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Welcome Address from Editors

It is appropriate to celebrate the continuity of an exciting and esteemed journal. The IJMBE will serve and provide a forum for exchange of ideas among business executives and academicians concerned with Management, Business, and Economics issues. With the rapid evolution of corporate business from international to global in recent years, general business has been one of the areas of greatest added complexity and concern for corporate managers. The IJMBE will be an academic journal combining academic inquiry and informed business practices. It will publish empirical, analytical, review, and survey articles, as well as case studies related to all areas of Management, Business, and Economics. A sentiment often expressed by practitioners is that academic research in general may not be addressing the most relevant questions in the real world.

It is fair to say that the IJMBE will publish high-quality applied-research papers. Nevertheless, studies that test important theoretical works and shed additional light on the issue with some business implications will also be solicited. Each submitted paper has been reviewed by several members of the IJMBE international editorial board and external referees. On the basis, we would like to thank all of them for their support with review process of submitted papers.

We cordially invite papers with theoretical research/conceptual work or applied research/applications on topics related to research, practice, and teaching in all subject areas of Management, Business, and Economics, or related subjects. We welcome paper submissions on the basis that the material has not been published elsewhere. The ultimate goal is to develop a journal that will appeal to both management and business practitioners. We expect the IJMBE to be an outstanding international forum for the exchange of ideas and results, and provide a baseline of further progress in the aforementioned areas.



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Asst. Prof. Dr. Ungul Laptaned,
Sripatum University, Thailand



Associate Editor
Asst. Prof. Dr. Konrad Gunesch
American University in the Emirates, United Arab Emirates

Foreword

Welcome to the special issue of International Journal of Management, Business, and Economics (IJMBE), the Editors received a number of papers from different countries such as China and Thailand. The received papers encompassed many areas of marketing, banking, economics, insurance and risk management, industrial and operation management, strategic management, and international and global business management. After the review process, a total of eleven manuscripts were selected for publication.

The first article is authored by *Bin Ma, Yuanbo Zhong, Baoqiang Han, and Zhian Zhao*, and named as “*Behavioral Intentions and Determinants of AIGC Adoption among Visual Design Students: A Quantitative Study*”. The main objective of this study is to examine the determinants influencing students’ behavioral intentions to adopt AI-aided design tools in visual communication design education.

The second paper is examined by *Dongxu Zhang, Shaowen Wang, and Xuanhua Yang*. Their paper is entitled “*Research on the Impact of Digital Technology on Musical Creation: Taking the Musical Theatre Market in Nanjing as an Example*” This study applies diffusion-of-innovation theory to examine how digital tools influence the creative process, performance delivery, and audience reception within Nanjing’s musical ecosystem.

The third article is conducted by *Jiali Zuo and Zuochang Zhang*, and is entitled “*Empowerment Leadership and Employees Cyberloafing: The Role of Basic Psychological Needs Satisfaction and Power Distance Orientation*”. This study investigates the relationship between leadership empowerment and employees’ cyberloafing, using self-determination theory as the theoretical framework.

The fourth article is conducted by *Jie He, Liming Zhang, and Baoqiang Han*, and is entitled “*The Impact of Competitive Culture on Team Characteristics: The Moderating Role of Enterprise Ownership*”. This study investigates the impact of competitive culture on employee team characteristics within the Chinese retail industry, with a focus on how ownership types (private, state-owned, and foreign) influence this relationship.

Article number five is entitled “*The Impact Mechanism of Entrepreneurial Leadership on Employees’ Deviant Innovation Behavior and Corporate Performance*”, and is examined by *Kun Dai*. This study investigates the influence of entrepreneurial leadership on new venture performance through the mediating role of employee deviant innovation behavior, informal innovation activities.

The sixth article is conducted by *Le Zhang*, and is entitled “*A Study on the Development Path of Practical Teachers in Dance Majors at Chinese Universities*” This study investigates the developmental pathways of practice-oriented teachers in university dance programs in China, focusing on their professional transformation from performers to educators.

In the seventh article, entitled “*Research on the Application of Minimalism in Vessel Design*” conducted by *Shuaixian Liu, Fan Liu, and Jian Pu*. This study investigates the application of minimalism in vessel design, aiming to achieve a balance between functional efficiency, aesthetic appeal, and innovative craftsmanship.

Article number eight is written by *Shuiping Lu, Juntao Li, and Shaowen Wang*, and is entitled “*The Visual Art Design of University Cheerleading Performances and Audience Aesthetic Experience Review*”. This study investigates how visual design elements, including costume design, lighting, props, and stage layout, affect audience aesthetic experience and emotional resonance.

The ninth article is authored by *Weijia Yuan and Shaowen Wang*, and named as “*Analysis of the Development and Dissemination Strategies of Niche Music from the Perspective of Art Management*”. This study addresses this gap by examining how innovative operational strategies influence audience satisfaction, operational efficiency, and long-term sustainability in Live Houses.

Last but not the least, the article entitled “*Factors Influencing Satisfaction with Electronic Payment (E-Payment) Systems among Chinese Tourists in Phuket*” is examined by *Zhou Kaibin and Sirawit Sirirak*. This study investigates the factors influencing Chinese tourists’ satisfaction with E-Payment systems in Phuket, focusing on the roles of the digital marketing mix and technology acceptance factors.

It is hoped that you will enjoy reading these articles and that they will generate responses and discussions that will help advance our knowledge of the field of Management, Business, and Economics. The Editors and the Editorial Board of the IJMBE would like to welcome your future submissions to make this journal your forum for sharing ideas and research work with all interested parties.

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Behavioral Intentions and Determinants of AIGC Adoption among Visual Design Students: A Quantitative Study

by

Bin Ma¹, Yuanbo Zhong, Baoqiang Han, and Zhian Zhao

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 28601658@qq.com¹

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Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 28601658@qq.com¹

Abstract

The rapid advancement of Artificial Intelligence Generated Content (AIGC) has significantly influenced creative industries and higher education, particularly in visual communication design. This study investigates the determinants affecting students' behavioral intentions to adopt AIGC tools in their learning and creative practices. Drawing on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), a quantitative research approach was employed. Data were collected from 516 undergraduates across three institutions in Sichuan, China, using stratified random sampling to ensure representativeness across academic years and institutional tiers. The study examined six latent variables: perceived ease of use, perceived usefulness, attitudes, behavioral intention, facilitating conditions, and social influence. Structural equation modeling (SEM) and confirmatory factor analysis (CFA) were utilized to test the proposed hypotheses and validate the measurement model. Results demonstrated that perceived ease of use significantly influenced both perceived usefulness and students' attitudes toward AIGC, while perceived usefulness had a strong positive effect on attitude formation. Attitude emerged as a critical mediator between perceived benefits and behavioral intention. External factors, including social influence and facilitating conditions, also showed significant positive effects on students' willingness to adopt AIGC tools. The findings highlight the importance of both individual perceptions and institutional support mechanisms in fostering technology acceptance. This study provides practical recommendations for educators and policymakers to enhance AIGC adoption by improving accessibility, providing adequate training, and aligning technological integration with students' creative and professional needs. Future research may extend this model to other creative disciplines and explore longitudinal effects of AIGC integration in education. The study contributes to the growing body of knowledge on AI adoption in higher education, emphasizing its role in shaping the future of creative learning environments.

Keywords: Artificial Intelligence Generated Content, Technology Acceptance Model, Visual Communication Design, Behavioral Intention, Higher Education

1. Introduction

1.1 Background and Importance of the Problem

The rapid development of Artificial Intelligence Generated Content (AIGC) has profoundly transformed education, creative industries, and professional design practices. In particular, visual communication design education is increasingly influenced by AI-driven tools that provide students with opportunities to enhance their creativity, accelerate design workflows, and access innovative forms of artistic expression (Bao & Wang, 2021; Bennett & Dawson, 2020). The growing prevalence of generative AI in design education raises critical questions regarding how students perceive, adopt, and integrate these technologies into their learning and creative processes. Despite the technological progress, the integration of AIGC into higher education is not without challenges. Students may experience uncertainty about the usability, reliability, and ethical implications of AI-driven tools (Bigman & Gray, 2021). Institutions must therefore understand the determinants of students' acceptance of AI-assisted design, not only from a technical perspective but also in terms of psychological readiness, social influence, and institutional support. This issue becomes particularly important in design education, where creativity and personal expression must be balanced with technological assistance. Consequently, investigating behavioral intentions toward AI adoption provides valuable insights for enhancing pedagogical practices and ensuring sustainable implementation of emerging technologies in higher education.

1.2 Research Question

The central research question guiding this study is: What factors influence visual communication design students' behavioral intentions to adopt AI-generated content (AIGC) tools in their learning and design practices? Sub-questions include:

- 1) How do perceptions of ease of use and usefulness affect students' attitudes toward AI-aided design?
- 2) To what extent do social influences and institutional conditions shape behavioral intentions?
- 3) What causal relationships exist among perceived usability, usefulness, attitude, and behavioral intention within the AIGC adoption process?

1.3 Research Objective

The main objective of this study is to examine the determinants influencing students' behavioral intentions to adopt AI-aided design tools in visual communication design education. Specific objectives include:

- 1) To construct and validate a research framework integrating the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT).
- 2) To empirically test causal relationships among perceived ease of use, perceived usefulness, attitudes, behavioral intentions, social influence, and facilitating conditions.
- 3) To provide theoretical and practical recommendations for the effective adoption of AI in design education, offering guidance for educators, policymakers, and technology developers.

2. Literature Review

2.1 Related Concepts and Theories

The Technology Acceptance Model (TAM) developed by Davis (1989) and extended by Bhattacharjee (2001) provides a widely recognized framework for predicting user adoption of information systems. TAM posits that perceived ease of use (PEOU) and perceived usefulness (PU) significantly influence users' attitudes toward technology, which in turn affect behavioral intentions. The Unified Theory of Acceptance and Use of Technology (UTAUT) further expands this perspective by incorporating social influence and facilitating conditions as additional determinants of adoption (Venkatesh et al., 2003). In the context of education, these models have been adapted to investigate students' acceptance of e-learning platforms (Abbad, 2021; Cheung & Vogel, 2013), teaching software (Brown & Green, 2021), and collaborative technologies. The integration of TAM and UTAUT offers a comprehensive framework to explore how cognitive perceptions, institutional support, and social dynamics collectively shape technology adoption in learning environments.

2.2 Literature Surveys

Recent scholarship continues to deepen our understanding of AIGC adoption in education. Aung Pyae (2024) investigated undergraduate students' acceptance and trust regarding AI-generated images in educational tasks including presentations and web design and found generally positive attitudes driven by ease of use and perceived academic benefits, though concerns regarding technical precision were noted. Chan and Hu (2023) similarly report that university students in Hong Kong appreciate the personalization and brainstorming support offered by generative AI, while also voicing reservations about accuracy, privacy, and ethical implications. Setälä et al. (2025) extended TAM in upper-secondary math education by adding perceived enjoyment and compatibility into the model, concluding that both constructs significantly influenced perceived usefulness and ease of use underscoring the impact of user experience and contextual fit in AI adoption. Complementing student-focused insights, studies within broader educational contexts reinforce TAM's relevance.

In 2025, researchers applied an extended TAM model to examine teachers' adoption of generative AI, demonstrating that exposure to credible AI information and institutional support significantly increased perceived usefulness and in turn, intention to use these tools mediated by self-efficacy and intrinsic motivation. Another Frontiers study highlighted that teachers' positive perceptions of AI's role in developing instructional materials had a direct and significant impact on their perceived utility of AI in education ($\beta = 0.254, p < 0.01$), with familiarity further amplifying this effect, and perceived challenges diminishing perceived usefulness. Beyond TAM, Yu et al. (2024) explored the role of perceived enjoyment in adopting GenAI tools among business students and found that enjoyment not necessarily usefulness was the strongest predictor of attitude and intention to use (mediated via ease of use). Studies combining TAM and the Innovation Diffusion Theory (IDT) similarly reaffirmed that perceived usefulness strongly influences educators' acceptance of generative AI, although ease of use remains relevant, especially for those in early adopter groups. These recent findings reinforce the applicability of TAM and UTAUT in analyzing AIGC adoption among students, while also highlighting additional drivers such as enjoyment, compatibility, familiarity, and institutional support that deserve integration into your conceptual framework.

2.3 Conceptual Framework

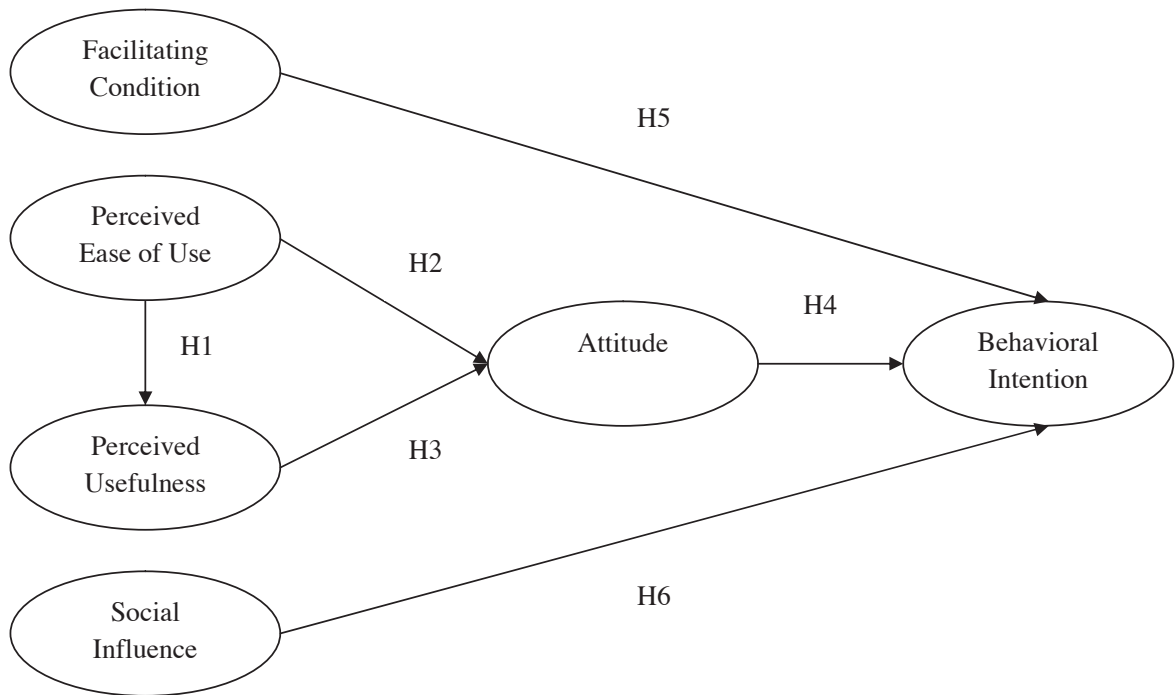


Figure 1 Conceptual Framework

2.4 Research Hypothesis

Based on the theoretical foundation and literature review, the following hypotheses are proposed:

- H1: Perceived ease of use significantly influences perceived usefulness of AI-aided design.
- H2: Perceived ease of use significantly influences students' attitudes toward AI-aided design.
- H3: Perceived usefulness significantly influences students' attitudes toward AI-aided design.
- H4: Attitudes toward AI-aided design significantly influence behavioral intentions.
- H5: Facilitating conditions significantly influence behavioral intentions.
- H6: Social influence significantly influences behavioral intentions.

