

# AI Acceptance in New Media Teaching Among Lecturers in ChongQing China

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**Abstract:** *The rapid integration of Artificial Intelligence (AI) into the global educational landscape has necessitated a profound shift in pedagogical strategies, particularly within specialized fields such as new media. This research empirically investigates the factors influencing the acceptance and adoption of AI technologies among higher education lecturers in Chongqing, China. By synthesizing the Technology Acceptance Model (TAM) and the Diffusion of Innovation (DOI) theory, the study develops a comprehensive framework to evaluate how perceived institutional and technical attributes shape educator behavior. Data were collected via a structured questionnaire from academic staff across 46 universities in Chongqing, utilizing purposive sampling to ensure domain-specific expertise. Structural Equation Modeling (SEM) was employed to analyze the relationships between Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Compatibility, Relative Advantage, and Behavioral Intention. The findings indicate that while PEOU and PU remain fundamental drivers, Compatibility with existing creative workflows serves as a critical mediator for long-term adoption. Furthermore, the study highlights the strategic importance of aligning AI integration with Sustainable Development Goal 4 (SDG 4) to foster inclusive and high-quality digital education. These results provide actionable insights for university administrators to design targeted professional development programs that reduce technical anxiety and enhance pedagogical innovation.*

**Keywords:** Artificial Intelligence (AI); Technology Acceptance Model (TAM); Diffusion of Innovation (DOI); Higher Education; New Media Pedagogy; Chongqing; Sustainable Development Goal 4 (SDG 4)

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## 1. Introduction

### 1.1 Background of the Study

In the contemporary global landscape, Artificial Intelligence (AI) has transcended its origins as a mere computational tool to become a fundamental catalyst for pedagogical transformation. As the world transitions into the era of Education 4.0, higher education institutions are increasingly required to integrate advanced technological frameworks into their instructional delivery. This shift is not only about the adoption of new software but represents a paradigm shift in how knowledge is constructed and disseminated. In the specialized field of new media teaching—encompassing journalism, digital storytelling, and multi-platform communication—AI offers unprecedented capabilities for personalized learning, automated content analytics, and the simulation of complex media environments.

Within the Chinese educational context, the "Action Plan for Artificial Intelligence Innovation in Higher Education" has set a strategic mandate for the digitalization of university curricula. Chongqing, as a primary educational hub and a pilot zone for digital economy development in Southwestern China, serves as a critical focal point for this research. The integration of AI in Chongqing's universities is currently at a pivotal stage where infrastructure development is meeting the complexities of human perception. Understanding the acceptance levels of lecturers in this region is paramount to ensuring that technological investments translate into meaningful educational outcomes.

