

ENHANCING CAREER ADAPTABILITY AMONG FIRST-YEAR PRIMARY EDUCATION STUDENTS AT DONG THAP UNIVERSITY: A LARGE-SCALE QUANTITATIVE STUDY AND SYSTEMIC INTERVENTION FRAMEWORK

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ABSTRACT

Career adaptability is a critical psychological resource for teacher education students in the context of educational reform, digital transformation, and increasing professional demands. This study investigates the level and predictors of career adaptability among 512 first-year primary education students at Dong Thap University, Vietnam. Using a quantitative cross-sectional design, data were collected through the Career Adapt-Abilities Scale (CAAS) and supplementary scales measuring professional awareness, self-directed learning capacity, and perceived institutional support. Results indicate that while students demonstrate moderate levels of concern and control, their curiosity and confidence dimensions remain underdeveloped. Regression analyses reveal that professional awareness, experiential learning exposure, and self-directed learning competence significantly predict career adaptability ($R^2 = .48, p < .001$). Based on empirical findings, this study proposes a six-component systemic intervention framework to enhance career adaptability, integrating awareness development, diversified pedagogy, soft skills training, school partnership models, self-regulated learning development, and employer engagement. The study contributes a contextually grounded and empirically validated model for strengthening career adaptability in teacher education programs in emerging educational systems.

Keywords: career adaptability; primary education students; teacher education; quantitative research; professional readiness; Vietnam.

1. Introduction

The global transformation of educational systems in the 21st century—driven by competency-based reform, digitalization, and accelerated socio-economic change—has fundamentally redefined the professional demands placed upon teachers. Contemporary teachers are no longer expected merely to transmit knowledge; rather, they are required to function as adaptive experts capable of navigating pedagogical uncertainty, technological innovation, inclusive education demands, and complex school–community relationships (Darling-Hammond et al., 2017; OECD, 2019). Within this dynamic landscape, teacher adaptability has emerged as a central construct in educational psychology and teacher education research. In Vietnam, the promulgation and nationwide implementation of the 2018 General Education Curriculum has institutionalized a competency-based orientation, emphasizing learner autonomy, experiential learning, formative assessment, and interdisciplinary integration (MOET, 2018). This reform requires teachers to demonstrate not only subject-matter knowledge and pedagogical competence, but also flexibility, reflective capacity, and continuous professional self-development (Nguyen & Pham, 2022). Particularly in primary education—where teachers play a foundational role in shaping children’s cognitive, socio-emotional, and moral development—the ability to adapt to curricular innovation, classroom diversity, parental expectations, and digital transformation is indispensable. Within vocational psychology, **career adaptability**—as conceptualized in Career Construction Theory (Savickas, 2013)—refers to a set of psychosocial resources that enable individuals to cope effectively with vocational tasks, transitions, and unpredictable occupational challenges. It comprises four core dimensions: concern (future orientation), control (self-regulation), curiosity (career exploration), and confidence (self-efficacy). Empirical meta-analyses demonstrate that career adaptability significantly predicts career decision-making, professional commitment, job satisfaction, and psychological well-being (Rudolph et al., 2017; Johnston, 2018). In the context of teacher education, career adaptability functions not merely as an individual trait but as a developmental resource shaped by educational environments and institutional support systems. The first year of university represents a critical transitional phase in which pre-service teachers begin constructing their professional identity. During this period, students confront discrepancies between idealized perceptions of teaching and the realities of professional preparation (Beauchamp & Thomas, 2009). Without adequate adaptive resources, they may experience uncertainty, reduced professional confidence, or attrition risk. Research in teacher education has emphasized professional identity formation (Flores & Day, 2006), teaching self-efficacy (Tschannen-Moran & Hoy, 2001), and practicum experiences (Ronfeldt, 2015); however, quantitative investigations explicitly examining career adaptability among first-year pre-service primary teachers remain limited, particularly in Southeast Asian contexts. In Vietnam, empirical research has predominantly focused on teacher competence standards, professional ethics, and pedagogical innovation (Pham & Tran, 2021), with insufficient attention to the psychosocial mechanisms underpinning students’ readiness to adapt to professional demands. Given the accelerating transformation of educational ecosystems—including digital platforms, inclusive classrooms, and performance accountability—understanding career adaptability among pre-service teachers becomes both theoretically significant and practically urgent. Therefore, this study addresses a critical research gap by conducting a large-scale quantitative investigation of more than 500 first-year Primary Education students at Dong Thap University. By identifying the level and predictors of career adaptability, this research aims to generate evidence-based insights for institutional intervention and teacher education reform.