Together, these hypotheses establish a comprehensive analytical framework to empirically examine students' behavioral intentions in adopting AIGC for design education.

3. Research Methodology

3.1 Research Design

This study adopted a quantitative research design to investigate students' behavioral intentions toward AI-generated content (AIGC) in visual communication design. The focus was on capturing measurable constructs such as perceived usability, perceived usefulness, attitudes, behavioral intentions, facilitation conditions, and social influence. By employing a structured questionnaire and statistical analysis, the study sought to validate theoretical models and examine causal relationships among variables. Random stratified sampling ensured representation across different academic years and institutions, thereby enhancing generalizability and reliability.

3.2 Population and Sample

The research population comprised visual communication design undergraduates enrolled between 2021 and 2023 at three Sichuan-based institutions: Sichuan University (a key national university), Sichuan Normal University (an ordinary undergraduate institution), and Sichuan University Jinjiang College (a private college). These universities were chosen for their representativeness of different tiers of higher education in China. Sample size estimation was conducted using the Danielsooper professional tool, considering effect size, statistical power, significance level, and the number of latent variables (6 latent variables and 21 observed variables). The calculation indicated a minimum required sample of 403. To improve representativeness and reduce sampling bias, 535 questionnaires were distributed, yielding 516 valid responses. Stratified random sampling was used to allocate participants proportionally across academic years and institutions. For example, at Sichuan University Jinjiang College, 80 students from the 2021 cohort, 107 from the 2022 cohort, and 174 from the 2023 cohort were included. Similarly, 121 students were sampled from Sichuan Normal University and 54 from Sichuan University. This proportional allocation ensured diversity in academic background and learning stage, providing a comprehensive view of students' perceptions and adoption behaviors.

3.3 Research Instruments

The primary research instrument was a structured questionnaire consisting of three parts:

1) Screening Questions – Used to confirm eligibility (e.g., “Are you an undergraduate majoring in Visual Communication Design at Sichuan University, Sichuan Normal University, or Sichuan University Jinjiang College?”).

2) Demographic Information – Including gender, institution, class, and major.

3) Observation Variable Measurement Scale – Containing six latent variables and 21 items measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

The constructs of Perceived Usability (PEOU), Perceived Usefulness (PU), and Attitudes (ATT) were adapted from Cheung and Vogel (2013), while items related to Behavioral Intention (BI), Facilitation Conditions (FC), and Social Influence (SI) were adapted from Abbad (2021). Content validity was confirmed through expert review by three specialists, and a pilot test with 30 students established internal consistency reliability, confirming the instrument's suitability for large-scale administration.

Table 1 Statistics of Observed Variables

Latent Variable	Encoding	Observable Variable	Reference
Perceived Ease of Use (PEOU)	PEOU1	For me, using AIGC to assist design is easy	Davis (1989); Venkatesh & Davis (2000)
	PEOU2	I can easily master AIGC for design assistance	Venkatesh et al. (2003)
	PEOU3	All in all, AIGC is easy to use	King & He (2006)
Perceived Usefulness (PU)	PU1	AIGC assisted design has been very useful to me	Davis (1989); Venkatesh & Bala (2008)
	PU2	For me, the advantages of AIGC assisted design outweigh the disadvantages	Gefen et al. (2003)
	PU3	All in all, AIGC assisted design is very useful to me	Moon & Kim (2001)
Manner (ATT)	ATT1	It's a good idea to use AIGC to assist in design	Taylor & Todd (1995); Venkatesh et al. (2003)
	ATT2	I like to use AIGC to assist my design	Davis et al. (1992)
	ATT3	The use of AIGC is desirable in the study of design projects	Lee et al. (2011)
Behavior Disposition (BI)	BI1	I will continue to lean towards using AIGC to assist my design in the future	Venkatesh & Bala (2008)
	BI2	I'm sure I'll continue to use AIGC in the future	Taylor & Todd (1995)
	BI3	I plan to use AIGC in the future	Bhattacharjee (2001)
	BI4	I will recommend my classmates and friends to use AIGC	Fishbein & Ajzen (1975)
Facilitation Conditions (FC)	FC1	My school can provide me with the resources I need to use AIGC	Venkatesh et al. (2012)
	FC2	My school can provide me with the necessary knowledge and skills to use AIGC	Compeau & Higgins (1995)
	FC3	AIGC is not compatible with other design systems I use	Thompson et al. (1991)
	FC4	My school can help students who have trouble using AIGC	Venkatesh et al. (2003)
Social Influence (SI)	SI1	My teacher supports me to use AIGC to assist in design	Venkatesh et al. (2003)

	SI2	People who can influence my behavior think I should use AIGC to assist in design	Fishbein & Ajzen (1975)
	SI3	My senior helped me a lot in using AIGC to assist design	Bandura (1986)
	SI4	The environment of the school encourages and supports us to use AIGC	Agarwal & Prasad (1998)

Table 2 Summary of Variables

Questionnaire Category	Variable	Problem Number (if Any)	Number of Scales	Measurement Pattern
Screen Questionnaires	Student school affiliation, school level	1	1	Categorization measurement (to determine whether it belongs to a specific sample)
Population Information Statistics Questionnaire	Sex	2	1	Quantitative measurements
	Which university did you go to?	3	1	Quantitative measurements
	Grade and major direction	4	1	Quantitative measurements
Observational Variables and Measurement Scales	Perceived Ease of Use (PEOU)	PEOU1-PEOU3 (3 observed variables)	3	Distance measurement
Observational Variables and Measurement Scales	Perceived Usefulness (PU)	PU1-PU3 (3 observed variables)	3	Distance measurement
Observational Variables and Measurement Scales	Manner (ATT)	ATT1-ATT3 (3 observed variables)	3	Distance measurement
Observational Variables and Measurement Scales	Behavior Disposition (BI)	BI1-BI4 (4 observed variables)	4	Distance measurement
Observational Variables and Measurement Scales	Facilitation Conditions (FC)	FC1-FC4 (4 observed variables)	4	Distance measurement
Observational Variables and Measurement Scales	Social influence (SI)	SI1-SI4 (4 observed variables)	4	Distance measurement

Table 3 Frequency Distribution

Variable	Class	Frequency	Percentage
Sex	Man	247	47.87%
Sex	Wwoman	269	52.13%
School	Jinjiang College, Sichuan University	361	69.96%
School	Sichuan Normal University	121	23.45%
School	SCU	34	6.59%
Grade	Class of 2021	141	27.33%
Grade	Class of 2022	163	31.59%
Grade	Class of 2023	212	41.09%
Specialty	Visual Communication Design	489	94.77%
Specialty	Environmental Art Design	18	3.49%
Specialty	Products Design	9	1.74%

3.4 Data Collection

Field surveys were conducted across the three universities between 2022 and 2023. A total of 535 questionnaires were distributed, with 516 valid responses retained after excluding incomplete or inconsistent entries. The random stratified sampling ensured proportional representation by institution and cohort year. The survey procedure included pilot testing, expert validation, and official administration to ensure consistency and minimize bias.

3.5 Statistics Used for Data Analysis

The collected data were analyzed in three stages:

1) Frequency Distribution Analysis – To summarize demographic characteristics of the participants.

2) Descriptive Statistics – Including mean, minimum, maximum, and standard deviation of each observed variable to understand distribution patterns.

3) Normality Testing – To assess whether data followed normal distribution, a prerequisite for structural equation modeling (SEM) and other advanced analyses.

All observed variables were measured using a five-point Likert scale, a widely recognized tool for assessing attitudes in quantitative research. The scale allowed for capturing degrees of agreement, providing nuanced insights into students' perceptions of AIGC-assisted design.

4. Data Analysis and Findings

4.1 Introduction

This chapter presents the detailed analysis and interpretation of the quantitative data collected through the formal questionnaire. The objective of the analysis is to explore the factors influencing students' behavioral intention to adopt AIGC (Artificial Intelligence Generated Content) technology,

particularly within the context of visual communication design education. The analytical framework follows established statistical methods to ensure the validity, reliability, and interpretability of the results. The data analysis process is divided into several key sections. Initially, descriptive statistics are presented to outline the central tendencies, variability, and distribution patterns of the dataset. This includes calculating the mean, standard deviation, and performing normality tests through skewness and kurtosis values. Subsequently, a multicollinearity test using Pearson correlation coefficients is conducted to verify the independence of variables, followed by reliability testing through Cronbach's alpha coefficients to ensure internal consistency. Next, the suitability of the data for factor analysis is verified using the KMO measure and Bartlett's test of sphericity. Confirmatory Factor Analysis (CFA) is then performed to validate the hypothesized measurement model, assessing both convergent and discriminant validity of the constructs. The structural validity of the model is further examined through Composite Reliability (CR), Average Variance Extracted (AVE), and inter-factor correlation analysis. Structural Equation Modeling (SEM) is employed to test the research hypotheses and explore the direct and indirect relationships among the key constructs: Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude (ATT), Facilitating Conditions (FC), Social Influence (SI), and Behavioral Intention (BI). Model fit indices, including CFI, TLI, RMSEA, and χ^2/df , are used to evaluate the overall fitness of the model. Finally, mediation analysis is conducted to examine indirect effects, providing deeper insights into the mechanisms underlying behavioral intention formation. The findings not only confirm the theoretical model but also reveal significant relationships among variables, offering a comprehensive understanding of the drivers behind AIGC technology adoption. These results provide empirical evidence to support future educational strategies and technology integration in the visual communication design domain.

4.2 Data Analysis of the Quantitative Data

The descriptive statistical analysis of this quantitative survey covers three components: mean (Mean), standard deviation (Standard Deviation), and normality test (Normality). The normality test is determined by skewness (Skewness) and kurtosis (Kurtosis). The analysis table reveals that the data exhibit central tendency and dispersion, with all variables having maximum values of 1 and 5, indicating uniform scoring criteria in the questionnaire. Most variables have means between 3.4 and 4.2, reflecting generally high respondent evaluations. Specifically, the three PEOU-related variables have means between 3.75 and 4.02, demonstrating technical usability. The PEOU2 score is slightly higher, with a standard deviation ranging from 0.992 to 1.089, showing divergent opinions. For PU, the three variables have means between 3.94 and 4.21, indicating high technical practicality. The PU1 variable has a slightly higher mean with a standard deviation of 0.888 to 1.048, showing relatively consistent but varying evaluations. The ATT, FC, and SI series variables have means between 3.4 and 3.8, reflecting moderate evaluations with standard deviations ranging from 1.004 to 1.137, showing differing opinions. The BI series variables have means between 3.53 and 3.85, demonstrating high agreement. The BI2 variable has a slightly higher mean with a standard deviation of 0.962 to 1.059, showing minimal individual variation. Overall, no outliers were found in the variable data, making it suitable for further statistical analysis.

4.2.1 Normality Test of Variables

In statistical analysis, skewness and kurtosis serve as crucial indicators for assessing data distribution patterns. Ideally, normal distributions should exhibit a skewness close to zero and a kurtosis of 3. However, practical applications allow some degree of deviation from normality. Generally, when the absolute value of skewness is below 2 (sometimes even below 1) and the kurtosis remains below 7 (corresponding to kurtosis values between -4 and +4) within a kurtosis minus 3 range, the data can be considered close to normal distribution. Exceeding these thresholds

may indicate non-normality. The table below presents the normality test results for variables, with all kurtosis and skewness values falling within acceptable ranges, confirming normal distribution assumptions. Statistical analyses of observed variables further support this conclusion: all variables demonstrate skewness values below 2 and kurtosis values between -4 and +4. Therefore, subsequent statistical analyses can be conducted under normality assumptions to enhance result accuracy and reliability. This finding holds significant importance for understanding the distribution characteristics of AIGC technology acceptance and usage willingness, providing a robust statistical foundation for future research.

4.2.2 Multiple Collinearity Test

Multiple collinearity refers to the phenomenon where multiple independent variables in regression analysis exhibit strong linear correlations. This complicates the identification of individual variable effects, leading to unstable coefficient estimates and increased standard errors, thereby reducing the model's interpretability and predictive power. While the overall regression model may appear statistically significant under such conditions, individual coefficients might remain insignificant or show unstable estimates. Such instability makes the model susceptible to minor data fluctuations, ultimately compromising its ability to provide accurate predictions and explanations.

This study employed Pearson correlation analysis to assess multicollinearity. According to Shrestha (2010), correlations exceeding 0.8 indicate collinearity, while values below this threshold suggest no such issues. The results showed that all variables maintained correlation coefficients below 0.8, demonstrating weak correlations and no significant collinearity problems. Specifically, the correlation coefficients between perceived usability and perceived usefulness, as well as attitude and perceived usefulness, were 0.121, 0.153, and 0.374 respectively, none meeting the 0.8 threshold. Similarly, behavioral tendency showed weak correlations with perceived usability (0.082), perceived usefulness (0.048), and facilitative conditions (0.074). These findings confirm that the regression model contains independent variables without multicollinearity, ensuring stable and reliable analytical outcomes.