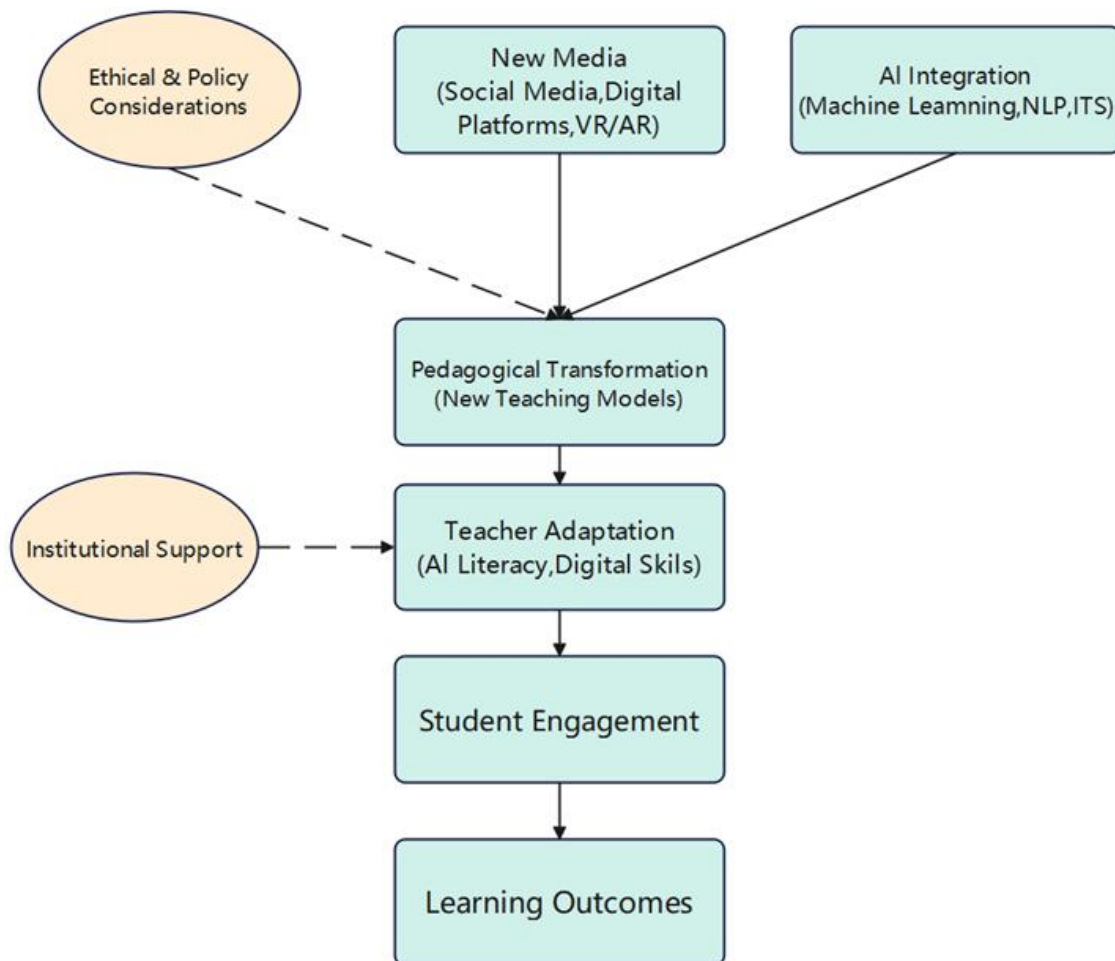


Figure 1 : Conceptual Framework

## 1.2 Problem Statement

Despite the rapid proliferation of AI tools, a significant "implementation gap" persists within the new media departments of Chongqing's higher education institutions. While universities have invested heavily in digital infrastructure, the actual utilization of AI by lecturers remains fragmented and inconsistent. This phenomenon is often characterized by a "technological paradox" where the availability of advanced tools does not automatically result in their pedagogical application.

Lecturers frequently report a sense of technical anxiety, stemming from the perceived complexity of AI systems and a lack of alignment with existing media production workflows. Furthermore, existing research has largely focused on student-centric perspectives, leaving a critical void in our understanding of the specific factors that influence the psychological

readiness of frontline educators. Without addressing these perceptual barriers, the transition toward an AI-augmented media education system will remain incomplete.

#### 1.4 Significance and SDG 4 Alignment

Theoretically, this study bridges the gap between technology acceptance and innovation diffusion by synthesizing the TAM and DOI models in a specialized academic context. Practically, the findings provide a roadmap for university administrators in Chongqing to design more effective professional development programs that prioritize pedagogical compatibility over mere technical skill.

Furthermore, this research is deeply aligned with **Sustainable Development Goal 4 (SDG 4: Quality Education)**. By identifying and mitigating the barriers to AI adoption, this study contributes to the creation of a more inclusive, high-quality, and technologically resilient educational environment. By empowering lecturers to harness the power of AI, Chongqing's higher education sector can better prepare students for the demands of the future digital economy.

#### 1.3 Research Objectives

The primary aim of this research is to empirically investigate the factors that determine the acceptance and adoption of AI technologies among new media lecturers in Chongqing. The specific objectives are as follows:

- To evaluate the current extent of AI technology adoption and its practical application within new media curricula.
- To investigate the impact of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) on the behavioral intentions of academic staff.
- To analyze how innovation-specific attributes, such as compatibility and relative advantage, influence the integration of AI into traditional teaching models.

