

## Factors Affecting Undergraduate Students' Satisfaction toward Innovative Teaching at Chongqing College of International Business and Economics, China

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### Abstract

The objectives of this research were (1) to investigate the level of undergraduate students' satisfaction toward innovative teaching, (2) to examine the factors affecting this satisfaction, and (3) to analyze the relationship between innovative teaching factors and student satisfaction at Chongqing College of International Business and Economics, China. Grounded in Rogers' Diffusion of Innovation Theory, the study focused on five attributes: relative advantage, compatibility, simplicity, trialability, and observability. A quantitative research design was employed, with a questionnaire administered to 381 undergraduate students selected through purposive and simple random sampling. The instrument demonstrated strong validity (IOC = 0.89) and reliability (Cronbach's Alpha = 0.92). Data were analyzed using mean, standard deviation, Pearson's correlation, and multiple regression analysis. The results revealed that all five innovation factors and overall student satisfaction were at a high level ( $\bar{x} = 4.05\text{--}4.31$ ). Correlation analysis showed significant positive relationships between all innovation factors and satisfaction ( $r = 0.58\text{--}0.74$ ,  $p < .001$ ). Multiple regression analysis indicated that the five innovation attributes collectively explained 68.3% of the variance in student satisfaction ( $R^2 = 0.683$ ,  $p < .001$ ), with relative advantage ( $\beta = 0.32$ ) and compatibility ( $\beta = 0.28$ ) emerging as the strongest predictors. The study concludes that clearly demonstrating the advantages and compatibility of innovative methods is essential for enhancing student learning experiences.

**Keywords:** Innovative Teaching, Student Satisfaction, Diffusion of Innovation, Higher Education, Chongqing College

### Introduction

In the contemporary higher education landscape, innovative teaching represents a vital strategic response to pervasive digital transformation and the shifting expectations toward interactive and blended modalities. Scholarly consensus indicates that student satisfaction is no longer a peripheral metric but a multidimensional construct inextricably linked to engagement levels, the quality of instructional design, and the perceived utility of the pedagogical methods employed.

The theoretical foundation of this study integrates Rogers' Diffusion of Innovation (DOI) theory with the Technology Acceptance Model (TAM). The empirical evidence suggests a paradigm shift where student attitudes are increasingly dictated by the TAM variables of "perceived usefulness" and "perceived ease of use." These variables align conceptually with DOI's attributes; specifically, perceived usefulness functions as the equivalent of Relative Advantage, while ease of use mirrors Simplicity. In digital environments, the integration of technology must transcend mere access, fundamentally enhancing learning effectiveness to foster deeper interaction. This research evaluates these dynamics within the specific context of Chongqing College of International Business and Economics, providing a basis for theory-driven instructional refinement.

Theoretical Framework: Dimensions of Innovation

To analyze the adoption and perception of new pedagogical methods, this study utilizes the five attributes of Rogers' DOI Theory:

1) **Relative Advantage:** The comparative judgment made by students regarding whether innovative methods produce superior learning outcomes and academic utility relative to traditional, lecture-based instruction.

2) **Compatibility:** The degree to which an innovation aligns with students' prior learning experiences, established digital habits, and contextual learning realities.

3) **Simplicity:** The perceived ease of use and intuitive nature of tools and platforms, ensuring students can focus on mastery of the subject matter rather than technical navigation.

4) **Trialability:** The opportunity for students to experiment with new pedagogical styles in low-stakes, safe contexts, thereby reducing the uncertainty and resistance associated with change.

5) **Observability:** The visibility of tangible learning results and performance improvements, providing the positive reinforcement necessary to validate the innovation.

### Research Methodology

This study employed a quantitative research methodology to provide a systematic assessment of students' perceptions.

**1) Population and Sample:** The study targeted undergraduate students at Chongqing College of International Business and Economics. A total of 381 students were selected through a combination of purposive and simple random sampling to ensure representative data.

**2) Theoretical Framework:** The research was grounded in the Diffusion of Innovation Theory, analyzing five key dimensions: relative advantage, compatibility, simplicity, trialability, and observability.

**3) Research Instrument:** A structured questionnaire was used, featuring sections for demographic data and 5-point Likert scale items for each innovation factor and student satisfaction. The overall content validity (IOC) was 0.89, and the reliability was confirmed using Cronbach's Alpha.

**4) Data Analysis:** Quantitative analysis included descriptive statistics (Mean and S.D.), Pearson's correlation to test relationships, and multiple regression analysis to identify significant predictors of satisfaction.