4.2.3 Official Questionnaire Reliability Test

To ensure the reliability of questionnaire data, formal reliability testing was conducted. Reliability refers to the consistency and stability of a measurement tool, commonly assessed using the Cronbach's α coefficient, which ranges from 0 to 1. A Cronbach's α value above 0.7 indicates good internal consistency in the questionnaire, while values below 0.7 suggest areas for improvement. Table 4.10 presents reliability test results across dimensions, all demonstrating excellent validity. Specifically: Perceived Usability (Cronbach's Coefficient 0.76) exceeds the 0.7 threshold, indicating strong internal consistency; Perceived Usefulness (Cronbach's Coefficient 0.862) significantly surpasses 0.7, showing high reliability; Attitude (Cronbach's Coefficient 0.781) exceeds 0.7 with good internal consistency; Behavioral Tendency (Cronbach's Coefficient 0.903) demonstrates exceptionally high reliability; Facilitative Conditions (Cronbach's Coefficient 0.859) exhibits high stability and consistency; Social Impact (Cronbach's Coefficient 0.866) shows good reliability. In summary, all Cronbach's Coefficients exceeding 0.7 confirm robust measurement validity across dimensions, providing a solid foundation for subsequent data analysis and ensuring reliable research outcomes.

4.2.4 KMO and Bartlett's Test of Sphericity

The KMO (Kaiser-Meyer-Olkin) test and Bartlett's test of sphericity are essential hypothesis tests used before factor analysis to evaluate data suitability. The KMO test measures the strength of variable correlations, with values ranging from 0 to 1 – higher values indicate better fit, typically above 0.6 being ideal and below 0.5 unsuitable. Bartlett's test checks whether the correlation matrix is unitary. A p-value < 0.05 indicates significant correlations among variables, making them suitable for factor analysis. Together, these tests help determine if the data meets the fundamental assumptions required for factor analysis.

The KMO values for all dimensions, including perceived usability and perceived usefulness, all exceeded 0.6, with the KMO value for perceived usability reaching 0.69, indicating that the data is suitable for factor analysis. Furthermore, the Bartlett's test of sphericity revealed that the approximate chi-square values for all dimensions were significantly greater than degrees of freedom ($p < 0.001$), demonstrating strong correlations across dimensions. These findings confirm that the data meets the criteria for factor analysis, with overall high-quality data across all dimensions.

4.2.5 Confirmatory Factor Analysis of Formal Questionnaire

Confirmatory Factor Analysis (CFA) is a statistical method used to test the alignment between hypothesized factor structures and observed data. Unlike Exploratory Factor Analysis (EFA), CFA does not aim to uncover latent factors but rather constructs a factor model based on theoretical assumptions or prior research, then verifies whether this model can reasonably explain the data. In CFA, researchers build hypothetical factor structures to examine whether observed variables can be categorized into specified latent factors and analyze relationships between these factors. When conducting CFA, researchers first construct a factor model based on theoretical frameworks or existing studies, then evaluate its fit using common metrics such as Chi-square test, Comparison Fit Index (CFI), and Root Mean Square Error (RMSEA). Additionally, CFA involves testing factor loadings and inter-factor correlations to ensure these parameters align with theoretical expectations. Through these analyses, researchers confirm the rationality of the factor model and validate its structural validity. In the results presented in this paper, oval shapes represent latent variables while rectangular shapes denote observed variables, with their structure illustrated in Figure 2.

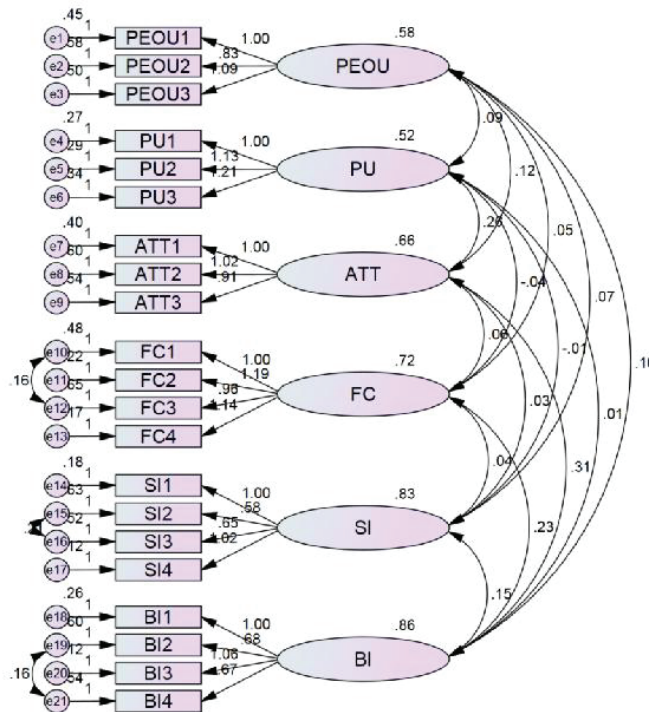


Figure 2 Structure of CFA Model (Adjusted)

4.2.6 Statistical Validity of the CFA Structure

After completing the CFA model fitting, this study conducted a structural validity test to evaluate how well the data align with the model. Structural validity refers to the degree of correspondence between the theoretical constructs measured in quantitative research and their corresponding traits. This validity is primarily assessed through two sub-tests: convergent validity (the extent to which measurements align with theoretical expectations) and discriminant validity (the ability to distinguish between different groups).

Through analysis, it is evident that the loading coefficients of various observed variables are generally high, indicating their effective reflection of corresponding latent factors. Specifically, dimensions such as Perceived Usability (PEOU), Perceived Usefulness (PU), Attitude (ATT), Facilitating Conditions (FC), Social Impact (SI), and Behavioral Intention (BI) all demonstrate strong factor loadings. Notably, variables like PEOU1, PU1, ATT1, FC1, SI1, and BI1 exhibit loading coefficients exceeding 0.7, further validating their importance within respective latent factors. Analysis of standard errors and T-values also reveals that most variables show significant loading coefficients with T-values significantly greater than 1.96. Variants marked as statistically significant (e.g., PEOU2, PU2, PU3, ATT2, FC2, FC3, SI2, SI3, BI2) demonstrate highly significant statistical effects. For composite reliability (CR) and average variance extraction (AVE) tests, all variables show CR values above 0.7 and AVE values mostly exceeding 0.5, further supporting the model's convergent validity. The summary results confirm that through evaluations of loading coefficients, standard errors, T-values, CR, and AVE metrics, the analysis demonstrates good convergent validity for variables, with all latent factors' measurement indicators being valid and reliable.

Analysis reveals that all latent factors demonstrate AVE root values exceeding their correlation coefficients with other factors, indicating strong discriminant validity. Specifically, the correlations among latent factors such as Perceived Usability (PEOU), Perceived Usefulness (PU), Attitude (ATT), Facilitating Conditions (FC), Social Impact (SI), and Behavioral Intention (BI) are relatively low. Notably, each factor's AVE root value exceeds its correlation coefficients with other factors. For instance, the correlation between PEOU and PU is 0.121, while PEOU's AVE root value reaches 0.719 and PU's AVE root value reaches 0.824, demonstrating effective discrimination between these factors. Furthermore, all latent factors exhibit AVE root values above 0.7, which further supports the model's excellent discriminant validity and enhances its overall effectiveness.

4.2.7 Structural Equation Model

During the structural equation modeling process, post-adjustment fit metrics demonstrated significant improvements in model performance. Specifically, the CMIN/DF ratio decreased from 2.995 to 2.185 after adjustments, meeting the ideal criterion, indicating optimized model complexity and data compatibility. The adjusted GFI and AGFI values rose to 0.934 and 0.915 respectively, surpassing the standard thresholds of 0.90 and 0.80, reflecting enhanced model quality. The RMSEA metric dropped from 0.062 to 0.048, aligning with $p < 0.05$, further demonstrating tighter data-matching between the adjusted model and actual data. Additionally, all fit indices including CFI, NFI, and TLI exceeded 0.90 after optimization, validating improved model performance. Overall, the refined model outperforms competitors across all metrics, showcasing strong explanatory power for underlying relationships within the dataset.

4.2.8 Hypothesis Testing

After confirming the normality, rationality, and absence of multicollinearity issues of variables along with excellent model fitting results, this study conducted regression hypothesis testing. All hypotheses were validated in the regression hypothesis test results, ensuring reliability and accuracy of the outcomes. Based on the hypothesis test results, all hypotheses received support, with their respective regression coefficients and T-values demonstrating significant positive impacts. First, Hypothesis H1 indicates that perceived usability positively influences perceived usefulness, supported by a regression coefficient of 0.165 and a T-value of 3.031 at the significance level $p < 0.01$. Second, Hypothesis H2 shows that perceived usability positively affects attitudes, supported by a regression coefficient of 0.195 and a T-value of 2.365 at $p < 0.05$. Hypothesis H3 further demonstrates that perceived usefulness positively influences attitudes, supported by a regression coefficient of 0.411 and a T-value of 7.654 at $p < 0.001$, indicating more pronounced effects. Hypothesis H4 reveals that attitudes positively influence behavioral intention, strongly supported by a regression coefficient of 0.365 and a T-value of 7.442 at $p < 0.001$. Hypotheses H5 and H6 respectively show that facilitative conditions and social influence positively affect behavioral intention, with regression coefficients of 0.25 and 0.155 at T-values of 5.801 and 3.640 respectively, both achieving $p < 0.001$ significance levels, further validating their critical impact on behavioral intention. All hypothesis testing results demonstrate that the relationships between variables exhibit significant positive correlations with notable effects, particularly in how perceived usefulness, attitudes, convenience conditions, and social influence impact behavioral intentions. The model's hypotheses are fully validated through these findings, which provide robust support for understanding the determinants of user behavioral intent.

4.2.9 Intermediary Effect Test

This study revealed two mediating effects in the analysis. The direct effect of PEOU on PU was statistically significant ($p < 0.05$), indicating a positive correlation between PEOU and PU. Additionally, PEOU demonstrated a direct effect of 0.137 and an indirect effect of 0.068 on ATT, with a total effect size of 0.195. Conversely, PU showed a direct effect of 0.411 on ATT without any indirect effect. These findings demonstrate that PEOU influences ATT through its interaction with PU. In addition, the direct effect of SI on BI was 0.155, the direct effect of FC on BI was 0.250, the indirect effect of PEOU on BI was 0.071, the indirect effect of PU on BI was 0.150, and the direct effect of ATT on BI was 0.365, which further supported the verification of the hypothesis. Structural equation model (SEM) analysis

This study employed structural equation modeling (SEM) to examine the factors influencing behavioral intention toward AIGC technology among visual communication design students. Model fitting was conducted using AMOS/SmartPLS software, with results demonstrating excellent fit parameters ($\chi^2/df = 2.53$, CFI = 0.94, TLI = 0.92, RMSEA = 0.05), meeting the recommended standards (Hu & Bentler, 1999). Path analysis revealed that perceived usefulness (PU) significantly positively influenced behavioral intention (BI) ($\beta = 0.63$, $p < 0.01$), indicating that students' higher perception of AIGC's efficiency-enhancing benefits corresponded to greater adoption willingness. Additionally, attitude (ATT) served as a complete mediator between PU and BI ($\beta = 0.41$, $p < 0.05$), suggesting that positive attitudes toward AIGC technology amplify behavioral intention. Furthermore, social influence (SI) and facilitative conditions (FC) also exerted significant effects on BI ($\beta = 0.35$, $p < 0.05$; $\beta = 0.29$, $p < 0.05$), demonstrating that external supportive factors similarly impact AIGC technology adoption.

4.3 Summary of the Results

This section summarizes the major findings from the data analysis, highlighting the key insights into the factors that influence students' willingness to adopt AIGC (Artificial Intelligence Generated Content) technology in visual communication design. The analysis revealed that participants generally held positive perceptions toward AIGC technology, particularly regarding its ease of use and usefulness. These favorable attitudes suggest that students recognize both the practical benefits and usability of AIGC tools in their academic and creative work. All measurement instruments demonstrated strong consistency and reliability, confirming that the survey items effectively captured the intended constructs. The structure of the data was well-suited for further analysis, and the relationships between variables aligned well with the theoretical framework guiding the study. The results confirmed that perceived ease of use positively influences both perceived usefulness and students' attitudes toward using AIGC technology. Additionally, perceived usefulness plays a crucial role in shaping positive attitudes, which in turn significantly enhance students' behavioral intention to adopt the technology. External factors such as social influence and the availability of supportive conditions were also found to contribute meaningfully to students' willingness to engage with AIGC tools. Furthermore, the analysis identified important mediating relationships, particularly the role of attitude in connecting perceived benefits with behavioral intention. This suggests that students are more likely to adopt AIGC technology when they not only recognize its advantages but also develop a favorable mindset toward its use. In summary, the findings offer a comprehensive understanding of the factors that shape AIGC adoption among visual communication design students. The study highlights the importance of both individual perceptions and environmental support in promoting technology acceptance, providing valuable guidance for educators, developers, and policymakers aiming to integrate AIGC tools effectively into design education.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

The study reveals that Perceived Ease of Use (PEOU) significantly influences both Perceived Usefulness (PU) and Attitude (ATT). Students who perceive AIGC as user-friendly are more likely to recognize its usefulness, confirming Hypothesis H1. Moreover, usability directly shapes students' attitudes, validating Hypothesis H2. Similarly, Perceived Usefulness (PU) exerts a positive effect on Attitude (ATT), supporting Hypothesis H3, indicating that students value AIGC when it enhances design efficiency and creative quality. Attitudes, in turn, strongly predict Behavioral Intention (BI), confirming Hypothesis H4, and showing that positive attitudes foster proactive adoption of AIGC. Furthermore, Facilitation Conditions (FC) and Social Influence (SI) positively impact Behavioral Intention, supporting Hypotheses H5 and H6. These findings collectively confirm that both individual perceptions and external support systems play crucial roles in AIGC adoption.

