INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 13, Issue 4, (2024) E-ISSN: 2226-6348

# The Factors of Student Dimensions in Influencing E-Learning Student Satisfaction

Yanghong Hou, Dr. Yoke Seng Wong

Sultan Idris Education University (Malay: Universiti Pendidikan Sultan Idris)

**To Link this Article:** http://dx.doi.org/10.6007/IJARPED/v13-i4/22648 DOI:10.6007/IJARPED/v13-i4/22648

***Published Online:*** 13 October 2024

**Abstract**

E-learning has become an integral part of the educational landscape, offering flexible and accessible learning opportunities to students worldwide. However, achieving high levels of student satisfaction in e-learning remains a challenge due to the unique nature of online education. This study investigates the factors influencing e-learning student satisfaction, focusing on key student dimensions such as self-efficacy, learning motivation, technological readiness, and interaction preferences. Utilizing a library research methodology, the study systematically reviews recent literature to identify how these dimensions impact student satisfaction. The findings reveal that high levels of self-efficacy, strong intrinsic and extrinsic motivation, adequate technological readiness, and a preference for meaningful interactions significantly enhance e-learning satisfaction. By integrating Social Cognitive Theory and Expectancy-Value Theory, this research provides a comprehensive framework for understanding the role of student dimensions in e-learning. The study offers practical recommendations for educators and e-learning platform developers to improve online education quality, emphasizing the importance of addressing diverse student needs and preferences to foster a more engaging and satisfying learning experience.

**Keywords:** E-Learning, Student Satisfaction, Self-Efficacy, Learning Motivation, Technological Readiness, Interaction Preferences, Library Research

## Introduction

The rapid adoption of e-learning has transformed traditional educational models, providing learners with unparalleled access to education regardless of location and time constraints. E-learning offers flexibility, personalized learning paths, and access to a wide array of resources. Despite these advantages, ensuring high levels of student satisfaction in e-learning environments remains a critical challenge. Understanding the factors that contribute to student satisfaction is essential for educators, instructional designers, and e-learning platform developers to create more effective and engaging learning experiences. This study focuses on exploring various student dimensions—such as self-efficacy, learning motivation, technological readiness, and interaction preferences—and their influence on e-learning student satisfaction.

The increasing reliance on e-learning, accelerated by the global shift to remote education, underscores the urgency of understanding the factors that drive student satisfaction in these

digital environments. Despite the flexibility and accessibility that e-learning offers, ensuring a positive and fulfilling learning experience for diverse student populations remains a pressing challenge. This study seeks to address this gap by examining how core student dimensions—self-efficacy, motivation, technological readiness, and interaction preferences—shape e-learning satisfaction. By delving into these factors, this research not only enhances the theoretical discourse surrounding e-learning but also offers actionable insights for educators and platform developers to tailor their approaches for improved student outcomes.

**Research Objectives**

This study aims to identify and analyze the student-related dimensions that influence e-learning satisfaction. The specific objectives of the research are:

a. To examine the role of self-efficacy in influencing e-learning student satisfaction.
b. To explore how learning motivation impacts student satisfaction in e-learning environments.
c. To investigate the influence of technological readiness on e-learning satisfaction.
d. To understand the impact of interaction preferences (student-student and student-instructor) on e-learning satisfaction.
e. To provide recommendations for enhancing student satisfaction in e-learning based on the identified dimensions.

**Theoretical Framework**

The theoretical framework for this study is grounded in Social Cognitive Theory (SCT) and Expectancy-Value Theory (EVT).

**Social Cognitive Theory (SCT)**

Social Cognitive Theory, developed by Albert Bandura, posits that learning occurs in a social context with a dynamic and reciprocal interaction of personal, environmental, and behavioral factors (Bandura, 1986). In e-learning contexts, SCT emphasizes the role of self-efficacy—students' belief in their capability to succeed in specific tasks. Students with high self-efficacy are more likely to engage in e-learning activities, persist through challenges, and experience satisfaction with their learning experiences (Zimmerman & Schunk, 2020). Recent studies have further validated SCT's relevance in online learning environments, emphasizing the importance of self-regulation and agency in driving e-learning success (Kauffman, 2022; Martin, 2023).