## 2. Literature Review and Theoretical Framework

### 2.1 Theoretical Foundation: TAM and DOI Integration

The theoretical underpinning of this research is a synthesized framework of the Technology Acceptance Model (TAM) and the Diffusion of Innovation (DOI) theory. TAM, originally developed by Davis (1989), remains the most influential model in explaining technology adoption. It posits that Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are the two primary determinants of a user's intention. In the context of AI in Chongqing's higher education, PU refers to the degree to which a lecturer believes that using AI will enhance their teaching performance, while PEOU relates to the perceived lack of effort required to use the technology.

Complementing TAM, Rogers' (2003) DOI theory provides a broader perspective by examining the attributes of the innovation itself. Key constructs such as Relative Advantage (the perception that AI is better than current tools), Compatibility (the degree to which AI fits with existing teaching values), and Complexity (the perceived difficulty) are integrated into the model. This integration is crucial because TAM explains *why* users accept technology, while DOI explains *how* the characteristics of the innovation influence that acceptance. By combining them, this study captures both the psychological and technical dimensions of AI adoption in the academic environment of Chongqing.

## 2.2 Proposed Theoretical Framework

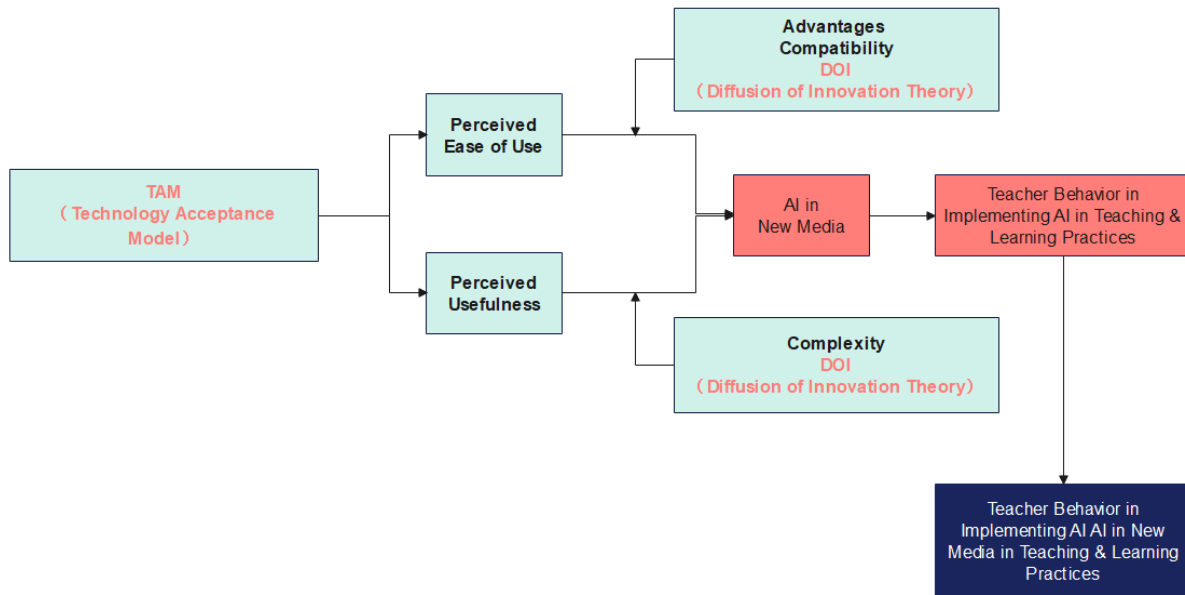


Figure 2: Integrated TAM-DOI Theoretical Framework for AI Acceptance

## 2.3 Detailed Hypotheses Development and Variable Analysis

To empirically test the relationships within the integrated model, the following hypotheses are developed with detailed theoretical justifications:

### 2.3.1 The Relationship between PEOU and PU (H1)

According to the TAM logic, the easier a technology is to use, the more useful it is perceived to be. For lecturers in Chongqing, if AI tools (such as automated grading or content generation) have intuitive interfaces and require minimal technical troubleshooting, educators can dedicate more time to pedagogical innovation. Therefore, **H1** posits that Perceived Ease of Use has a significant positive effect on Perceived Usefulness.