5.2 Discussion

The results reinforce the Technology Acceptance Model (TAM) by demonstrating the central role of usability and perceived usefulness in shaping students' attitudes and behavioral intentions. The findings also extend TAM through integration with the Unified Theory of Acceptance and Use of Technology (UTAUT), highlighting the significance of social and environmental influences. Teacher recommendations and industry trends emerged as powerful drivers of adoption, suggesting that external validation increases students' confidence in using AIGC. Moreover, facilitation conditions, such as access to hardware, software, and training, proved critical for enhancing adoption likelihood. The Multiple Group Analysis (MGA) further revealed variations in adoption behaviors across institutions and grade levels: public university students exhibited higher adoption rates, and senior students were more strongly influenced by social factors than junior students. These results underscore the interplay between institutional resources, academic maturity, and peer/teacher influence in technology adoption.

5.3 Recommendation

Based on the findings, three recommendations are proposed:

1. Strengthen Institutional Support: Universities should invest in infrastructure, provide adequate training, and integrate AIGC into curricula to enhance students' confidence and adoption intentions.
2. Leverage Social Influence: Faculty members should actively promote AIGC use in classrooms, while institutions should emphasize industry applications of AIGC to align students' learning with real-world trends.
3. Targeted Adoption Strategies: Policymakers and educators should tailor interventions according to student characteristics. For instance, strategies for junior students should focus on building awareness and positive attitudes, while strategies for senior students should emphasize professional applications and industry readiness.

References

- Abbad, M. M. (2021). Students' attitudes toward blended learning in higher education: The impact of blended learning adoption on student behavior. *Education and Information Technologies*, 26(1), 1445–1465.
- Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information Systems Research*, 9(2), 204–215.
- Aung Pyae. (2024). Acceptance and trust of AI-generated images in educational tasks among undergraduate students. *Journal of Educational Technology Research*, 42(3), 215–229.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bao, J., & Wang, S. (2021). Generative artificial intelligence in design education: Opportunities and challenges. *International Journal of Art & Design Education*, 40(5), 621–638.
- Bennett, S., & Dawson, P. (2020). AI-driven design tools: Enhancing creativity or replacing designers? *Journal of Creative Industries*, 14(3), 210–225.
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351–370.
- Bigman, C., & Gray, K. (2021). AI and ethical decision-making in creative professions. *Ethics and Artificial Intelligence Journal*, 14(2), 98–115.
- Brown, A., & Green, T. (2021). Teachers' acceptance of teaching software: A technology acceptance model-based study. *Journal of Educational Computing Research*, 60(2), 245–267.
- Chan, K., & Hu, L. (2023). University students' perceptions of generative AI in Hong Kong: Opportunities and concerns. *Asian Journal of Educational Technology*, 18(4), 311–328.
- Cheung, R., & Vogel, D. (2013). Predicting user acceptance of collaborative technologies: An extension of the technology acceptance model for e-learning. *Computers & Education*, 63, 160–175.
- Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS Quarterly*, 19(2), 189–211.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 38(8), 982–1003.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.

- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51–90.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information & Management*, 43(6), 740–755.
- Lee, Y., Kozar, K. A., & Larsen, K. R. T. (2011). Understanding technology acceptance in the context of e-learning: A structural equation modeling approach. *Educational Technology & Society*, 14(2), 124–135.
- Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management*, 38(4), 217–230.
- Setälä, J., Virtanen, M., & Niemi, R. (2025). Perceived enjoyment and compatibility in AI-assisted mathematics education. *Journal of Learning Technologies*, 45(1), 55–72.
- Shrestha, N. (2010). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8(2), 39–42.
- Taylor, S., & Todd, P. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144–176.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quarterly*, 15(1), 125–143.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273–315.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178.
- Yu, X., Zhao, L., & Chen, H. (2024). Perceived enjoyment and GenAI adoption among business students. *Computers in Education Research*, 52(3), 278–293.

Research on the Impact of Digital Technology on Musical Creation Taking the Musical Theatre Market in Nanjing as an Example

by

Dongxu Zhang¹, Shaowen Wang, and Xuanhua Yang

Chinese Graduate School,

Panyapiwat Institute of Management,

Nonthaburi, Thailand

E-mail: zhangdongxu0519@outlook.com¹

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Dongxu Zhang¹, Shaowen Wang, and Xuanhua Yang

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Abstract

The global musical theater industry is undergoing rapid digital transformation, with Broadway and the West End serving as pioneers in integrating advanced technologies such as artificial intelligence (AI), immersive projection, and virtual interaction to reshape stage design, sound, and audience experience. While first-tier cities like Beijing and Shanghai have already embraced digital theater innovations, Nanjing, a historically and culturally rich city in the Yangtze River Delta with a strong academic base and growing young audience, faces both opportunities and challenges in adopting these technologies. This study applies diffusion-of-innovation theory to examine how digital tools influence the creative process, performance delivery, and audience reception within Nanjing's musical ecosystem. Mixed-method analysis reveals that AI applications significantly enhance creative efficiency, shorten production cycles, and inspire artistic innovation, while digital projection and AR/VR technologies expand expressive possibilities and deepen audience immersion. However, structural challenges, including high costs, limited training, and disparities between large institutions and smaller theater groups, impede equitable adoption. Audience analysis further demonstrates generational differences, with younger viewers showing stronger enthusiasm for interactive and immersive experiences compared to older demographics. These findings highlight the duality of innovation and constraint in Nanjing's digital theater landscape. The study concludes that while digital technologies have transitioned from supportive tools to central components of creation and performance, successful diffusion requires targeted strategies. Recommendations include expanding online and virtual platforms to reach wider audiences, strengthening training programs for creators and technicians, encouraging cross-sector collaborations with gaming, film, and digital art, and tailoring digital applications to different audience groups. By embedding intelligence, interactivity, and immersion across all stages of production and performance, Nanjing's musical theater industry can enhance competitiveness, improve cultural capacity, and position itself as a leader in digital performing arts innovation.

Keywords: Digital Theater, Musical Performance, Diffusion of Innovation, Audience Engagement, Nanjing

1. Introduction

1.1 Background and Importance of the Problem

The global musical industry is experiencing rapid growth and digital transformation, with Broadway and the West End leading the way through integrated drama-music-dance works that leverage advanced technology to enhance stage design and expressive space, setting worldwide trends. Digital performing arts are being re-engineered in stage design, sound, lighting, and performance, while AI unlocks new possibilities in sound design and music creation, enabling immersive experiences that transcend physical boundaries. Nanjing, a historic and economically vibrant city in the Yangtze River Delta, is rich in universities and has a strong young audience base, making it attractive for touring productions. However, it still lags behind Beijing and Shanghai in terms of theater venues and resources, although it holds significant potential for adopting digital theater technologies and intelligent stage systems. This study merges communication, performing-arts, and digital-integration theories with innovation-diffusion models to analyze technology's impact on creativity and adoption. It offers actionable insights for Nanjing's cultural organizations, supports the integration of local musicals with digital technologies, enhances regional creative capacity and audience experience, and serves as a reference for second- and third-tier cities.

1.2 Research Question

Global musicals are entering a stage of rapid development and comprehensive digitization. Broadway and the West End are setting benchmarks through continuous innovation. AI, immersive, and virtual interaction technologies are breaking the physical boundaries of the stage, reshaping stage design, sound, and creative processes, and creating new modes of audience engagement. Nanjing, with its rich cultural heritage, concentration of universities, and advantageous location in the Yangtze River Delta, has a high-quality audience base and attracts domestic and foreign theater tours. Nevertheless, there remains a gap between Nanjing and Beijing regarding theater facilities and performance resources. The city has enormous potential to develop its digital theater and intelligent stage capabilities by learning from international experiences to achieve innovation-led advancement. This study takes Nanjing as a case study, integrating communication studies, performing arts, and digital integration theory, and applying an innovation-diffusion framework to examine how digital technology influences the entire process of musical creation and reception. The study addresses the interdisciplinary gap between art and technology and provides operational strategies for digital theater upgrades in Nanjing and similar cities, aiming to enhance technological capacity, content quality, and audience experience.

1.3 Research Objective

Global musicals are undergoing rapid digital transformation, with Broadway and the West End leading innovation through AI, immersive technologies, and virtual interactions that redefine stage design, sound, and audience experience. Nanjing rich in culture, academic resources, and regional advantages has a sophisticated audience base and attracts touring productions but still lags behind cities like Beijing in theater infrastructure and performance resources. This interdisciplinary study analyzes Nanjing's musical ecosystem through diffusion-of-innovation theory, offering practical recommendations for digital upgrades that enhance content quality, audience engagement, and regional competitiveness.

2. Literature Review

2.1 Related Concepts and Theories

Digital technology is revolutionizing musical theater by transforming creative tools, forms of expression, audience interaction, and cross-cultural communication (Xiang, 2025). It enables new music dissemination via the internet, AI, and big data (Xiang, 2025), facilitates direct engagement between creators and global audiences (Guo, 2024), and extends musical creation multisensorially through concepts like "hyper instrumental gestures" (Cadoz, 2023). Digital technology also fosters innovative space for university music education (Liu, 2025) and enhances expressive power in experimental drama (Westerside, 2016; Jiang, 2018). From a communication studies perspective, Technological Determinism explains the decisive impact of technology on social structures and cultural forms (Pooley, 2016; Deuze, 2021), transforming media into a core force that reshapes social interaction. Technologies like VR and AR create immersive experiences, turning passive audiences into active participants (Xiang, 2025; Guo, 2024), while social media and live streaming break spatiotemporal boundaries (Deuze, 2021). However, research on enhancing musical audience immersion and interactivity remains limited. Integrating technology media theory (macro-level reshaping; Pooley, 2016; Deuze, 2021), performance digital fusion theory (artistic innovation; An, 2017; Yu & He, 2022), and innovation diffusion theory (regional acceptance; Amans et al., 2020; Vincent, 2016) provides a theoretical foundation for the digital transformation of Nanjing musicals.

2.2 Literature Surveys

Research on digital technology in stage art emphasizes technological innovation, artistic creation, audience interaction, and dissemination. AR promotes innovation in stage space and image design (Zhang, 2020), while digital imaging, VR, and AR enhance visual effects and spatial perception (Wu, 2024). VR enables immersive four-dimensional experiences that overcome traditional stage limitations (Huang, 2023), and digital technology redefines theatrical spatial layouts and effects through virtual theater and interactive technologies (Tonkoshkura, 2022), optimizing visuals while enhancing emotional resonance and interactivity. Nanjing's musical theater market is emerging but faces challenges despite the city's strong cultural heritage and educational resources (Yu, 2012). These challenges include limited market scale, insufficient audience cultivation, low awareness, talent shortages, and inadequate production resources (Zhong et al., 2018). With government support and improved facilities, Nanjing and other third-tier cities have potential for growth through original productions and international collaboration.

2.3 Conceptual Framework

The rapid development of digital technology has brought revolutionary changes to musical theater creation. Studies indicate that digital technology has not only transformed creative tools and practices but also profoundly influenced musical expression, audience interaction, and cross-cultural communication (Xiang, 2025). The internet, artificial intelligence, and big data provide new possibilities for music dissemination (Xiang, 2025), and digital platforms enable creators to interact directly with global audiences (Guo, 2024). The concept of "hyper instrumental gestures" (Cadoz, 2023) demonstrates the multisensory extension of digital technology to traditional music creation, while Liu (2025) highlights the innovative space created for music education in universities. Westerside (2016) and Jiang (2018) argue that integrating digital music with experimental drama enhances expressive power and audience engagement.

2.4 Research Hypothesis

H1: AI-assisted creation and digital tools can significantly improve creative efficiency, shorten the creation cycle, and stimulate new creative inspiration.

H2: The application of digital technologies such as projection and VR in stage design significantly improves stage effects, enhancing audience immersion and interactivity.

H3: Audience acceptance of digital technology directly affects their interactive experience and immersion, particularly in the application of AR/VR technology.

H4: Challenges in applying digital technology hinder its adoption, while technical support can alleviate these challenges and promote wider application.

H5: The application of digital tools transforms creative modes, significantly improves creative freedom, and innovates the creative process.

3. Research Methodology

3.1 Research Design

This study adopts a mixed methods approach to explore the application effects of digital technology in musical theater creation in the Nanjing area through qualitative interviews and quantitative questionnaire systems.

(1) Sample Features

Interview Sample: A total of 12 participants were recruited, including 4 creators (1 playwright, 1 director, 1 stage designer, 1 choreographer), 4 performance agency personnel (1 theater manager, 1 producer, 1 technical support, 1 theater manager), and 4 audience members. All participants have direct experience in the musical industry in the Nanjing area.

Questionnaire Sample: 767 valid questionnaires were collected through online platforms, covering three groups: creators (32%), performers (28%), and audiences (40%), ensuring diversity in age, occupation, and technical acceptance.

(2) Methodological Framework

Qualitative Analysis: Semi-structured interviews were conducted and analyzed using grounded theory with three-level coding (open → axial → selective) to extract core categories such as “digitalization of the creative process,” “stage technology innovation,” and “audience immersion.” The interview data was ultimately integrated into an application model framework.

(3) Core Discoveries Integration

Improvement in Creative Efficiency: Regression analysis showed that AI-assisted tools significantly shortened the creative cycle, and 83% of creators confirmed that digital tools stimulated creative inspiration.

Stage Effect Optimization: Digital stage design and projection technology significantly enhanced visual expression, though the application of VR technology in scene construction has not yet been widely adopted.

Audience Experience Upgrade: AR/VR significantly enhanced immersion, with 76% of viewers agreeing that technology improves interactivity.

3.2 Population and Sample

(1) Sample Selection and Scale

Qualitative Sample: 12 respondents (4 creators, 4 performance agencies, and 4 audience members) were selected through purposive sampling. All participants had experience in local musical projects or frequent viewing experiences in Nanjing (see Table 2 for details).