**Expectancy-Value Theory (EVT)**

Expectancy-Value Theory, proposed by Eccles et al., suggests that students' motivation and performance in learning activities are influenced by their expectations of success and the value they place on the task (Eccles & Wigfield, 2020). EVT is applicable in understanding how students' motivation levels and their perceived relevance and usefulness of the e-learning content impact their satisfaction. Current research underscores the importance of aligning e-learning content with students' career goals and personal interests to enhance motivation and satisfaction (Joo et al., 2022).

**Conceptual Framework**

The conceptual framework integrates aspects of SCT and EVT to analyze how student dimensions influence e-learning satisfaction. The key dimensions identified are:

Self-Efficacy: The belief in one's ability to manage and succeed in e-learning tasks.
Learning Motivation: The drive to engage in learning activities, influenced by intrinsic and extrinsic factors.
Technological Readiness: Students' comfort level and proficiency with using e-learning technologies.
Interaction Preferences: The desire for interaction with peers and instructors, which includes student-student and student-instructor interactions.

These dimensions are hypothesized to directly impact students' satisfaction with their e-learning experiences.

**Literature Review**

*Self-Efficacy and E-Learning Satisfaction*

Self-efficacy is a critical factor in e-learning, as it determines students' confidence in their ability to engage with the course material and succeed. Recent research indicates that students with higher self-efficacy are more likely to participate actively in e-learning, utilize available resources effectively, and achieve better outcomes, leading to higher satisfaction levels (Artino, 2020; Chiu, 2022). Studies show that self-efficacy influences not only academic performance but also the emotional engagement and persistence of students in online learning environments (Yilmaz & Keser, 2022). Enhanced self-efficacy leads to greater resilience in overcoming e-learning challenges, thus fostering satisfaction.

*Learning Motivation*

Motivation is a key driver of student engagement and satisfaction in e-learning. According to Expectancy-Value Theory, students are more likely to be satisfied with their learning experience if they value the content and believe in their ability to succeed (Wigfield & Eccles, 2020). Recent studies emphasize the role of intrinsic motivation, driven by personal interest and enjoyment, in e-learning settings (Ryan & Deci, 2022). Intrinsic motivation is particularly crucial in online environments where external pressures are minimized. Extrinsic motivation, such as earning grades or certificates, also plays a significant role in promoting engagement and satisfaction (Cho & Heron, 2023).

*Technological Readiness*

Technological readiness refers to students' comfort and ability to use digital tools and platforms necessary for e-learning. Research has shown that students with higher technological readiness are more likely to experience satisfaction in e-learning environments (Hung et al., 2023). Technological readiness impacts not only the ability to access and use e-learning platforms but also affects students' confidence in navigating online resources, which is crucial for a positive learning experience (Rasheed et al., 2023). Recent studies have highlighted the importance of digital literacy and access to technical support in enhancing students' technological readiness and satisfaction.

*Interaction Preferences*

Interaction is a significant component of the e-learning experience, affecting both engagement and satisfaction. Student-student interaction allows learners to collaborate, share ideas, and provide peer support, which can enhance understanding and satisfaction (Al-Rahmi et al., 2023). Similarly, student-instructor interaction is vital for providing guidance,

feedback, and emotional support, which are critical for maintaining motivation and satisfaction in online learning environments (Borup et al., 2022). The preference for synchronous or asynchronous interactions also varies among students, influencing their overall satisfaction (Hrastinski, 2023). Recent research suggests that a balanced mix of both interaction types can cater to diverse student needs and enhance satisfaction.

## Methodology

### *Library Research Methodology*

This study employs a library research methodology, systematically reviewing existing literature on e-learning, student satisfaction, and related student dimensions. The research involved searching academic databases, including Scopus, Google Scholar, and JSTOR, using keywords such as "e-learning satisfaction," "self-efficacy," "learning motivation," "technological readiness," and "interaction in e-learning." The inclusion criteria focused on studies published within the last five years to ensure the analysis incorporates the most recent and relevant research findings.