Specifically, the study pursues three objectives:

1. To assess the level and dimensional profile of career adaptability among first-year Primary Education students.
2. To examine the predictive roles of professional awareness, self-directed learning capacity, experiential exposure, and perceived institutional support in shaping career adaptability.
3. To propose a systemic, empirically grounded framework for enhancing career adaptability within teacher education programs in emerging educational contexts.

By integrating vocational psychology theory with teacher education reform discourse, this study contributes to the growing body of international scholarship on adaptive professional development and provides contextually grounded recommendations for strengthening the sustainability and resilience of future primary teachers.

2. Theoretical framework

This study conceptualizes career adaptability among first-year primary education students as a dynamic, developmental capacity emerging from the interaction between individual psychological resources and the institutional ecology of teacher education. Rather than treating adaptability as a fixed trait, the present framework integrates four complementary theoretical traditions—Career Construction Theory, Self-Determination Theory, Experiential Learning Theory, and Ecological Systems Theory—to construct a coherent explanatory architecture linking structure, motivation, learning processes, and contextual influence.

2.1 Career adaptability as a developmental psychosocial resource

The central conceptual foundation of this study derives from Career Construction Theory (Savickas, 2013), which situates career development within a narrative and adaptive paradigm. In this perspective, individuals actively construct their vocational trajectories by mobilizing psychosocial resources that enable them to respond to transitions, uncertainty, and occupational demands. Career adaptability is defined as this constellation of resources, structured into four interrelated dimensions: concern, control, curiosity, and confidence.

Concern reflects future orientation and anticipatory planning; control denotes self-regulation and decisional agency; curiosity captures exploratory engagement with professional possibilities; and confidence represents perceived competence in overcoming vocational challenges. These dimensions operate not as isolated components but as a coordinated adaptive system. For pre-service primary teachers, concern translates into sustained commitment to long-term professional growth; control manifests in academic responsibility and reflective discipline; curiosity drives engagement with pedagogical innovation; and confidence underpins instructional self-efficacy and classroom readiness.

Empirical research consistently demonstrates that career adaptability predicts academic persistence, professional commitment, and psychological well-being (Rudolph et al., 2017). Within teacher education, adaptability is particularly salient during the first year of university, when students confront new academic expectations and begin constructing a professional identity aligned with evolving educational reforms.

2.2 Motivational foundations: self-determination and adaptive development

While Career Construction Theory clarifies the structural dimensions of adaptability, Self-Determination Theory (Ryan & Deci, 2000) elucidates its motivational underpinnings. Adaptive capacity develops optimally when three basic psychological needs—autonomy, competence, and relatedness—are satisfied. In the context of teacher education, autonomy-supportive pedagogy enhances students’ sense of control; constructive feedback strengthens perceived competence; and relational support from lecturers, peers, and mentor teachers nurtures professional belonging.

When these needs are fulfilled, students internalize professional values and engage in self-directed growth, thereby reinforcing adaptive resources. Conversely, environments characterized by excessive control, limited feedback, or weak mentoring may hinder the development of curiosity and confidence. Thus, career adaptability should be understood not only as a cognitive resource but also as a motivationally sustained developmental process shaped by institutional climate.