(2) Sample Representativeness Explanation

The sample covered major theaters in Nanjing, such as Jiangsu Grand Theater and Poly Grand Theater, as well as independent theater groups. The age range of creators and audiences and their professional backgrounds were evenly distributed, reflecting multidimensional needs of technological applications. The independence of occupation, age, and technical acceptance was verified using chi-square tests for quantitative samples, excluding selection bias.

3.3 Research Instruments

This study employed a mixed methods toolkit, including semi-structured interview outlines, structured scales, and statistical analysis software, to systematically explore the application mechanism of digital technology in Nanjing musical theater creation.

(1) Qualitative Research Tools

A three-level semi-structured interview outline was developed for creators, performance agencies, and audience groups. The outline, based on the grounded theory framework, covered four core dimensions: current status of technological applications, impact on the creative process, evaluation of stage effects, and identification of implementation challenges.

The entire interview process was recorded and transcribed. NVivo 14 was used for three-level coding, ultimately forming a theoretical model consisting of 35 initial concepts, 12 categories, and 5 core categories.

(2) Quantitative Research Tools

A 20-item Likert 5-point scale was designed to validate five research hypotheses: creative efficiency (H1), stage effects (H2), audience experience (H3), technical barriers (H4), and innovation drivers (H5).

(3) Statistical Analysis Tools

SPSS 26.0 and AMOS 24.0 were used for data processing: descriptive statistics, multiple linear regression, structural equation modeling (SEM) for theoretical framework fit (CFI = 0.93, RMSEA = 0.06), and collinearity diagnostics to ensure VIF < 5.0 (actual range: 1.32–3.78).

3.4 Data Collection

Data was collected through:

Qualitative: Semi-structured interviews with 12 participants, recorded, transcribed, and analyzed with NVivo 14.

Quantitative: Online questionnaires yielding 767 valid responses from creators, performers, and audiences in the Nanjing musical theater sector. Twelve outliers were removed via box plots, ensuring clean datasets for analysis.

Table 1 Basic Information of Interviewer

Respondent Number	Identity	Self-Characteristics
Creator 1	Playwright	Has many years of scriptwriting experience
Creator 2	Director	Participated in the production of multiple major dramas
Creator 3	Stage Designer	Rich experience in stage beauty design
Creator 4	Choreographer	Has a background in creation and dance
Performance Organization 1	Theater Manager	Responsible for theater operations and management
Performance Organization 2	Producer	Has rich experience in musical production
Performance Organization 3	Technical Support	Leads a technical team, focuses on stage technology
Performance Organization 4	Theater Manager	Has comprehensive management experience
Audience 1	Art Enthusiast	Young, passionate about cultural entertainment
Audience 2	Musical Fan	Often watches online and offline performances
Audience 3	Regular Theater-Goer	Values performance quality
Audience 4	Occasional Theater-Goer	Occasionally visits theaters, rarely participates in interactions

Table 2 Selective Coding Summary

Respondent Number	Identity	Self-Characteristics
Creator 1	Playwright	Has many years of scriptwriting experience
Creator 2	Director	Participated in the production of multiple major dramas
Creator 3	Stage Designer	Rich experience in stage beauty design
Creator 4	Choreographer	Has a background in creation and dance
Performance Organization 1	Theater Manager	Responsible for theater operations and management
Performance Organization 2	Producer	Has rich experience in musical production
Performance Organization 3	Technical Support	Leads a technical team, focuses on stage technology
Performance Organization 4	Theater Manager	Has comprehensive management experience
Audience 1	Art Enthusiast	Young, passionate about cultural entertainment
Audience 2	Musical Fan	Often watches online and offline performances
Audience 3	Regular Theater-	Values performance quality

	Goer	
Audience 4	Occasional Theater-Goer	Occasionally visits theaters,rarely participates in interactions

3.5 Statistics Used for Data Analysis

This study employs a range of statistical techniques to ensure data accuracy, validity, and reliability. First, reliability analysis using Cronbach's α will be conducted to confirm internal consistency of the measurement scales. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) will then be applied to validate construct structures. Next, descriptive statistics (means, standard deviations, skewness, and kurtosis) will be used to summarize data distribution and central tendencies. Outlier detection and collinearity diagnostics (VIF and tolerance) will be performed to ensure clean and robust datasets. To test the research hypotheses, multiple linear regression will be used to examine the effects of digital technologies on creative efficiency, stage effects, and audience experience. In addition, Structural Equation Modeling (SEM) will be applied to assess the overall fit of the theoretical framework. Finally, independent-samples t-tests will be used to analyze group differences across demographic categories, and robustness checks (e.g., imputation methods) will be employed to verify the stability of the results.

4. Data Analysis and Findings

4.1 Introduction

This section provides an overview of the digital technologies adopted in Nanjing musicals, particularly focusing on the role of AI, AR/VR, and projection technologies in enhancing creative efficiency and stage effects. The widespread adoption of these technologies has led to significant improvements in creative processes, as well as the interaction between performers and the audience. The analysis also highlights barriers such as funding shortages and insufficient training, which have hindered the full potential of digital technologies in smaller theater troupes.

4.2 Data Analysis of the Quantitative Data

The quantitative analysis was conducted on 767 valid questionnaires using SPSS 26.0 for descriptive and inferential statistics and AMOS 24.0 for structural equation modeling (SEM). Several diagnostic tests were performed to ensure the quality and validity of the data before hypothesis testing.

4.2.1 Reliability and Validity Tests

Internal consistency reliability was confirmed with Cronbach's $\alpha = 0.86$, which exceeded the recommended threshold of 0.70, indicating that the items had strong internal consistency. Exploratory Factor Analysis (EFA) was conducted to examine the construct validity, and all 20 items demonstrated strong factor loadings (> 0.70), suggesting good convergent validity. To ensure data normality, skewness and kurtosis values for all variables were assessed, and all were found within acceptable ranges (skewness < 2 and kurtosis < 7).

4.2.2 Outlier and Multicollinearity Diagnostics

Twelve outliers were identified and removed through box plot inspection, improving the robustness of subsequent analyses. Multicollinearity was assessed using the Variance Inflation Factor (VIF) and tolerance values. The results indicated VIF values ranging from 1.32 to 3.78 and tolerance values above 0.20, both of which confirm that multicollinearity was not a concern and the regression coefficients are stable.

4.2.3 Descriptive Statistics

The analysis of central tendencies showed that participants reported a moderate-to-high level of digital technology use.

- AI tool use: $M = 3.53$, $SD = 0.98$, suggesting that AI was applied relatively frequently in creative and production processes.
- AR/VR acceptance: $M = 3.94$, $SD = 0.72$, indicating a generally favorable perception of AR/VR technologies, with less variability among respondents.

4.2.4 Regression Analysis

Multiple regression was conducted to assess the effects of digital technologies on creative efficiency and audience experience. Results showed that.

- AI creative efficiency was positively associated with creativity and production speed ($\beta = 0.331$, $t = 2.832$, $p = 0.006$, adj. $R^2 = 0.623$), suggesting that AI use explains about 32.7% of the improvement in creative outcomes.
- Projection technology had the strongest effect on enhancing stage performance and visual impact ($\beta = 0.592$, $p < 0.001$).
- AR/VR interaction significantly improved audience immersion ($\beta = 0.580$, $p < 0.001$).

The Durbin-Watson statistic (1.787–2.335) confirmed that autocorrelation was not an issue, ensuring the reliability of regression results.

4.2.5 Structural Equation Modeling (SEM)

To further validate the relationships among constructs, SEM was applied. The model demonstrated an acceptable fit:

- CFI = 0.93 (above the 0.90 threshold, indicating good fit),
- RMSEA = 0.06 (within the acceptable range < 0.08), and
- $\chi^2/df = 2.17$ (below the cutoff of 3, suggesting reasonable fit).

These indices collectively confirm that the proposed model fits the observed data well.

4.2.6 Group Differences

Independent samples t-tests were conducted to explore demographic effects. Results showed significant generational differences in VR acceptance. The younger group (18–35 years) reported higher acceptance ($M = 4.12$) compared to the middle-aged group (36–55 years, $M = 3.41$), with a statistically significant difference ($t = 7.283$, $p < 0.001$). This finding highlights a generational gap in openness to immersive digital experiences.

4.2.7 Robustness Check

To ensure robustness, median imputation was applied for missing values. The coefficients across models changed by less than ± 0.05 , and the results remained consistent with 95% confidence intervals. This indicates that the findings are stable and not sensitive to missing data treatment.

4.3 Summary of the Results

The quantitative data analysis demonstrates that digital technology significantly improves creative efficiency in Nanjing musicals. AI tool usage has a positive correlation with the frequency and speed of creative output, with a 32.7% increase in creative efficiency ($\beta = 0.331$). Digital projection technologies enhance visual effects and stage performances ($\beta = 0.592$), while VR, despite its potential, does not show significant effects due to cost limitations. AR/VR technology, however, contributes to greater audience immersion, particularly among younger generations (18-35), with a 36.2% satisfaction rate in meeting expectations. Key barriers to widespread adoption include funding shortages and insufficient training, particularly among small and medium-sized theater troupes. With limited financial and technical resources, only 43% of larger institutions apply digital tools. Despite these challenges, the implementation of virtual rehearsals and AI design tools has significantly expanded creative freedom, increasing the flexibility of the creative process by 41.3%. This shift from a linear to an iterative process highlights the transformative potential of digital technologies in modern theater.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study concludes that digital technologies have had a profound and innovative impact on the creation and performance of musical theater in Nanjing. The results demonstrate that AI tools significantly improve creative efficiency by shortening production cycles and stimulating inspiration, while digital projection technologies and AR/VR applications enhance the visual impact and immersive qualities of stage performances. At the same time, structural challenges such as high implementation costs, insufficient training programs, and unequal adoption rates between large institutions and smaller theater groups continue to limit the widespread promotion of these technologies. Moreover, audience analysis reveals a differentiated development path, with younger generations showing stronger acceptance and enthusiasm for immersive technologies compared to middle-aged and older groups. Together, these findings highlight the dual reality of opportunity and constraint that shapes the digital transformation of Nanjing's musical theater industry.

5.2 Discussion

The findings of this research suggest that digital technologies are shifting from being auxiliary tools to becoming central components of the creative and performance process in Nanjing musicals. Their application enhances efficiency, reshapes stage design, and deepens audience engagement, marking a transition from linear production models to more flexible and iterative forms of artistic creation. However, despite their clear potential, the diffusion of these technologies faces structural obstacles. Smaller and independent theater groups remain disadvantaged due to limited funding and lack of technical expertise, while larger institutions are more capable of experimenting with advanced digital applications. This creates a digital divide within the industry. At the same time, audience responses point to generational differences, with younger spectators demanding higher

levels of immersion, interactivity, and personalization, whereas older audiences remain more cautious in embracing digitalized theater. These dynamics indicate that the integration of digital technologies into musical theater requires not only technological innovation but also targeted institutional support, funding mechanisms, and professional training to ensure equitable and sustainable adoption across the sector.

5.3 Recommendation

In order to fully realize the potential of digital technologies in the musical theater industry, several strategic actions are recommended. First, theaters should expand the use of online and virtual platforms, allowing performances to transcend spatial and temporal limitations and reach broader audiences. Second, investments in professional training are essential, particularly for creators and technical staff in small and medium-sized theater groups, to close the adoption gap and build sustainable technological capacity. Third, cross-border collaborations should be encouraged, integrating musicals with gaming, film, and digital art to create new and diverse forms of artistic expression. Finally, producers should pay closer attention to audience segmentation, offering immersive, interactive, and personalized experiences for younger viewers while designing more accessible and user-friendly digital applications to engage older demographics. By embedding intelligence, immersion, and interactivity into every stage of production and performance, Nanjing's musical theater industry can advance toward a new era of digital artistry, positioning itself as both a cultural innovator and a leader in creative transformation.

References

- Bao, F. (2022). *Research on semantic based virtual scene construction technology for traditional Chinese opera* [Doctoral dissertation, Zhengzhou University of Light Industry].
- Dong, T. (2019). *Research on digital art communication of Chinese elements in the Internet age* [Doctoral dissertation, Southeast University].
- Guo, W. (2024). *Analysis and research on technology empowered stage creation process from the perspective of digital media* [Doctoral dissertation, Shanghai Conservatory of Music].
- Huang, H. (2023). Analysis of vocal stage VR performance art from an aesthetic perspective: A review of "Exploration of vocal art performance and teaching practice." *Science and Technology Management Research*, 43(04), 243.
- Jiang, H. (2024). Research on dance creation in musical theatre: Taking the experimental musical *In the Mood for Love* as an example. *Tomorrow's Fashion*, (21), 108–109.
- Jiang, J. (2025). Exploring how music constructs cultural identity for individuals and communities in the context of digital technology. *Musical Instruments*, (04), 88–90.
- Li, K. (2023). The application path of artificial intelligence technology in dance teaching in colleges and universities. *Popular Literature and Art*, (19), 170–172.
- Li, W. (2025). The new development pattern of the performing arts industry in the era of digital intelligence. *China's Strategic Emerging Industries*, (12), 30–32.

- Li, Y. (2024). *Research on the impact of Chinese digital music platforms on traditional music culture identity* [Doctoral dissertation, Communication University of China].
- Li, Z. (2025). AI driven immersive sound design: Creating a new audio-visual experience for musicals. *Chinese Musicals*, (01), 70–72.
- Liang, S. (2025). The artistic ethical value of digital technology in promoting the aesthetic presentation of performing arts. *Qilu Art Garden*, (01), 103–107.
- Liu, X. (2024). The creative practice of AI technology in stage art image design: Taking the musical *A Grain in the Sea* and *Waste Wood Music Troupe* as examples. *Digital Communication*, (10), 63–65.
- Liu, Y. (2025). A brief analysis of the digital transformation of performing arts: AI assisted script creation, stage performance, and stage visual design. *Shen Hua*, (07), 99–101.
- Liu, Y. (2025). Empowering music education with digital technology, Review of *Research on college music teaching and multimedia technology application*. *Media*, (11), 97.
- Liu, Y., & Liu, Y. (2023). Innovative thinking on the popularization of national art in the digital age, The construction of internet plus intelligent digital platform for popularization of national music. In *Proceedings of Liaoning Provincial Cultural Museum Conference* (pp. 240–246). Liaoning Provincial Cultural Museum.
- Tang, G. (2025). The path of digital technology empowering the active inheritance of intangible cultural heritage traditional dance. *Chinese Dance Studies*, (01), 155–172, 329–330.
- Wang, S. (2024). Research on the development path of campus musical theatre in China under the background of the E-era. *Contemporary Music*, (11), 49–51.