### 2.3.2 The Impact of PU on Attitude and Intention (H2)

Perceived Usefulness is the strongest predictor of technology acceptance. When lecturers recognize that AI can effectively reduce their administrative burden and improve student engagement, they develop a positive attitude toward the technology. This cognitive evaluation of "utility" directly shapes their emotional predisposition. Thus, **H2** states that Perceived Usefulness significantly influences the attitude of lecturers toward adopting AI.

### 2.3.3 The Role of Compatibility in AI Adoption (H3)

Compatibility is a cornerstone of DOI theory. In new media education, AI tools must align with existing creative workflows (e.g., video editing, digital journalism). If an AI tool is compatible with the lecturer's current teaching philosophy and departmental standards, the perceived usefulness of that tool increases. **H3** suggests that Compatibility has a positive impact on Perceived Usefulness.

### 2.3.4 Relative Advantage and Behavioral Intention (H4)

Relative Advantage represents the degree to which AI is perceived as superior to traditional teaching methods. If lecturers in Chongqing believe that AI provides a competitive edge—such as real-time data analytics or immersive VR experiences—their behavioral intention to adopt the technology will strengthen. **H4** proposes that Relative Advantage is a primary driver of Behavioral Intention.

### **2.3.5 Complexity as a Barrier to Ease of Use (H5)**

Complexity is the "dark side" of innovation attributes. In this study, complexity refers to the perceived difficulty in understanding and implementing AI algorithms in the classroom. High complexity increases the cognitive load on lecturers, thereby reducing their Perceived Ease of Use. Consequently, **H5** posits that Complexity negatively affects the Perceived Ease of Use of AI technologies.

## **3. Research Methodology**

### **3.1 Research Design and Quantitative Approach**

This study employs a quantitative research design, specifically utilizing a cross-sectional survey methodology to investigate the underlying factors influencing Artificial Intelligence (AI) acceptance among lecturers. The selection of a quantitative approach is driven by the need for an objective and systematic measurement of theoretical constructs derived from the Technology Acceptance Model (TAM) and the Diffusion of Innovation (DOI) theory. By translating subjective professional perceptions into quantifiable numerical data, this research facilitates robust statistical hypothesis testing, thereby providing a generalized and reliable understanding of the technological adoption landscape within Chongqing's higher education sector.

### **3.2 Target Population and Purposive Sampling Strategy**

The target population for this investigation consists of higher education lecturers and academic staff situated within 46 universities and colleges in Chongqing, China. Participants were specifically recruited from departments focused on new media, journalism, and digital communication, as these fields are currently at the vanguard of AI integration—ranging from generative content models to automated media analytics.

A purposive sampling technique was strategically applied to select respondents who possess the specialized professional background required to evaluate the pedagogical and technical implications of AI tools in a classroom setting. This approach ensures that the data reflects the insights of frontline educators who are actively engaged in curriculum innovation. The final sample represents a diverse cross-section of both public and private institutions across the Chongqing municipality, ensuring a representative snapshot of the regional academic environment.

### **3.3 Research Instrumentation and Operationalization**

The primary instrument for empirical data collection is a structured online questionnaire. The measurement scales were meticulously developed by adapting validated items from prominent technology adoption literature and tailoring them to the specific nuances of AI in media education. The questionnaire is organized into two primary segments: Section A captures demographic profiles (such as age, gender, and years of teaching experience), while Section B operationalizes the theoretical constructs using a five-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) to assess variables such as Perceived Usefulness, Compatibility, and Complexity.

**Table 3: Structure of the Educator Questionnaire**

Research Question	Population	Data Collection Method	Estimated Sample Size
RQ1: Adoption level	Educators & Administrators	Online survey	~130 (100 educators + 30 administrators)
RQ2: Student outcomes	Students	Survey + Academic records	~180 (90 AI group + 90 traditional)
RQ3: Educator attitudes	Educators	Online survey + Interviews	100 (survey), 10–12 (interviews)
RQ4: Instructional change	Educators	Semi-structured interviews	10–12
RQ5: Student engagement	Students	Focus groups	3–4 groups × 6–8 students each

### 3.4 Data Analysis and Statistical Framework

The data analysis phase involves a multi-stage statistical framework utilizing IBM SPSS Statistics for initial descriptive screening and SmartPLS for Structural Equation Modeling (SEM). Descriptive statistics are used to provide a comprehensive summary of the demographic characteristics of the respondents and the baseline levels of AI adoption within their respective departments.