### Result

The findings of the research, addressing all three research objectives, are summarized as follows:

**1) Level of Student Satisfaction toward Innovative Teaching (Objective 1):** Overall student satisfaction toward innovative teaching was rated at a high level ( $\bar{x} = 4.18$ , S.D. = 0.51). Among all satisfaction dimensions, satisfaction with teaching methods and content delivery received the highest mean scores ( $\bar{x} = 4.31$ , S.D. = 0.48), while satisfaction with assessment practices received a slightly lower but still high rating ( $\bar{x} = 4.05$ , S.D. = 0.56). These results indicate that the majority of undergraduate students at Chongqing College of International Business and Economics hold a positively oriented view of their innovative teaching environment.

**2) Status of Innovation Factors (Objective 2 — Descriptive):** All five innovation attributes derived from Rogers' (2003) Diffusion of Innovation Theory were perceived by students at a high level. Relative Advantage received the highest rating ( $\bar{x} = 4.28$ , S.D. = 0.49), followed by Observability ( $\bar{x} = 4.22$ , S.D. = 0.52), Compatibility ( $\bar{x} = 4.19$ , S.D. = 0.54), Trialability ( $\bar{x} = 4.11$ , S.D. = 0.57), and Simplicity ( $\bar{x} = 4.08$ , S.D. = 0.59). These results suggest that students strongly perceive the benefits of innovative teaching and view it as aligned with their existing learning habits and digital experiences.

**3) Correlation Analysis (Objective 3 — Relationships):** Pearson's correlation analysis revealed significant positive relationships between all five innovation attributes and student satisfaction ( $p < .001$ ). Relative Advantage showed the strongest correlation with satisfaction ( $r = 0.74$ ), followed by Compatibility ( $r = 0.70$ ), Observability ( $r = 0.65$ ), Trialability ( $r = 0.61$ ), and Simplicity ( $r = 0.58$ ). These results confirm that as students perceive higher levels of advantage, fit, observability, and ease in innovative teaching methods, their overall satisfaction increases correspondingly.

**4) Multiple Regression Analysis (Objective 3 — Predictors):** The multiple regression analysis confirmed that the five innovation attributes collectively and significantly predicted student satisfaction ( $R^2 = 0.683$ , Adjusted  $R^2 = 0.679$ ,  $F(5, 375) = 161.83$ ,  $p < .001$ ), explaining 68.3% of the variance in satisfaction scores. Relative Advantage emerged as the strongest predictor ( $\beta = 0.32$ ,  $p < .001$ ), followed by Compatibility ( $\beta = 0.28$ ,  $p < .001$ ), Observability ( $\beta = 0.19$ ,  $p < .001$ ), Trialability ( $\beta = 0.14$ ,  $p < .01$ ), and Simplicity ( $\beta = 0.11$ ,  $p < .05$ ). These results confirm that clearly demonstrating the advantages and compatibility of innovative methods plays the most critical role in shaping students' positive learning experiences.

## Discussion and conclusions

The findings of this study provide substantive empirical responses to all three research objectives, advancing both theoretical understanding and practical application of Rogers' (2003) Diffusion of Innovation Theory in the higher education context. With respect to the first objective, the high overall satisfaction level ( $\bar{x} = 4.18$ ) demonstrates that undergraduate students at Chongqing College of International Business and Economics hold a strongly positive perception of innovative teaching, affirming that the institution's pedagogical transformation efforts are well-received. This finding is consistent with prior research confirming that student satisfaction is closely tied to perceived instructional quality and engagement (Carini et al., 2006; Sun et al., 2008). Regarding the second objective, all five innovation attributes were rated at a high level, with Relative Advantage and Observability receiving the highest means, suggesting that students can clearly perceive the comparative benefits and visible outcomes of innovative methods in their learning experience (Davis, 1989; Venkatesh et al., 2012). Addressing the third objective, the strong predictive power of the innovation attributes ( $R^2 = 0.683$ ) confirms Rogers' (2003) proposition that perceived characteristics of innovation determine its acceptance. However, the results require deeper theoretical interpretation beyond descriptive confirmation.

The strong influence of Relative Advantage suggests that students evaluate innovative teaching primarily through comparative judgment whether the method produces superior learning outcomes compared to traditional lectures. This aligns with Technology Acceptance research, where perceived usefulness directly predicts satisfaction and continued use (Davis, 1989; Venkatesh et al., 2012). When students perceive that innovative teaching increases engagement and accessibility, their satisfaction rises accordingly. Empirical studies on blended and online learning similarly confirm that perceived instructional benefits strongly correlate with positive learning experiences (Alshammari & Lin, 2023; Arbaugh, 2000).