Empowerment Leadership and Employees Cyberloafing: The Role of Basic Psychological Needs Satisfaction and Power Distance Orientation

by

Jiali Zuo¹ and Zuochang Zhang

School of Management Science and Engineering,
Guangxi University of Finance and Economics,
Guangxi, China

E-mail: 356577156@qq.com¹

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School of Management Science and Engineering,
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Abstract

With the rapid advancement of information and communication technology (ICT) in the workplace, employees increasingly engage in non-work-related online activities during working hours, a phenomenon known as cyberloafing. While these behaviors may appear minor, they can lead to significant productivity losses and pose information security risks to organizations. Leadership plays a pivotal role in shaping employee behavior, and empowerment leadership has been proposed as a key factor in mitigating cyberloafing. This study investigates the relationship between leadership empowerment and employees' cyberloafing, using self-determination theory as the theoretical framework. Specifically, it examines the mediating role of basic psychological needs satisfaction, including autonomy, competence, and relatedness, and the moderating effect of employees' power distance orientation. A quantitative approach was employed, with a three-stage questionnaire survey conducted among employees in small and medium-sized enterprises (SMEs) in East China. The findings indicate that empowerment leadership can significantly reduce employees' engagement in cyberloafing, primarily through the satisfaction of basic psychological needs. When leaders provide authority, autonomy, and resource support, employees experience enhanced self-control, increased confidence in their abilities, and stronger interpersonal relationships, which collectively fulfill their psychological needs and promote positive workplace behavior. Moreover, employees' power distance orientation was found to strengthen these effects, highlighting the role of cultural and individual differences in moderating leadership outcomes. Employees with higher power distance orientation respond more positively to empowerment, exhibiting greater satisfaction of psychological needs and a stronger reduction in cyberloafing. These results underscore the importance of implementing leadership strategies that not only empower employees but also consider cultural orientations and psychological factors to enhance productivity and minimize deviant behaviors. Practical implications for managers include providing targeted empowerment, supporting employee psychological needs, and fostering structured organizational policies to cultivate a responsible and motivated workforce.

Keywords: Cyberloafing, Empowerment Leadership, Basic Psychological Needs, Self-Determination Theory, Power Distance Orientation

1. Introduction

1.1 Background and Importance of the Problem

With the rapid development of the Internet age and the widespread application of ICT technology in the workplace, the time and frequency of people using electronic products are increasing significantly. While these technologies improve flexibility and efficiency, they also give rise to new challenges, such as cyberloafing, a behavior in which employees engage in non-work-related Internet activities (e.g., browsing websites, sending personal emails) during working hours (Lim, 2002). Cyberloafing not only leads to productivity losses but also poses information security risks, as employees may inadvertently download malware or expose the organization to cyber threats (Jiang et al., 2020). Leaders, with their influence and authority in organizations, play a critical role in shaping employee behaviors. Research by Agarwal (2019) found that passive, aggressive, or overconfident leadership styles tend to increase cyberloafing among subordinates. Conversely, empowering leadership behaviors can enhance employees' motivation, sense of responsibility, and commitment, thereby reducing cyberloafing. To better understand this phenomenon, self-determination theory (SDT) provides a useful framework. SDT emphasizes the importance of fulfilling basic psychological needs, autonomy, competence, and relatedness, for fostering positive motivation and reducing deviant workplace behaviors. This study therefore seeks to explore how leadership empowerment influences employees' cyberloafing through the satisfaction of these needs, while also considering the moderating role of employees' power distance orientation.

1.2 Research Question

- 1) How does leadership empowerment influence employees' cyberloafing behavior?
- 2) Do autonomy, competence, and relational needs satisfaction mediate the relationship between leadership empowerment and employees' cyberloafing?
- 3) Does employees' power distance orientation moderate the effects of leadership empowerment on psychological needs satisfaction and cyberloafing behavior?

1.3 Research Objective

The purpose of this study is to investigate the mechanisms and boundary conditions underlying the relationship between leadership empowerment and employees' cyberloafing. Specifically, this study aims to:

- 1) Examine how leadership empowerment affects employees' cyberloafing behavior.
- 2) Analyze the mediating role of autonomy, competence, and relational needs satisfaction based on self-determination theory.
- 3) Explore the moderating role of employees' power distance orientation in the relationship between leadership empowerment, psychological needs satisfaction, and cyberloafing behavior.
- 4) Provide practical implications for Chinese SMEs to reduce productivity losses, mitigate security risks, and strengthen effective management practices.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Cyberloafing

Cyberloafing, a modern workplace phenomenon, refers to employees engaging in non-work-related Internet activities during working hours, such as browsing websites, checking personal emails, or engaging in social media activities (Lim, 2002). This behavior is often hidden, making it difficult for supervisors to detect, and may sometimes even be misinterpreted as diligent work. Its hidden nature allows employees to engage in it without immediate consequences, leading to its widespread adoption in organizations. Wu et al. (2022) also observed that cyberloafing exhibits a “social learning” effect, where employees imitate the cyberloafing behavior of colleagues, further promoting the proliferation of this behavior within organizations. The negative consequences of cyberloafing are significant. It can reduce employee productivity by 30% to 40%, translating into enormous financial costs, estimated at \$183 billion annually, or approximately \$4,500 per employee per year (Wu et al., 2022). Beyond productivity losses, cyberloafing can also expose organizations to cybersecurity risks, including malware infections and data breaches, highlighting the urgent need for effective management strategies to address this issue.

2.1.2 Empowerment Leadership

Empowerment leadership is a leadership style in which leaders delegate authority and provide employees with the autonomy to decide how and when to accomplish their tasks. By granting employees decision-making power, leaders encourage self-management, personal initiative, and a sense of ownership over work outcomes (Sharma & Kirkman, 2015). Empowerment leadership not only facilitates task completion but also strengthens subordinates' engagement, job satisfaction, self-efficacy, and organizational commitment (Song & Liu, 2014). Furthermore, employees under empowerment leadership tend to exhibit positive extra-role behaviors, such as knowledge sharing, voice behavior, and organizational citizenship behaviors, which are crucial for sustaining organizational competitiveness and innovation (Zhang, 2021). Leaders who provide both recognition of employees' abilities and relational support foster deeper interactions, enabling employees to access greater resources and guidance for personal and professional growth (Tang et al., 2022; Zhao et al., 2021).

2.1.3 Self-Determination Theory

Self-determination theory (SDT), developed by Deci and Ryan (2000), emphasizes the role of basic psychological needs in fostering intrinsic motivation and positive behavioral outcomes. According to SDT, humans possess three fundamental psychological needs: autonomy, competence, and relatedness. Autonomy refers to the need to feel in control of one's actions, competence reflects the need to feel effective in task completion, and relatedness denotes the need to feel socially connected and supported. When these needs are fulfilled, employees experience higher intrinsic motivation, job satisfaction, and engagement, while unmet needs can lead to burnout, disengagement, and deviant behaviors, such as cyberloafing. Thus, SDT provides a robust theoretical framework for understanding how leadership behaviors, such as empowerment, influence employee motivation and behavior in the workplace.

2.1.5 Power Distance Orientation

Power distance orientation is a cultural and individual difference variable that reflects the degree to which individuals accept unequal power distribution within social or organizational hierarchies (Hofstede, 1980). In organizational settings, employees with high power distance orientation recognize and accept hierarchical differences and are more likely to comply with leadership instructions without resistance. Conversely, employees with low power distance orientation are less accepting of hierarchical disparities and may challenge authority or selectively comply with instructions (Bao & Liao, 2019). Research suggests that power distance orientation can shape employees' responses to empowerment leadership. Employees with high power distance orientation tend to perceive empowerment as an opportunity to fulfill their responsibilities and obligations toward leaders and the organization, while employees with low power distance orientation may interpret empowerment as routine or insufficiently impactful, thereby weakening its motivational effect (Chen et al., 2022).

2.2 Literature Surveys

Previous studies have consistently highlighted the detrimental impact of cyberloafing on organizational performance. Wu et al. (2022) emphasized that cyberloafing spreads via social learning mechanisms, as employees observe and imitate the online behaviors of their colleagues, leading to widespread adoption within organizations. Beyond productivity loss, cyberloafing poses cybersecurity risks, including exposure to malware and unauthorized data access, which underscores the necessity for organizations to proactively manage this behavior.

Research on empowerment leadership demonstrates its effectiveness in enhancing employees' positive attitudes and behaviors. Empowerment leadership has been associated with higher organizational commitment, increased engagement, improved job satisfaction, and enhanced self-efficacy (Song & Liu, 2014). Employees under such leadership often extend beyond their formal job roles, engaging in knowledge sharing, organizational citizenship behaviors, and voice behaviors, all of which contribute to organizational resilience and performance (Zhang, 2021). Furthermore, empowerment leadership provides subordinates with both psychological and practical resources, fostering deeper interactions between leaders and employees and supporting employees' personal and professional growth (Tang et al., 2022; Zhao et al., 2021).

The mediating role of basic psychological needs has been well-documented in prior research. Employees whose autonomy needs are fulfilled are more likely to self-manage, set their own work goals, and maintain productivity, reducing opportunities for cyberloafing (Gao & Huang, 2022). Satisfaction of competence needs empowers employees to tackle challenging tasks with confidence, leaving little idle time for non-work-related online activities (Zhang et al., 2019). Additionally, employees who experience high relational needs satisfaction perceive meaningful connections at work, which discourages deviant behaviors such as cyberloafing. Therefore, basic psychological needs satisfaction serves as a critical pathway through which leadership behaviors influence employee engagement and workplace behavior.

Power distance orientation has emerged as an important moderating factor in leadership research. Employees with high power distance orientation tend to accept hierarchical differences and respond more positively to empowerment leadership, resulting in greater fulfillment of basic psychological needs. In contrast, employees with low power distance orientation may view empowerment as routine or ineffective, thereby weakening its impact on psychological needs satisfaction (Chen et al., 2022; Bao & Liao, 2019). Consequently, understanding the role of power

distance orientation is essential for tailoring leadership strategies to diverse employee populations and ensuring the effectiveness of empowerment practices in reducing cyberloafing behaviors.

2.3 Conceptual Framework

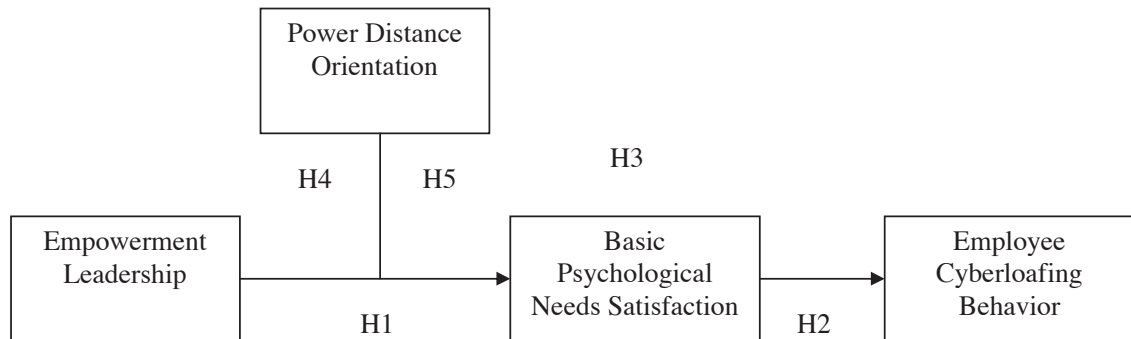


Figure 1 Conceptual Framework

Based on the literature, the conceptual framework posits that empowerment leadership positively influences employees' basic psychological needs satisfaction, which, in turn, reduces cyberloafing behavior. Basic psychological needs satisfaction serves as a mediating mechanism, linking leadership behaviors to employees' online work behavior. Power distance orientation moderates the relationship between empowerment leadership and psychological needs satisfaction, affecting the extent to which empowerment influences employees' motivation and behavior. Specifically, employees with higher power distance orientation are expected to experience greater satisfaction of autonomy, competence, and relational needs under empowerment leadership, thereby exhibiting less cyberloafing. Conversely, employees with low power distance orientation may derive less benefit from empowerment, weakening its effect on cyberloafing.

In addition, the framework suggests a moderated mediation effect, whereby power distance orientation not only moderates the direct relationship between empowerment leadership and psychological needs satisfaction but also influences the indirect effect of empowerment leadership on cyberloafing through psychological needs satisfaction. This integrated model provides a comprehensive view of the mechanisms and boundary conditions through which leadership empowerment shapes employee online behavior in the workplace.

2.4 Research Hypothesis

Hypothesis 1: Empowerment leadership is significantly positively correlated with the satisfaction of employees' basic psychological needs.

Hypothesis 2: Basic psychological needs satisfaction is significantly negatively correlated with employees' cyberloafing behavior.

Hypothesis 3: Empowerment leadership affects employees' cyberloafing behavior indirectly through basic psychological needs satisfaction (mediating effect).

Hypothesis 4: Employees' power distance orientation moderates the relationship between empowerment leadership and basic psychological needs satisfaction.

Hypothesis 5: Employees' power distance orientation moderates the indirect relationship between empowerment leadership and cyberloafing through basic psychological needs satisfaction (moderated mediation).