To test the complex hypothesized relationships within the integrated TAM-DOI framework, SEM is utilized due to its robust capability to analyze multiple path coefficients simultaneously. The analysis process includes a rigorous two-step evaluation: first, the assessment of the measurement model (outer model) to verify internal consistency, convergent validity, and discriminant validity; followed by the evaluation of the structural model (inner model) to determine the significance and strength of the hypothesized paths. This ensures that the determinants of AI acceptance among Chongqing lecturers are identified with a high degree of statistical reliability.

## 4. Discussion, Conclusion, and Recommendations

### 4.1 Discussion of Findings

The findings of this research provide a nuanced understanding of the factors that drive Artificial Intelligence (AI) acceptance among lecturers in Chongqing’s higher education institutions. By integrating the Technology Acceptance Model (TAM) with the Diffusion of Innovation (DOI) theory, the study reveals that the adoption process is influenced not only by the perceived utility of the tools but also by their alignment with existing professional values.

A critical finding is the significant role of **Compatibility** and **Relative Advantage**. Lecturers in new media departments are more likely to integrate AI into their curriculum if they perceive the technology as a natural extension of their creative workflows rather than a disruptive complexity. This aligns with the theoretical assertion that innovation diffusion is highly dependent on how well the technology fits into the social and professional fabric of the user group.

## 4.2 Practical Recommendations

Based on the empirical evidence, several strategic recommendations are proposed for university administrators and policymakers in Chongqing:

- a) **Pedagogical-Centered Training:** Professional development programs should transition from basic technical software training to workshops that emphasize how AI can solve specific pedagogical challenges in new media education.
- b) **Institutional Support Systems:** Universities should establish clear guidelines and support structures to reduce the "Perceived Complexity" of AI tools, thereby fostering a more positive attitude toward adoption.
- c) **Strategic Alignment with SDG 4:** Institutions should leverage AI as a tool for achieving **Sustainable Development Goal 4 (Quality Education)**, ensuring that the technology is used to promote inclusive and equitable learning environments.

## 4.3 Conclusion

In conclusion, the acceptance of AI among higher education lecturers in Chongqing is a multi-faceted phenomenon governed by both psychological perceptions and innovation attributes. This study confirms that while "Perceived Usefulness" is a fundamental motivator, it is the synergy of "Compatibility" and "Relative Advantage" that ensures the long-term sustainability of AI integration in the classroom. As Chongqing continues to position itself as a digital education leader, addressing these core determinants will be essential for the successful transformation of its academic landscape.

## 4.4 Limitations and Future Research

Despite its contributions, this study is subject to certain limitations. The cross-sectional nature of the research captures a snapshot of perceptions at a specific point in time. Future research should consider longitudinal designs to observe how lecturers' attitudes evolve as AI technology matures and becomes more ubiquitous in society. Additionally, expanding the scope to include a comparative analysis between Chongqing and other metropolitan hubs in China would provide a broader perspective on the national digital transformation.

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## Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this paper.

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## Appendix

### Appendix A: Research Questionnaire Items

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

#### Perceived Usefulness (PU)

- PU1: Using AI tools improves my teaching performance.
- PU2: AI applications enable me to accomplish tasks more quickly.
- PU3: AI enhances the quality of new media instruction.

#### Perceived Ease of Use (PEOU)

- PEOU1: My interaction with AI tools is clear and understandable.
- PEOU2: It is easy for me to become skillful at using AI.
- PEOU3: I find AI tools easy to use in the classroom.

#### Compatibility (COM)

- COM1: Using AI is compatible with all aspects of my teaching.
- COM2: AI tools fit well with the way I like to work.
- COM3: AI integration is consistent with my existing pedagogical values.