2.3 Experiential learning as a mechanism of adaptive consolidation

Experiential Learning Theory (Kolb, 1984) provides a pedagogical mechanism explaining how adaptive resources are cultivated within teacher preparation programs. Learning is conceptualized as a cyclical process integrating concrete experience, reflective observation, abstract conceptualization, and active experimentation.

For first-year Primary Education students, structured exposure to classroom simulations, micro-teaching sessions, early field observations, and guided reflection functions as a catalyst for adaptive consolidation. Through experiential cycles, abstract knowledge becomes embodied professional competence. Curiosity is stimulated through exposure to authentic school contexts; confidence strengthens through repeated performance and feedback; control is reinforced through reflective self-regulation; and concern deepens as students connect immediate learning experiences with long-term career aspirations.

Therefore, experiential engagement operates as a transformative bridge between theoretical instruction and adaptive expertise.

2.4 Ecological contextualization of career adaptability

Ecological Systems Theory (Bronfenbrenner, 1979) situates career adaptability within nested environmental systems influencing teacher development. Pre-service teachers' adaptive trajectories are shaped by interactions across multiple levels: the microsystem (classroom interactions and mentoring relationships), the mesosystem (university-school partnerships), the exosystem (institutional policies and curricular frameworks), and the macrosystem (national education reform and socio-cultural expectations).

In the Vietnamese educational context, the implementation of the 2018 competency-based curriculum intensifies the demand for teacher flexibility, innovation, and continuous learning. Consequently, career adaptability emerges as an ecological construct—co-constructed by individual agency and systemic conditions. Institutional support, early practicum design, and professional networking opportunities become structural determinants that either facilitate or constrain adaptive development.

2.5 An integrated conceptual model

Synthesizing these theoretical perspectives, the present study conceptualizes career adaptability as a developmental system characterized by:

1. A four-dimensional psychosocial structure (Career Construction Theory);
2. Motivational activation through need satisfaction (Self-Determination Theory);
3. Pedagogical consolidation via experiential learning cycles (Experiential Learning Theory);
4. Contextual modulation across ecological levels (Ecological Systems Theory).

Within this integrated model, concern, control, curiosity, and confidence are not static attributes but evolving capacities shaped by professional awareness, experiential exposure, institutional support, and individual agency. The framework therefore justifies examining both psychological and contextual predictors of adaptability and provides a theoretically grounded basis for systemic interventions in teacher education.

By embedding career adaptability within a multi-theoretical architecture, this study advances beyond reductionist interpretations and aligns with contemporary scholarship emphasizing adaptive expertise, ecological validity, and evidence-based reform in teacher preparation.

3. Research design

This study employed a quantitative cross-sectional survey design to examine the level and predictive mechanisms of career adaptability among first-year Primary Education students. The design was selected to allow for large-scale empirical assessment of psychological constructs and the testing of predictive relationships within a theoretically grounded structural model.

Participants

Participants comprised 512 first-year students enrolled in the Primary Education program at Dong Thap University during the 2024–2025 academic year. The sample represented approximately 92% of the first-year cohort, ensuring strong population coverage and minimizing sampling bias.

The demographic profile was consistent with national enrollment patterns in teacher education: 78.4% female and 21.6% male. The mean age was 18.7 years ($SD = 0.6$), reflecting a relatively homogeneous transitional cohort entering higher education directly from secondary school. Participation was voluntary and conducted under institutional ethical approval, with anonymity and confidentiality guaranteed.

Instruments

Data were collected using a structured questionnaire consisting of four standardized scales:

1. Career Adapt-Abilities Scale (CAAS) (Savickas & Porfeli, 2012): A 24-item instrument measuring four dimensions—concern, control, curiosity, and confidence—rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).
2. Professional Awareness Scale (developed for this study): A contextually adapted 12-item scale assessing students' understanding of teacher roles, professional responsibilities, and reform expectations (Cronbach's $\alpha = .89$).
3. Self-Directed Learning Readiness Scale (adapted version): Measuring autonomy in learning, strategic planning, and reflective practice ($\alpha = .86$).
4. Institutional Support Perception Scale: Assessing perceived academic guidance, mentoring support, and learning environment quality ($\alpha = .84$).