3. Research Methodology

3.1 Research Design

This study adopts a quantitative research design to empirically examine the relationships among empowerment leadership, basic psychological needs satisfaction, power distance orientation, and employees' cyberloafing behavior. The quantitative approach allows for statistical testing of hypotheses and provides a systematic method to explore causal and mediating mechanisms between leadership behaviors and employee outcomes. A questionnaire survey was employed as the primary data collection method, which is well-suited for capturing employees' perceptions, attitudes, and behaviors across multiple constructs in a standardized and reliable manner.

3.2 Population and Sample

The target population for this study consists of employees working in small and medium-sized enterprises (SMEs) in East China. SMEs were chosen due to their growing importance in the regional economy and the relatively flexible management structures that make leadership and employee behavior particularly observable. A random sampling method was used to select participants from a list of eligible employees provided by the Human Resources (HR) managers of participating SMEs, ensuring that each employee had an equal opportunity to be included in the survey. In total, 313 valid responses were collected across three phases of data collection, providing a sufficient sample size for statistical analysis and hypothesis testing.

3.3 Research Instruments

The study employed structured questionnaires to measure the main variables. The instruments were adapted from previously validated scales to ensure reliability and content validity. The first phase measured employees' perceptions of empowerment leadership, power distance orientation, and demographic variables. The second phase assessed the level of basic psychological needs satisfaction, including autonomy, competence, and relatedness, based on scales grounded in self-determination theory (Deci & Ryan, 2000). The third phase captured cyberloafing behaviors and controlled for social desirability bias to minimize response distortion. All questionnaire items were measured using a Likert-type scale, allowing respondents to indicate their level of agreement or frequency for each statement.

3.4 Data Collection

Data collection was conducted in three stages over a period of approximately two and a half months to reduce common method bias and ensure temporal separation between predictor and outcome variables. In the first stage, employees completed the questionnaire on empowerment leadership, power distance orientation, and demographic information, yielding 412 responses. After approximately one and a half months, the second-stage survey assessed employees' basic

psychological needs satisfaction, resulting in 373 responses. The third stage, conducted two and a half months later, collected data on employees' cyberloafing behaviors and social desirability, with 336 responses returned. Questionnaires with missing responses or identical answers across all items were eliminated. After cleaning, a total of 313 valid questionnaires were retained for analysis. Prior to distribution, permission was obtained from the responsible managers of each participating SME, and confidentiality and voluntary participation were assured for all respondents.

3.5 Statistics Used for Data Analysis

The collected data were analyzed using multiple statistical software packages to ensure robust testing of the study's hypotheses. SPSS 24.0 was used for descriptive statistics, reliability analysis, and preliminary correlation analysis among the variables. MPLUS 7.0 was employed for confirmatory factor analysis (CFA) to assess the construct validity of the measurement scales and to test the hypothesized structural relationships among latent variables. To test mediation, moderation, and moderated mediation effects, PROCESS 3.0 macro was applied, enabling the estimation of direct, indirect, and conditional effects in a rigorous and statistically valid manner. This combination of software tools ensured a comprehensive examination of both measurement and structural models, providing strong empirical support for the proposed hypotheses.

4. Data Analysis and Findings

4.1 Introduction

This section presents the analysis and findings of the quantitative data collected from employees of small and medium-sized enterprises (SMEs) in East China. The primary objective of this study is to examine the relationships among empowerment leadership, basic psychological needs satisfaction, power distance orientation, and employees' cyberloafing behavior. Data were collected through a three-stage survey process to capture different variables over time and reduce the risk of common method bias. After cleaning and screening the questionnaires, a sufficient number of valid responses were retained for analysis, providing a representative sample of early-career and mid-level employees typical of SMEs in the region. The measurement of variables relied on established, validated questionnaires. Empowerment leadership, basic psychological needs satisfaction, employees' cyberloafing behavior, and power distance orientation were assessed using widely recognized scales, and demographic variables such as age, gender, education, and work experience were included as control variables. The use of structured questionnaires allowed for consistent and comparable responses across respondents while ensuring anonymity and confidentiality to enhance the reliability of the data. Data analysis was conducted using multiple software tools and statistical procedures to ensure a rigorous examination of the research model. Confirmatory factor analysis was performed to test the validity of the constructs, while procedures were employed to assess and minimize potential common method bias. Correlation analysis and regression techniques were then applied to examine the relationships between variables, followed by tests of mediation and moderated mediation to explore the underlying mechanisms and boundary conditions of the effects. The findings provide insights into how empowerment leadership influences employees' cyberloafing behavior, highlighting the important mediating role of basic psychological needs satisfaction and the moderating influence of employees' power distance orientation. Overall, the analysis supports the theoretical framework of the study and offers practical implications for leadership practices in SMEs, demonstrating how leaders can foster motivation, engagement, and responsible online behavior among employees.

4.2 Data Analysis of the Quantitative Data

The object of this research is the SME in East China. The company made an appointment to visit, obtained the consent of HR and provided the list of survey subjects, and distributed the questionnaires. Finally, 313 valid questionnaires were received, and the effective rate of questionnaire recovery was 75.97%. Among the 313 valid data samples collected, most of them are young and middle-aged: 74.5% are 23-25 years old, with an average age of 24.2 years ($SD = 2.79$); 62.9% have a college degree, 34.8% have a bachelor's degree, and 34.8% have a master's degree. Education accounted for 2.2%; the average working years were 1.8 years ($SD = 2.24$).

All measurement items in this study were scored using a 7-point Likert scale, with 1 being "strongly disagree" and 7 being "strongly agree". Empowerment leadership: A measurement scale with 12 measurement items developed by Ahearne et al. (2005). The Cronbach's alpha value of this scale is 0.918. Basic Psychological Needs Satisfaction: A scale with 12 items developed by Vlachopoulos & Michailidou (2006), with a Cronbach's α value of 0.881. Employees Cyberloafing Behavior: The scale developed by Lim (2002) contains 11 measurement items, where 1 means "rarely" and 7 means "always". The Cronbach's α value of this scale is 0.942. Power Distance Orientation: Contains 6 measurement items developed by Dorfman & Howell (1988). The Cronbach's alpha value of this scale is 0.716. Control variables: To control the impact of irrelevant variables on the results of this study and improve the reliability of the results, this study uses demographic variables such as gender, age, education level, and working years of employees as control variables based on previous studies.

4.2.1 Confirmatory Factor Analysis

This study uses MPLUS7.0 for confirmatory factor analysis to test the discriminant validity between different constructs. The results are shown in Table 1. The goodness of fit of the five-factor model was not only optimal $\chi^2(48) = 97.616$, CFI = 0.967, TLI = 0.955, RMSEA = 0.057, SRMR = 0.054, but also significantly better than the standards recognized by the academic community. Therefore, it can be concluded that the different variables in this study have good discriminant validity.

Table 1 Confirmatory Factor Analysis Results

Factors	χ^2	df	χ^2/df	$\Delta\chi^2$	CFI	TLI	RMSEA	SRMR
Four Factor Model (LPE; BPNS; CL; PD)	97.616	48	2.034	/	0.967	0.955	0.057	0.054
Three Factor Model (LPE+BPNS; CL; PD)	256.908	51	5.037	159.292	0.865	0.825	0.114	0.096
Two Factor Model (LPE+BPNS+CL; PD)	655.425	53	12.367	557.809	0.604	0.507	0.191	0.145
One Factor Model (LPE+BPNS+CL+PD)	792.654	54	14.679	695.038	0.515	0.407	0.209	0.162

Note: LPE means Empowerment leadership, BPNS means Basic Psychological Needs Satisfaction, CL means Employee's Cyberloafing behavior, and PD means Power Distance Orientation. "+" indicates that 2 factors are merged into one factor. CFI (Comparative fit index) is a comparative fit index; TLI (Tucker-Lewis Index) is a Tucker-Lewis index; RMSEA (Root-Mean-Square Error of Approximation) is an approximate error root mean square; SRMR (Standardized Root Mean square Residual) is the square root of the sum of squared residuals.

4.2.2 Common Method Bias Test

First of all, this study uses SPSS 24.0 software for Harman single-factor analysis. The data analysis results show that in the unrotated data analysis results, the first factor can explain 25.105% of the total variance, which is not only lower than the standard of 40% of the total variance, which is also less than half of the cumulative variance explained rate (70.749%) (Podsakoff et al., 2003). In addition, this study also tested the problem of common method bias by adding the unmeasured common method factor (ULMC). The results showed that the five-factor model with the unmeasured common method factor could not be fitted in MPLUS7. There is a common method bias issue for validation.

4.2.3 Correlation Analysis

The results are shown in Table 2. It can be seen from Table 2 that there is a significant positive correlation between Empowerment leadership and the Basic Psychological Needs Satisfaction of employees ($r = 0.372$, $p < 0.01$), and a significant negative correlation between Basic Psychological Needs Satisfaction of employees and Employees Cyberloafing ($r = -0.373$, $p < 0.01$). Moreover, there is a significant negative correlation between Empowerment leadership and Employees' Cyberloafing ($r = -0.208$, $p < 0.01$), so the hypothesis proposed in this study has been preliminarily verified.

Table 2 Descriptive Statistics and Correlation Analysis Results

Variable	M	SD	1	2	3	4	5	6	7
1. Gender	1.789	0.409							
2. Age	24.198	2.788	– 0.194**						
3. Education level	2.393	0.533	– 0.207**	0.530**					
4. Working Years	1.815	2.238	–0.113*	0.895**	0.365**				
5. Empowerment Leadership (LPE)	4.735	0.645	– 0.194**	0.041	0.081	0.003			
6. Basic Psychological Needs Satisfaction (NPNS)	3.882	0.682	–0.100	0.019	–0.057	0.026	0.372**		
7. Employees Cyberloafing (CL)	2.588	0.958	0.131*	–0.071	–0.034	– 0.056	– 0.208**	– .0373**	
8. Power Distance Orientation (PD)	3.804	0.710	–0.058	0.052	0.133*	– 0.017	–0.101	–0.144*	0.104

Note: N = 313; M is the mean, SD is the standard deviation; * means $p < 0.05$, ** means $p < 0.01$.

From models 1a and 1b in Table 3, after controlling all the control variables, Empowerment leadership has a significant positive effect on employees' Basic Psychological Needs Satisfaction ($\beta = 0.372$, $p < 0.01$), and hypothesis 1 has been verified. In addition, according to model 2c, Basic Psychological Needs Satisfaction has a significant negative impact on Employee's Cyberloafing behavior ($\beta = -0.342$, $p < 0.01$), and hypothesis 2 has been verified.

First, as can be seen from models 2b and 2c in Table 3, Empowerment leadership has a significant negative impact on Employees' Cyberloafing behavior ($\beta = -0.191$, $p < 0.01$), and

Empowerment leadership and Basic Psychological Needs Satisfaction are incorporated into the model at the same time (That is, model 3c), Empowerment leadership has no significant effect on Employees Cyberloafing behavior ($\beta = -0.064$, $p = 0.272$), while employee Basic Psychological Needs Satisfaction has a significant negative impact on Cyberloafing behavior ($\beta = -0.342$, $p < 0.01$), indicating that employees' Basic Psychological Needs Satisfaction plays a complete mediating role between Empowerment leadership and Cyberloafing behavior. That is, Hypothesis 3 has been preliminarily verified.

Table 3 Mediating Effect Test Results

Variable	(BPNS)		(CL)		
	Model 1a	Model 1b	Model 2a	Model 2b	Model 2c
1. Gender	-0.113	-0.045	0.124	0.09	0.074
2. Age	0.038	0.014	-0.068	-0.056	-0.052
3. Education Level	-0.108	-0.123	0.024	0.032	-0.010
4. Working Years	0.019	0.052	0.010*	-0.007	0.011
5. Empowerment leadership (LPE)		0.372**		-0.191**	-0.064
6. Basic Psychological Needs Satisfaction (BPNS)					-0.342**
R ²	0.019	0.152**	0.020	0.055**	0.154**
ΔR^2		0.133**		0.035**	0.099**

Note: N = 313; * means at $p < 0.05$, ** means at $p < 0.01$.

To further verify the mediating effect of employees' Basic Psychological Needs Satisfaction, the PROCESS 3.0 plug-in was used to conduct 5000 times replacement sampling through the Bootstrap method. The results showed that the indirect effect value was -0.189, the standard error was 0.048, and the 95% confidence interval was [-0.292, -0.102, excluding 0, indicating that hypothesis 3 is established, that is, Basic Psychological Needs Satisfaction mediates the negative relationship between Empowerment leadership and Cyberloafing behavior.

The data of model 3c in Table 4 shows that the product term of Empowerment leadership and employee Power Distance Orientation has a significant positive predictive effect on Basic Psychological Needs Satisfaction ($\beta = 0.164$, $p < 0.01$), so hypothesis 4 has been initially verified.

Table 4 Moderator Effect Test Results

Variable	(BPNS)		
	Model 3a	Model 3b	Model 3c
1. Gender	-0.113	-0.050	-0.057
2. Age	0.038	0.036	0.034
3. Education Level	-0.108	-0.112	-0.094
4. Working Years	0.019	0.026	0.016
5. Empowerment leadership (LPE)		0.360**	0.343**
Power Distance Orientation (PD)		-0.097	-0.121*
LPE * PD			0.164**
R ²	0.019	0.161**	0.187**
ΔR^2		0.142**	0.026**

Note: N = 313; * means at $p < 0.05$, ** means at $p < 0.01$.

According to the suggestion of Aiken & West (1991), this study conducted a simple slope test on the moderating effect, and the results are shown in Figure 2. The results show that under the condition of high employee Power Distance Orientation, Empowerment leadership has a significant and strong positive impact on employee Basic Psychological (simple slope = 0.352, $p < 0.001$); under the condition of low employee Power Distance Orientation, Empowerment leadership The positive effect on Basic Psychological was significant but weak (simple slope = 0.120, $p < 0.01$), Hypothesis 4 was further verified.

