

PREDICTION OF UNDERGRADUATE STUDENTS' READINESS FOR ADAPTATION TO CHANGES IN THE MODERN WORLD

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ABSTRACT

In the context of the rapidly changing and uncertain modern world, the ability to adapt has become a critical competence for undergraduate students as they transition from higher education to the labor market. This article aims to synthesize existing literature to identify key predictors and to propose an integrated conceptual framework for predicting undergraduate students' readiness for adaptation to changes in the modern world. Drawing on psychological and learning theories, this review conceptualizes adaptation readiness as a multidimensional construct encompassing cognitive, affective, and behavioral adjustment processes. The synthesis of prior research identifies five interrelated predictors influencing adaptation readiness: self-efficacy, self-regulated learning, adaptability traits, future orientation, and the learning environment. Self-efficacy and the learning environment are conceptualized as foundational input factors, while self-regulated learning and adaptability function as mediating mechanisms through which students translate internal beliefs and external support into adaptive actions. The outcome of this process is readiness for adaptation, including career readiness in response to evolving labor market demands. Based on the integration of these factors, this article proposes an Integrated Prediction Model of Adaptation Readiness that highlights the dynamic and interactive nature of psychological, behavioral, and contextual influences. The proposed framework offers important theoretical contributions by clarifying the causal mechanisms underlying adaptation readiness and provides practical implications for curriculum design and educational environments in higher education. The article concludes by suggesting directions for future empirical research to test and refine the proposed model across diverse educational contexts.

Keywords: Adaptation Readiness, Self-Efficacy, Self-Regulated Learning, Adaptability, Career Readiness

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INTRODUCTION

In the 21st century, the world has been facing rapid and complex dynamics of change across multiple dimensions, including technology, the economy, society, and culture. These changes are driven by advances in digital technologies, automation, and artificial intelligence, as well as by highly uncertain labor market structures and lifestyles. Within this context, the ability to adapt to changes in the modern world has come to be regarded as a strategic competence essential for daily living, lifelong learning, and future career development.

Undergraduate students, as the country's emerging human resources, are currently undergoing a transition from the education system to the world of work, which is characterized by intense competition and unpredictability. Their readiness for adaptation is therefore of critical importance for coping with novel situations, developing 21st-century skills, and responding to the rapidly changing demands of society and the labor market (Trilling & Fadel, 2009; World Economic Forum, 2023). Conversely, a lack of such readiness may be associated with academic underachievement, educational and occupational stress, and long-term limitations in personal development.

Previous research suggests that learners' readiness for adaptation is a multidimensional construct arising from interactions among personal, psychological, and environmental factors. These include self-directed learning skills, critical thinking, cognitive flexibility, self-efficacy, learning motivation, and institutional support from educational organizations (Bandura, 1997; Martin et al., 2013; Zimmerman, 2002). However, most existing studies have tended to focus on describing levels or components of adaptive readiness rather than developing predictive models that systematically integrate these factors.

From a theoretical perspective, examining the prediction of undergraduate students' readiness for adaptation to changes in the modern world can enhance understanding of the causal mechanisms and the roles of psychological, learning-related, and educational contextual variables that influence learners' adaptation in contemporary society. At the same time, from policy and practical perspectives, predictive findings can serve as an evidence base for designing curricula, learning activities, and policy measures aimed at strengthening students' essential competencies in a targeted and sustainable manner. Such efforts align with 21st-century skills frameworks and international directions in human capital development (OECD, 2019; World Economic Forum, 2020, 2023; Trilling & Fadel, 2009).

Understanding the mechanisms that influence adaptive readiness is therefore a key to preparing younger generations for the future. Despite the substantial body of research examining related variables, there remains a lack of comprehensive integration and synthesis of these factors. Accordingly, this article aims to review and synthesize existing knowledge on factors influencing undergraduate students' readiness for adaptation to changes in the modern world, to identify key predictors, and to propose practical implications for designing educational management and learning environments that effectively enhance students' adaptive competence.