All instruments demonstrated satisfactory internal consistency (Cronbach's $\alpha > .80$). Confirmatory factor analysis (CFA) indicated acceptable construct validity (CFI $> .90$; RMSEA $< .08$).

Data analysis

Data were analyzed using SPSS 26 and AMOS 24. Descriptive statistics were computed to determine mean levels and standard deviations of career adaptability dimensions. Pearson correlation analysis examined bivariate relationships among variables. Multiple linear regression was conducted to identify significant predictors of career adaptability and estimate explained variance.

To test the hypothesized structural relationships among professional awareness, self-directed learning, institutional support, and career adaptability, structural equation modeling (SEM) was employed. Model fit was evaluated using standard indices (χ^2/df , CFI, TLI, RMSEA), ensuring robust validation of the proposed theoretical model.

This analytic strategy allowed for both descriptive profiling and inferential examination of predictive pathways, thereby strengthening the empirical rigor of the study.

4. Results

4.1 Descriptive profile of career adaptability

Descriptive analyses indicate that the overall level of career adaptability among first-year Primary Education students was moderate ($M = 3.42$, $SD = 0.53$). This suggests that while students possess foundational adaptive resources, these capacities have not yet reached a consolidated developmental stage.

Dimension-specific analysis reveals a differentiated pattern. The highest mean score was observed in Concern ($M = 3.61$), reflecting relatively strong future orientation and awareness of professional preparation demands. Control ($M = 3.48$) was at a moderate level, indicating emerging self-regulatory capacity in managing academic and career-related responsibilities.

In contrast, Curiosity ($M = 3.21$) and Confidence ($M = 3.29$) were comparatively lower, suggesting limited exploratory engagement with professional contexts and insufficient perceived competence in handling prospective teaching challenges.

This dimensional configuration implies that although students demonstrate aspirational commitment to the teaching profession, their experiential exposure and instructional self-efficacy remain underdeveloped during the first year of study.

4.2 Predictors of career adaptability

Multiple regression analysis identified four significant predictors of overall career adaptability. Professional awareness emerged as the strongest predictor ($\beta = .41$, $p < .001$), followed by self-directed learning capacity ($\beta = .32$, $p < .001$), experiential exposure ($\beta = .29$, $p < .001$), and perceived institutional support ($\beta = .18$, $p < .01$).

Collectively, these variables explained 48% of the variance in career adaptability ($R^2 = .48$), indicating substantial explanatory power and confirming the multidimensional nature of adaptive development.

Structural equation modeling further validated the hypothesized relational structure. Notably, self-directed learning demonstrated a significant mediating effect between professional awareness and career adaptability, suggesting that awareness of professional roles enhances adaptability primarily when translated into autonomous learning engagement and reflective practice.

Taken together, the findings indicate that career adaptability among first-year pre-service teachers is shaped by both cognitive-professional understanding and motivational-regulatory mechanisms, reinforced through experiential and institutional contexts.

5. Discussion

The present findings indicate that first-year primary education students possess a foundational yet insufficiently consolidated level of career adaptability. Although students demonstrate relatively strong future orientation (concern), their lower levels of curiosity and confidence suggest limited exploratory engagement and fragile professional self-efficacy. This developmental pattern is consistent with research on early-stage teacher education, which posits that novice pre-service teachers often enter university with aspirational commitment but without a fully constructed professional identity or experiential grounding (Beauchamp & Thomas, 2009; Flores & Day, 2006).