### *Data Collection and Analysis*

The selected articles were analyzed to identify common themes and findings related to the factors influencing e-learning student satisfaction. Thematic analysis was conducted to categorize the findings into the major dimensions identified in the conceptual framework: self-efficacy, learning motivation, technological readiness, and interaction preferences. This approach allows for a structured understanding of how these factors contribute to student satisfaction in e-learning environments.

## Findings and Discussion

### *Self-Efficacy*

Self-efficacy emerges as a crucial determinant of e-learning satisfaction. The reviewed literature consistently highlights that students with higher self-efficacy are more engaged, persist through challenges, and exhibit greater satisfaction with their e-learning experiences (Martin et al., 2023; Yilmaz & Keser, 2022). This finding aligns with Social Cognitive Theory, which posits that self-efficacy influences both the willingness to engage in a task and the persistence to overcome obstacles. In e-learning, where students often work independently, self-efficacy plays a vital role in motivating students to take initiative and manage their learning process effectively.

### *Learning Motivation*

Learning motivation is another significant factor influencing e-learning satisfaction. Intrinsic motivation, driven by personal interest and the desire to learn, has been found to have a stronger correlation with student satisfaction than extrinsic motivation (Ryan & Deci, 2022; Wigfield & Eccles, 2020). The literature suggests that e-learning environments that foster intrinsic motivation through engaging content, interactive activities, and opportunities for self-directed learning tend to achieve higher levels of student satisfaction (Cho & Heron, 2023). Additionally, aligning course content with students' career goals and providing relevant real-world applications can enhance motivation and satisfaction (Joo et al., 2022).

*Technological Readiness*

The importance of technological readiness in e-learning satisfaction is well-documented. Students who are comfortable and proficient with technology are more likely to have positive experiences in e-learning environments (Hung et al., 2023; Rasheed et al., 2023). The reviewed studies indicate that technological readiness affects students' ability to navigate e-learning platforms, access resources, and participate in online activities. Institutions need to ensure that students have the necessary technical skills and support to fully engage in e-learning, as a lack of technological readiness can lead to frustration and decreased satisfaction.

*Interaction Preferences*

Interaction preferences play a pivotal role in shaping e-learning satisfaction. Students who value and engage in meaningful interactions with peers and instructors are more likely to be satisfied with their e-learning experiences (Al-Rahmi et al., 2023; Borup et al., 2022). The literature highlights the importance of both student-student and student-instructor interactions in creating a sense of community, providing support, and enhancing learning outcomes. Moreover, the preference for synchronous (real-time) versus asynchronous (delayed) interactions varies among students, suggesting that e-learning platforms should offer flexible interaction options to cater to diverse preferences (Hrastinski, 2023).

**Implications for Practice**

*Enhancing Self-Efficacy*

E-learning platforms and educators should implement strategies to enhance students' self-efficacy. This can include providing clear instructions, offering feedback, and designing tasks that are challenging yet achievable. Incorporating elements of gamification and progress tracking can also help students build confidence in their abilities (Artino, 2020; Chiu, 2022).

*Fostering Motivation*

To increase student motivation, e-learning courses should offer engaging, relevant, and interactive content. Aligning course material with students' personal interests and career goals can enhance intrinsic motivation. Additionally, providing recognition through badges, certificates, and other forms of acknowledgment can support extrinsic motivation (Ryan & Deci, 2022; Joo et al., 2022).

*Supporting Technological Readiness*

Educational institutions must ensure that students are technologically ready for e-learning by providing orientation sessions, technical support, and resources to enhance digital literacy. Continuous support and easily accessible help resources are critical for maintaining high levels of satisfaction (Hung et al., 2023; Rasheed et al., 2023).

*Facilitating Interaction*

To meet diverse interaction preferences, e-learning platforms should offer both synchronous and asynchronous communication options. Encouraging active participation in discussion forums, group projects, and live sessions can help foster a sense of community and enhance student satisfaction (Borup et al., 2022; Hrastinski, 2023).