LITERATURE REVIEWS

This section aims to review and synthesize the literature in order to explain the mechanisms underlying the relationships among key variables. The content is organized into three main parts: 1) the conceptual definition of readiness for adaptation, 2) the synthesis of predictive factors (predictors), and 3) the integration into a theoretical framework, as presented below.

1) Conceptualizing Readiness for Adaptation in a VUCA World

In the context of the modern world characterized by high volatility and uncertainty, readiness for adaptation does not merely refer to the possession of technical skills, but rather to a complex psychological and behavioral construct. Martin et al. (2013) explain that this capability comprises adaptation across three dimensions: cognitive adjustment, affective regulation, and

behavioral modification when individuals encounter novel situations. A review of the literature indicates that readiness for adaptation is not solely an innate trait, but a capacity that can be developed through learning processes and experience. Consequently, predicting this readiness requires consideration of a wide range of antecedents, encompassing both internal individual factors and external contextual factors.

2) Synthesis of Key Predictors

Based on a synthesis of prior research, the predictors influencing undergraduate students' readiness for adaptation can be classified into three main groups, as follows.

1) Basic Psychological Factors: The Role of Self-Efficacy

Self-efficacy, defined as individuals' perceptions of their own capabilities according to Bandura's theory (1997), constitutes a fundamental foundation of human action. In the context of adaptation, self-efficacy functions as a form of psychological "fuel." Students with high levels of self-efficacy are more likely to perceive change as a challenge rather than an obstacle, which in turn fosters psychological resilience and persistent efforts to explore new solutions. The literature indicates that self-efficacy not only exerts a direct influence on readiness for adaptation but also serves as a catalyst for positive learning behaviors.

H1: Self-efficacy has a direct positive effect on readiness for adaptation to changes in the modern world.

2) Behavioral Driving Mechanisms: The Role of Self-Regulated Learning (SRL)

While self-efficacy represents belief, self-regulated learning (SRL) functions as the actual "operational mechanism." Zimmerman (2002) describes SRL as comprising goal setting, planning, and self-evaluation. In contexts characterized by rapid global change, SRL skills are particularly critical, as they enable students to "re-learn" and adjust their learning strategies to keep pace with emerging technologies and new contexts. A synthesis of the literature suggests that SRL likely serves as a mediating variable that transforms self-beliefs (self-efficacy) into adaptive actions in practice.

H2: Self-regulated learning functions as a mediating variable between psychological factors (e.g., self-efficacy) and readiness for adaptation.

3) Trait-Based Factors: Adaptability and Future Orientation

Adaptability, defined as the ability to manage novelty and uncertainty, together with future career readiness, represents predictive factors that reflect individuals' "future-oriented attitudes." Students who possess clear career goals and high levels of adaptability tend to demonstrate greater proactive preparation and a stronger awareness of the need to develop transferable skills, which directly contributes to their readiness to enter the labor market.

H3: Adaptability in coping with uncertainty and a clear future orientation are significant positive predictors of readiness for adaptation.

4) Contextual Factors: The Learning Environment

Although individual factors are critically important, contextual conditions cannot be overlooked. A learning environment that fosters critical thinking and provides strong institutional support can be likened to "soil" that enables growth. The literature analysis indicates that a supportive learning environment can strengthen (moderate) the effects of individual factors—such as self-efficacy—on readiness for adaptation. Conversely, restrictive environments may diminish students' adaptive potential.

H4: A supportive learning environment has a positive influence on readiness for adaptation and may function as a moderating variable that enhances the effects of individual factors.