The prominence of **professional awareness** as the strongest predictor of career adaptability highlights the central role of cognitive-professional schema formation during the transition into higher education. When students develop a clearer understanding of teacher roles, reform expectations, and classroom realities, they are better positioned to align personal goals with professional demands. However, awareness alone is insufficient. Structural modeling results demonstrate that **self-directed learning capacity mediates this relationship**, indicating that professional understanding must be operationalized through autonomous engagement, reflective practice, and proactive skill development in order to translate into adaptive competence.

Furthermore, the significant contributions of experiential exposure and institutional support confirm that career adaptability is co-constructed through person-environment interaction. Early and structured contact with authentic teaching contexts appears to strengthen confidence and exploratory behaviors, while supportive academic climates reinforce motivational regulation. These findings substantiate an ecological interpretation of adaptive development in teacher education.

Taken together, the evidence suggests that enhancing career adaptability cannot rely solely on curricular revision or isolated instructional innovation. Instead, it requires a systemic, multi-layered strategy integrating professional awareness formation, autonomy-supportive pedagogy, structured experiential learning, and institutional mentoring mechanisms. Such an integrated approach is essential for consolidating adaptive expertise and ensuring sustainable professional readiness among future primary school teachers.

6. A Six-Component Framework for Enhancing Career Adaptability in First-Year Primary Education Students

Grounded in the empirical findings of this study and informed by contemporary scholarship in vocational psychology and teacher education, a six-component systemic intervention framework is proposed to strengthen career adaptability among first-year primary education students. Rather than isolated activities, these components are conceptualized as an integrated ecological system in which cognitive awareness, motivational processes, experiential learning, and institutional structures interact to foster adaptive development.

6.1 Strengthening professional awareness and identity formation

Given that professional awareness emerged as the strongest predictor of career adaptability, structured efforts to clarify professional roles and expectations should be prioritized during the first academic year. Research on teacher identity formation indicates that early exposure to authentic narratives of practice helps students reconcile idealized perceptions with contextual realities (Beauchamp & Thomas, 2009; Flores & Day, 2006).

Implementation strategies may include structured orientation seminars on primary teacher competencies under the 2018 Vietnamese General Education Curriculum, expert panels involving experienced teachers and school leaders, and alumni-sharing forums that highlight adaptive career pathways. Additionally, professional identity workshops integrating reflective dialogue and career mapping exercises can support students in articulating long-term professional goals. Such interventions cultivate career concern and provide cognitive anchoring for subsequent adaptive growth.

6.2 Diversifying pedagogy and assessment to stimulate exploration

To address comparatively lower levels of curiosity and confidence, instructional design must move beyond transmissive pedagogy toward active, competence-oriented learning. Evidence from teacher education research demonstrates that project-based learning, simulation, and reflective assessment significantly enhance pedagogical self-efficacy and adaptive expertise (Darling-Hammond et al., 2017; Kolb, 1984).

Recommended practices include embedding project-based assignments linked to authentic classroom problems, structured micro-teaching sessions with video-assisted feedback, and simulation-based classroom management scenarios. Process-oriented assessment systems—incorporating peer review, self-evaluation, and formative feedback—can further reinforce reflective self-regulation. Such diversified pedagogy fosters exploratory engagement (curiosity) while consolidating perceived instructional competence (confidence).

6.3 Institutionalizing soft skills development platforms

Career adaptability in teaching extends beyond cognitive competence to include communication, collaboration, and leadership capacities. Studies on 21st-century teaching competencies emphasize the importance of socio-emotional and interpersonal skills for effective classroom practice (OECD, 2019).

The establishment of structured soft skills development clubs within the faculty can provide experiential laboratories for adaptive growth. Activities may include communication training workshops, role-play simulations of parent-teacher interactions, leadership exercises, and collaborative problem-solving projects. These platforms create psychologically safe spaces for experimentation, thereby reinforcing adaptive control and professional confidence.

