Chapter 2
The Effectiveness of Blended-Mode E-Learning on Students' Performance and Self-Efficacy Among College Students

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ABSTRACT

E-learning has been in the limelight since the rise of the Internet, and distance learning and non-face-to-face forms of education have begun to gain popularity, synchronous E-learning and asynchronous E-learning learning modes have different strengths and weaknesses, and the digital divide can be bridged by mixing the two different E-learning modes. Against this background, this paper examines the past literature, combines questionnaire surveys and quantitative research in the form of quasi-experimental research on higher education. Based on the expectancy-value theory and quantitative analysis of statistical data results, the study focuses on the learning performance and self-efficacy of higher education samples, and explores

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the changes in students' psychological state in blended teaching, thus promoting the effectiveness of E-learning, and providing a basis for the future of E-learning and blending mode education in the future.

1. INTRODUCTION

The concept of blended e-learning emerged in the early 2000s, It is rooted in constructivist and social cognitive learning principles that emphasize learner-centered engagement, flexible pacing, and active knowledge construction. Numerous empirical studies have demonstrated that blended learning can yield better outcomes than traditional instruction. For instance, Bernard et al. (2014) conducted a meta-analysis of over 100 studies and concluded that blended learning consistently led to improved academic achievement compared to both fully online and face-to-face formats. Similarly, Means et al. (2013), in a U.S. Department of Education report, confirmed the superior learning gains associated with blended instruction across disciplines.

However, existing empirical research rarely focuses on skill-based subjects such as foundational art, where learning depends heavily on visual demonstration, iterative practice, and subjective interpretation. For students who may lack artistic background or confidence, adapting to blended formats presents unique challenges such as interpreting visual content digitally, navigating unfamiliar tools, and managing self-directed learning.

There is also a theoretical gap in the application of major learning frameworks to this context. While Bandura's Social Cognitive Theory (1997) emphasizes the role of self-efficacy in shaping learning behaviors, few studies have examined how blended-mode learning environments influence self-efficacy in visual learning contexts. Likewise, although Expectancy-Value Theory (Eccles & Wigfield, 2002) and Attribution Theory (Weiner, 2010) provide useful lenses to understand motivation and performance, they are underutilized in research on art education for non-specialist students. Furthermore, the constructivist foundation of blended learning centered on active, student-driven knowledge construction has not been sufficiently studied in relation to students' perceptions of learning art through digital means.

This chapter therefore aims to fill these gaps by investigating how blended-mode e-learning influences academic performance and self-efficacy among university students enrolled in art basics courses. It contributes both theoretically by applying and testing psychological learning frameworks and practically by informing course design, instructional support, and policy implementation in digital education.