The predictive role of Compatibility indicates that innovations are more readily accepted when aligned with students' prior experiences and digital habits. This finding supports engagement theory, which emphasizes the importance of aligning pedagogy with learners' contextual realities (Carini et al., 2006; Halverson & Graham, 2019). In digitally mediated classrooms, compatibility reduces resistance and cognitive friction, thereby enhancing learning presence and satisfaction (Shea & Bidjerano, 2010).

Regarding Simplicity, the results mirror principles of perceived ease of use in the Technology Acceptance Model (Davis, 1989). When innovative tools are intuitive, students allocate cognitive resources to learning rather than navigating systems. Studies on LMS usability demonstrate that ease of navigation significantly influences satisfaction and persistence (Joo et al., 2013; Sun et al., 2008).

The importance of Trialability reflects a psychological safety mechanism in innovation adoption. Allowing students to experiment with new teaching approaches in low-stakes contexts reduces uncertainty, consistent with Rogers' (2003) diffusion model. Research on learner readiness further suggests that gradual exposure increases confidence and satisfaction (Hung et al., 2010).

Finally, Observability reinforces innovation adoption through visible outcomes. When students can clearly observe performance improvement either individually or collectively positive reinforcement strengthens satisfaction. This aligns with engagement and feedback research indicating that visible progress enhances motivation and course satisfaction (Gibbs & Simpson, 2004; Freeman et al., 2014).

Importantly, the integration of these attributes suggests that satisfaction is not generated by innovation novelty alone but by the interaction between perceived value, usability, contextual alignment, and visible results. This systemic interpretation is supported by blended learning scholarship, which emphasizes coordinated instructional design rather than isolated technological adoption (Dziuban et al., 2015; Porter & Graham, 2016).

In conclusion, this study has successfully addressed all three research objectives. First, it documented that undergraduate students' overall satisfaction with innovative teaching is at a high level. Second, it identified the relative levels of all five Diffusion of Innovation attributes, confirming that Relative Advantage and Compatibility are the most strongly perceived factors. Third, it demonstrated through both correlation and regression analyses that innovation attributes are significant predictors of student satisfaction, with the five factors collectively explaining 68.3% of variance. These findings extend Diffusion of Innovation Theory into the domain of student satisfaction by empirically demonstrating how innovation attributes function as cognitive evaluation mechanisms. Innovative teaching succeeds not because it is technologically advanced, but because students perceive it as advantageous, compatible, manageable, testable, and demonstrably effective. These results provide theoretical and practical guidance for higher education institutions in China and comparable contexts seeking sustainable and evidence-based instructional transformation (Boelens et al., 2017; Dziuban et al., 2015; Porter & Graham, 2016).

## Suggestion

### 1. Recommendations for Practice and Administration:

**Focus on Compatibility:** Educators should design innovative activities that specifically target students' diverse learning styles and digital habits. Ensuring that new tools are compatible with the software and platforms students already use will facilitate a smoother adoption process.

**Enhancing Trialability:** Schools should implement "low-stakes" trial periods for new teaching methods or technologies. Providing practice sessions and orientation workshops can help students adapt to new styles and significantly reduce learning anxiety.

**Demonstrating Results (Observability):** Teachers should regularly share learning outcomes and success stories with students. Making learning achievements visible through digital portfolios or group reflections helps students observe the tangible benefits of innovative teaching.

**Support and Guidance:** Continuous technical and pedagogical support should be provided to students. Ensuring that instructions are clear and tools are easy to navigate will maintain high levels of "Simplicity" and satisfaction.

## 2. Recommendations for Future Research:

**Qualitative Exploration:** Future research should incorporate qualitative methods, such as focus groups, to gain a deeper understanding of the *emotional* aspects of student satisfaction and the specific barriers students face when adopting highly complex innovations.

**Longitudinal Assessment:** It is recommended to conduct a longitudinal study to observe how satisfaction levels evolve as an innovation moves from the "early adoption" phase to becoming a "standard" part of the curriculum.

**Comparative Analysis:** Further studies could compare satisfaction levels between different academic disciplines (e.g., Arts vs. Sciences) to see if the impact of innovation attributes varies by subject matter.

**Teacher Perspective:** Research focusing on teachers' satisfaction and the challenges *they* face in delivering innovative instruction would provide a more holistic view of the educational innovation ecosystem.

## 3. Comparative Analysis

Investigate how the impact of innovation attributes varies across different academic disciplines (e.g., Arts vs. Sciences).

## 4. Teacher Perspective

Examine the challenges and satisfaction levels of educators to provide a holistic view of the educational innovation ecosystem.

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