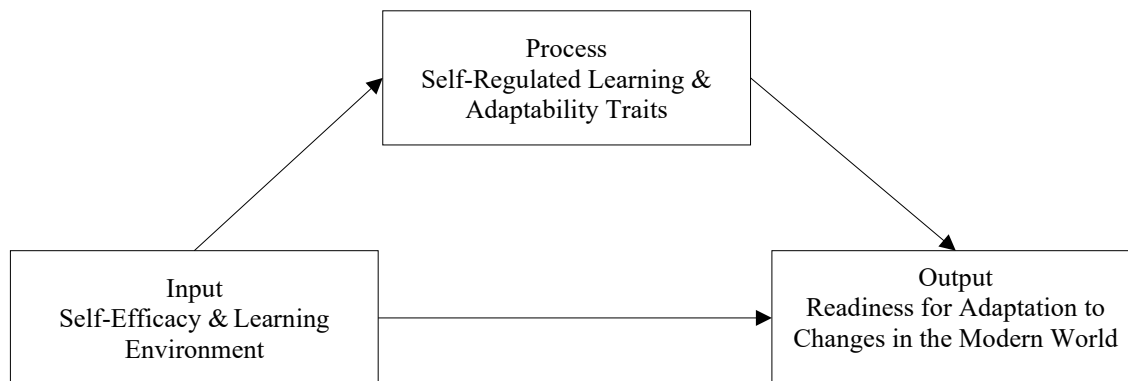
Proposed Conceptual Framework

Based on the integration of the five factors discussed above, this article proposes an Integrated Prediction Model of Adaptation Readiness, as illustrated in Figure 1. The model is structured around the following causal relationships:

Inputs: Self-efficacy and the learning environment serve as fundamental foundational factors.

Processes (Mediators): The input factors exert their effects through self-regulated learning (SRL) and adaptability traits, which function as mechanisms through which students transform available resources into adaptive actions.

Outputs: The ultimate outcome is readiness for adaptation to changes in the modern world, which also encompasses career readiness.



The proposed model highlights that fostering students' readiness cannot be achieved by focusing on a single dimension alone. Instead, it requires the creation of an ecosystem that integrates self-beliefs (self-efficacy), self-regulated learning skills (SRL), and environmental support in order to effectively address future challenges.

CONCLUSION

This article focuses on synthesizing the literature to identify key predictors and to propose an integrated conceptual framework for predicting undergraduate students' readiness for adaptation to changes in the modern world. Through the analysis and integration of psychological and learning theories, the main conclusions and recommendations can be summarized as follows.

Preparing students to live and work in a volatile and uncertain world (the VUCA world) cannot rely solely on the provision of academic knowledge; rather, it requires the development of strong internal attributes. The literature review reveals that adaptation readiness does not occur by chance, but instead results from causal interactions among key factors. Self-efficacy serves as a psychological foundation that enables students to confidently confront new situations.

Self-regulated learning (SRL) functions as a driving mechanism that enables students to adjust their learning strategies in response to changing circumstances. Adaptability represents the capacity to manage emotions and cognitive processes when encountering uncertainty. Future orientation serves as a motivational force that encourages preparation for future careers. The learning environment provides a facilitating context that nurtures and enhances students' potential.

The conceptual framework proposed in this article demonstrates that these factors do not operate in isolation; rather, they interact as a network of influences. Within this network, self-efficacy and the learning environment function as critical input factors that shape self-regulated learning and adaptability as mediating mechanisms, which ultimately lead to genuine readiness for adaptation.

The proposed predictive model has significant implications for the development of higher education in two key dimensions. Educational institutions should shift their focus from content-based instruction toward a process-based approach, particularly emphasizing the development of self-regulated learning skills and the enhancement of self-efficacy. This can be achieved through learning activities that allow students to engage with authentic problems and reflective practices, enabling them to construct their own adaptive mechanisms. Instructors and

universities play a crucial role in creating “safe spaces” that encourage experimentation and learning from mistakes. Such environments can reduce anxiety and enhance learners’ adaptive flexibility.

As this article presents a conceptual framework derived from a synthesis of the literature, a key limitation is the lack of empirical data to validate the accuracy of the proposed model. Therefore, future research should empirically test this framework. Quantitative research methods, such as structural equation modeling (SEM), should be employed to examine the model’s validity and the relative weights of each predictor across student samples in different contexts.

Longitudinal research is recommended to investigate the developmental trajectories of adaptation readiness over time, particularly to determine which predictors become most influential as students progress through higher academic levels. In conclusion, readiness for adaptation is a critical key to the future. The predictive model proposed in this article offers an important roadmap for educators and researchers to collaboratively develop graduates who not only “survive” but are able to “thrive” sustainably amid ongoing change.

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