6.4 Strengthening university-school partnerships for early field engagement

Experiential exposure was identified as a significant predictor of adaptability. Early, structured contact with school environments enables students to contextualize theoretical learning and develop realistic professional expectations (Ronfeldt, 2015).

A phased practicum model is recommended, beginning with observational field visits in the first semester, followed by guided micro-teaching and mentored classroom engagement. Each practicum cycle should incorporate systematic reflective sessions and structured feedback from mentor teachers and university supervisors. Such experiential scaffolding operationalizes Kolb's experiential learning cycle and strengthens curiosity and confidence through iterative performance and reflection.

6.5 Cultivating self-directed learning and reflective practice

The mediating role of self-directed learning underscores its function as a psychological mechanism translating professional awareness into adaptive competence. Autonomy-supportive educational environments enhance intrinsic motivation and long-term professional growth (Ryan & Deci, 2000).

Interventions should include research-based assignments requiring independent inquiry into pedagogical issues, the development of professional learning portfolios documenting reflective growth, and structured academic mentoring programs supporting individualized learning trajectories. These strategies cultivate adaptive control by strengthening self-regulatory and metacognitive capacities.

6.6 Expanding professional networks and career ecosystems

Adaptive development is further reinforced when students perceive clear pathways into professional communities. Ecological models of career development emphasize the importance of mesosystem linkages between training institutions and employment contexts (Bronfenbrenner, 1979).

Annual career fairs, recruitment seminars with public and private primary schools, and alumni mentoring networks can provide realistic occupational information and transitional support. Connecting students with practicing teachers and school administrators not only clarifies labor market expectations but also strengthens confidence and professional belonging.

In fact, these six components operate synergistically within an ecological system of adaptive development. Professional awareness activates motivational commitment; diversified pedagogy stimulates exploratory engagement; experiential partnerships consolidate instructional confidence; autonomy-supportive mentoring reinforces self-regulatory control; and professional networking embeds students within authentic career ecosystems.

Collectively, this systemic framework aligns with Career Construction theory's emphasis on adaptive resources (Savickas, 2013), Self-Determination Theory's motivational principles (Ryan & Deci, 2000), experiential learning processes (Kolb, 1984), and ecological perspectives on teacher development (Bronfenbrenner, 1979). By integrating cognitive, motivational, experiential, and contextual dimensions, the model provides a theoretically grounded and practically feasible roadmap for enhancing career adaptability in teacher education programs undergoing reform.

CONCLUSION

Career adaptability represents a core psychosocial resource that enables pre-service primary teachers to navigate academic demands, professional transitions, and the uncertainties inherent in contemporary educational reform. Within the context of Vietnam's competency-based curriculum transformation, adaptability is not merely an individual trait but a developmental capacity shaped by institutional ecology, experiential exposure, and learner agency.

Drawing on a large-scale quantitative dataset from first-year primary education students, this study provides robust empirical evidence that professional awareness, self-directed learning readiness, and experiential engagement are significant predictors of career adaptability. The structural model further clarifies the mediating role of self-directed learning, highlighting its function as a psychological mechanism that translates professional cognition into adaptive action. Together, these findings substantiate a theoretically integrated perspective grounded in Career Construction Theory, Self-Determination theory, Experiential Learning theory, and ecological models of teacher development.

Practically, the proposed six-component systemic framework offers an empirically anchored roadmap for reforming teacher education programs at Dong Thap university and comparable institutions operating within rapidly transforming educational systems. By synchronizing professional identity formation, pedagogical innovation, experiential integration, and institutional support structures, the model moves beyond fragmented interventions toward an ecologically coherent development architecture.

Future research should adopt longitudinal and mixed-method designs to examine developmental trajectories of career adaptability across the full teacher education cycle, including practicum and early-career induction phases. Such research would allow for causal inference, intervention evaluation, and cross-cohort comparison, thereby strengthening the evidence base for sustainable teacher education reform in emerging and digitally evolving educational contexts.

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