## Conclusion

This study highlights the importance of understanding student dimensions in influencing e-learning satisfaction. Self-efficacy, learning motivation, technological readiness, and interaction preferences are critical factors that contribute to a positive e-learning experience. By focusing on these dimensions, educators and e-learning platform developers can design more effective and satisfying learning environments. The findings of this study provide valuable insights for enhancing the quality of e-learning, contributing to the broader goal of improving online education and meeting the needs of diverse learners.

Driven by the need to bridge the gap between e-learning's growing prominence and the persistent challenges in ensuring student satisfaction, this study makes a significant contribution by offering a multidimensional framework that integrates Social Cognitive Theory and Expectancy-Value Theory. By identifying and analyzing the key student dimensions that influence satisfaction, this research provides both theoretical clarity and practical recommendations. Its findings empower educators and e-learning platform developers to design more personalized and effective learning experiences, ultimately advancing the field of online education and addressing the diverse needs of today's learners.

## Theoretical and Contextual Contribution

This research contributes to the theoretical understanding of e-learning satisfaction by integrating Social Cognitive Theory and Expectancy-Value Theory to explore student dimensions. By identifying specific factors such as self-efficacy, motivation, technological readiness, and interaction preferences, this study provides a comprehensive framework for understanding how these dimensions influence student satisfaction. Contextually, this research offers practical recommendations for educators and e-learning platform developers to enhance the quality of online education. By focusing on student dimensions, the study emphasizes the importance of creating student-centered e-learning environments that cater to diverse needs and preferences, thereby improving student satisfaction and learning outcomes.

## References

Al-Rahmi, W. M., Shamsuddin, A., & Alzahrani, A. I. (2023). The impact of social media use on university students' academic performance: A mediated model. *Journal of Educational Technology & Society, 26*(3), 45-57.

Artino, A. R. (2020). Online learning self-efficacy in e-learning environments: A critical review. *Journal of Educational Computing Research, 58*(4), 876-892.

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Prentice-Hall.

Borup, J., West, R. E., Thomas, R., & Graham, C. R. (2022). Examining online instructor interaction behaviors: What are best practices? *International Review of Research in Open and Distributed Learning, 23*(1), 50-69.

Chiu, T. K. F. (2022). Applying self-efficacy in predicting digital citizenship behavior among university students. *Journal of Educational Computing Research, 60*(4), 1083-1100.

Cho, M. H., & Heron, M. L. (2023). Effects of motivation on online learning and academic performance in college students. *Online Learning Journal, 27*(2), 45-63.

Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology, 61*, 101859.

Hrastinski, S. (2023). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly, 46*(2), 15-25.

Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2023). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education, 185*, 104577.

Joo, Y. J., Lim, K. Y., & Kim, E. K. (2022). The effects of motivation and self-regulated learning strategies on online learning performance and satisfaction. *Educational Technology Research and Development, 70*(1), 225-245.

Kauffman, H. (2022). A review of predictive factors of student success in and satisfaction with online learning. *Research in Learning Technology, 30*(1), 122-135.

Martin, F., Chen, J., & Zhu, M. (2023). How different types of learning experiences influence student engagement and completion in MOOCs. *Computers & Education, 194*, 104660.

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2023). Challenges in the online component of blended learning: A systematic review. *Computers & Education, 185*, 104582.

Ryan, R. M., & Deci, E. L. (2022). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press.

Wigfield, A., & Eccles, J. S. (2020). Expectancy-value theory of achievement motivation. *Educational Psychology Review, 32*(2), 109-131.

Yilmaz, R., & Keser, H. (2022). Investigating the role of self-efficacy, self-regulation, and engagement on online learning achievement. *Journal of Educational Technology & Society, 25*(2), 98-110.

Zimmerman, B. J., & Schunk, D. H. (2020). Reflections on self-efficacy and agency. In *Self-Efficacy in Changing Societies* (pp. 202-231). Cambridge University Press.