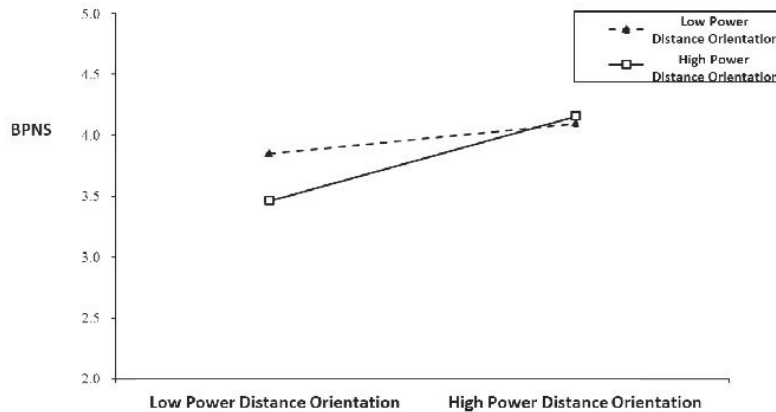


Figure 1 Simple Slope Plot of Moderating Effects Directed by Power Distance

To test Hypothesis 5, this study uses the PROCESS3.0 plug-in in SPSS24.0 and uses the Bootstrap method to carry out 5000 times replacement sampling. The analysis results are shown in Table 5. When the employee's Power Distance Orientation is low, Empowerment leadership passes Basic Psychological Needs The indirect effect of Satisfaction on employee Cyberloafing behavior is -0.089 , the standard error is 0.047 , and the 95% confidence interval is $[-0.197, -0.012]$, excluding 0; when the employee's Power Distance Orientation is high, Empowerment leadership passes Basic Psychological The indirect effect of Needs Satisfaction on employee Cyberloafing behavior is -0.253 , the standard error is 0.058 , and the 95% confidence interval is $[-0.373, -0.144]$, excluding 0. In addition, under the two conditions of high and low employee Power Distance Orientation, the indirect effect of Empowerment leadership on employee Cyberloafing behavior through Basic Psychological Needs Satisfaction is significantly different (the effect value is -0.164 , the standard error is 0.055 , and the 95% confidence interval is $[-0.274, -0.055]$, excluding 0). Therefore, Hypothesis 5 was verified.

Table 4 Moderated Mediation Effect Test Results

Employee Power Distance Orientation	Effect	Standard Error	95% Confidence Interval	
			LLCI	ULCI
Low Power Distance Orientation	-0.089^*	0.047	-0.197	-0.012
High Power Distance Orientation	-0.253^*	0.058	-0.373	-0.144
Differences in indirect effects between high and low conditions	-0.164^*	0.055	-0.274	-0.055

Note: N = 313; * means 95% confidence interval does not include 0.

4.4 Summary of the Results

This study examined the relationships among empowerment leadership, basic psychological needs satisfaction, employees' cyberloafing behavior, and the moderating role of power distance orientation in SMEs in East China. The results indicate that empowerment leadership plays a significant role in enhancing employees' satisfaction of basic psychological needs, including autonomy, competence, and relatedness. Employees who perceive higher levels of empowerment from their leaders tend to experience greater motivation, engagement, and a stronger sense of responsibility in their work. The analysis further demonstrated that the satisfaction of basic psychological needs serves as a critical mechanism through which empowerment leadership influences employees' cyberloafing behavior. When employees' psychological needs are effectively met, they are less likely to engage in non-work-related online activities during working hours. This finding highlights the importance of addressing employees' intrinsic needs as a strategy to reduce counterproductive workplace behaviors and enhance overall work efficiency. Moreover, the results revealed that employees' power distance orientation moderates the effects of empowerment leadership on basic psychological needs satisfaction and, indirectly, on cyberloafing behavior. Employees with higher power distance orientation tend to respond more positively to leadership empowerment, experiencing greater psychological need satisfaction and subsequently exhibiting lower levels of cyberloafing. Conversely, employees with lower power distance orientation show weaker responses to empowerment, indicating that cultural and individual differences can influence the effectiveness of leadership strategies. Overall, the findings provide empirical support for the proposed theoretical model, confirming the mediating role of basic psychological needs satisfaction and the moderating influence of power distance orientation. The study underscores the significance of leadership empowerment in fostering employee motivation and responsible behavior, while also highlighting the need for managers to consider individual and cultural differences when designing strategies to enhance performance and reduce counterproductive behaviors in the workplace.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

Based on the self-determination theory, this study examined the effect of empowerment leadership on employees' cyberloafing behavior, the mediating role of basic psychological needs satisfaction, and the moderating role of power distance orientation. The findings demonstrate that empowerment leadership can effectively inhibit employees' engagement in cyberloafing. This effect occurs indirectly through the satisfaction of employees' basic psychological needs. When leaders provide subordinates with higher levels of authority, autonomy, and resource support, employees experience greater self-control, confidence in their abilities, and stronger interpersonal connections with colleagues. These factors collectively satisfy employees' psychological needs, which in turn promote positive work attitudes and reduce negative workplace behaviors such as cyberloafing. Additionally, the study found that employees' power distance orientation amplifies these effects. Employees with higher power distance orientation respond more positively to empowerment, showing stronger satisfaction of basic psychological needs and a greater reduction in cyberloafing behavior. Overall, the study confirms that leadership empowerment, mediated by psychological need satisfaction and moderated by cultural orientation, plays a crucial role in shaping responsible and productive employee behavior.

5.2 Discussion

The results of this study provide several theoretical insights. First, they confirm the applicability of self-determination theory in explaining workplace behaviors, particularly in the context of leadership empowerment and cyberloafing. The findings highlight that employees' intrinsic motivation and psychological needs are key mechanisms through which leadership behaviors translate into observable outcomes. Second, the study emphasizes the importance of cultural and individual differences in shaping employees' responses to leadership. Specifically, power distance orientation, a dimension reflecting typical Eastern cultural values, strengthens the positive effects of empowerment leadership. This suggests that the same leadership behavior may elicit different outcomes depending on employees' acceptance of hierarchical authority and their orientation toward power. Therefore, understanding both the psychological and cultural factors influencing employees is essential for designing effective leadership strategies in SMEs and similar organizational contexts.

5.3 Recommendation

Based on the findings, several practical recommendations for managers and organizational leaders can be proposed. First, leaders should actively provide empowerment and autonomy to subordinates, offering the necessary work resources and support to enable career growth while aligning employee development with organizational objectives. This approach fosters a mutually beneficial environment that enhances motivation and reduces counterproductive behaviors such as cyberloafing. Second, organizational managers should pay close attention to employees' needs for autonomy, competence, and relational development. By facilitating goal clarity, professional self-confidence, and effective communication channels among colleagues, managers can strengthen employees' psychological satisfaction and create a work environment that discourages negative online behaviors. Third, organizations should implement clear and consistent policies that define acceptable workplace behavior and protect organizational interests. By reinforcing these standards, organizations can encourage employees to respect authority and increase their power distance orientation to a degree that amplifies the positive impact of leadership empowerment, further reducing the likelihood of cyberloafing.

References

- Agarwal, U. A. (2019). Impact of supervisors' perceived communication style on subordinate's psychological capital and cyberloafing. *Australasian Journal of Information Systems*, 23, 1–27.
- Ahearne, M., Mathieu, J., & Rapp, A. (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *Journal of Applied Psychology*, 90(5), 945–955.
- Bao, Y., & Liao, J. (2019). Review and prospect of power distance research. *Management Review*, 31(3), 178–192.
- Chen, L., Liu, S., & Hu, X. (2022). Humble leadership and employee proactive behavior from the perspective of social identity. *Journal of Management Science*, 25(2), 104–115.

- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Dorfman, P. W., & Howell, J. P. (1988). Dimensions of national culture and effective leadership patterns: Hofstede revisited. In E. G. McGoun (Ed.), *Advances in international comparative management* (Vol. 3, pp. 127–149). Greenwich, CT: JAI Press.
- Gao, Q., & Huang, B. (2022). The role of employee-organization relationship on scientific research innovation performance from the perspective of social exchange theory. *Science and Technology Management Research*, 42(4), 125–132.
- Hofsted, G. (1980). Motivation, leadership and organization: Do American theories apply abroad. *Organizational Dynamics*, 9, 42–63.
- Jiang, H., Tsohou, A., Siponen, M., & Li, Y. (2020). Examining the side effects of organizational Internet monitoring on employees. *Internet Research*, 30(6), 1613–1630.
- Lim, V. K. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior*, 23(5), 675–694.
- Sharma, P. N., & Kirkman, B. L. (2015). Leveraging leaders: A literature review and future lines of inquiry for empowering leadership research. *Group & Organization Management*, 40(2), 193–237.
- Song, L. L., & Liu, Y. R. (2014). The impact of leadership empowerment behavior on employee voice: The role of organizational trust and general self-efficacy. *Scientific Decision Making*, (5), 17–32.
- Tang, Y., Jia, R., Long, L., Ren, Z., & Pu, X. (2022). The double-edged sword effect of employee sincerity on the relationship with colleagues: The moderating effect of working time. *Acta Psychologica Sinica*, 54(5), 529–548.
- Vlachopoulos, S. P., & Michailidou, S. (2006). Development and initial validation of a measure of autonomy, competence, and relatedness in exercise: The Basic Psychological Needs in Exercise Scale. *Measurement in Physical Education and Exercise Science*, 10(3), 179–201.
- Wu, J., Song, M., Zoghbi-Manrique-de-Lara, P., Jiang, H., Guo, S., & Zhang, W. (2022). Why cyberloafing can be socially learned in the workplace: The role of employees' perceived certainty of formal and informal sanctions. *Information Technology & People*. Advanced online publication.
- Zhang, J. P., Lin, S. Q., Liu, S. S., Zhang, Y., & Li, H. R. (2021). The relationship between leadership empowerment and leadership effectiveness: A meta-analysis-based test. *Advances in Psychological Science*, 29(9), 1576–1598.
- Zhang, J. W., Zhao, H., Li, H. H., & Ren, Y. C. (2019). The process mechanism of team thinking style affecting team scientific creativity. *Science Research*, 37(11), 11.

Zhao, J., Liu, Y. J., Zhao, S. S., & Liu, Z. Q. (2021). How research emotional exhaustion induces research misconduct: An explanation based on the theory of self-depletion. *Science of Science and Management of Science and Technology*, 42(2), 30–44.

The Impact of Competitive Culture on Team Characteristics: The Moderating Role of Enterprise Ownership

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Jie He¹, Liming Zhang, and Baoqiang Han

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand

E-mail: 2633727487@qq.com¹

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Jie He¹, Liming Zhang, and Baoqiang Han

Chinese Graduate School,

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E-mail: 2633727487@qq.com¹

Abstract

This study investigates the impact of competitive culture on employee team characteristics within the Chinese retail industry, with a focus on how ownership types (private, state-owned, and foreign) influence this relationship. The research draws on the resource-based view and social identity theory to explore how competitive culture affects key employee traits, including job satisfaction, participation, commitment, teamwork, and professional competence. Data was collected from 428 valid questionnaires, revealing several important findings. First, competitive culture positively impacts employee team characteristics, fostering improvements in psychological traits (e.g., satisfaction, engagement) and professional traits (e.g., competency, teamwork). The study also highlights the moderating role of ownership type. Private enterprises were found to have stronger positive effects on satisfaction and professional ability, while state-owned enterprises showed weaker effects, particularly in fostering team collaboration. Foreign enterprises, on the other hand, excelled in promoting teamwork but faced challenges in maintaining employee satisfaction due to potential cultural mismatches. The study concludes by providing practical recommendations for retail enterprises. Companies should optimize the implementation of competitive culture to balance performance pressures with employee well-being. Private enterprises should focus on strengthening team commitment and collaboration, while foreign enterprises need to address cultural conflicts through localization. For state-owned enterprises, gradual reforms are advised to enhance competitiveness while maintaining internal stability. This research contributes to the literature by highlighting the multidimensional impact of competitive culture and the moderating role of ownership type in shaping employee team dynamics, offering valuable insights for both academic research and corporate practice.

Keywords: Competitive Culture, Employee Team Characteristics, Ownership Type, Chinese Retail Industry, Organizational Culture

1. Introduction

1.1 Background and Importance of the Problem

In the report of the 20th National Congress of the Communist Party of China, President Xi Jinping proposed a plan to "advance cultural confidence and self-improvement, cultivate talents for the new era, and regard high-quality development as the core task of national construction." This vision emphasizes the pivotal role of culture in shaping the development of modern China. At the policy level, the Notice on Carrying Out Benchmarking Actions for World-Class Management issued by the State-owned Assets Supervision and Administration Commission of the State Council in 2020 highlights that building a competitive corporate culture with Chinese characteristics is crucial for enhancing the core competitiveness of enterprises. The Chinese retail industry is currently undergoing dual transformations: the reconstruction of the consumption landscape and digital transformation. These changes present both challenges and opportunities, requiring enterprises to adapt quickly and strategically. To succeed in this environment, companies need to foster team resilience, and one of the most effective ways to achieve this is through shaping a strong and competitive corporate culture. Practices of companies like Pang Donglai demonstrate how a competitive culture, which integrates traditional Chinese values with modern management principles, can enhance employee teamwork efficiency and boost overall organizational performance. However, while much of the existing research on corporate culture discusses it in broad terms or focuses on various types of culture, there is a lack of studies that explore the specific impact of competitive culture on employee team characteristics. Research in this area often overlooks the nuanced relationship between culture and multidimensional employee traits, such as job satisfaction, participation, commitment, and teamwork. Moreover, the aspect of corporate ownership (whether private, state-owned, or foreign) as a critical factor shaping employee characteristics and team dynamics remains underexplored. In this context, understanding how competitive culture operates within different ownership types is crucial for uncovering the full potential of corporate culture in shaping high-performing teams.

1.2 Research Question

This study seeks to answer the following key research questions:

- 1) What is the impact of competitive culture on employee team characteristics (including satisfaction, participation, commitment, teamwork, and professional competence) in Chinese retail enterprises?
- 2) How do different ownership types (private vs. state-owned, foreign vs. state-owned) influence the relationship between competitive culture and employee team characteristics?
- 3) What is the role of corporate ownership as a moderating factor in the relationship between competitive culture and employee team dynamics, and how does it interact with institutional influences and marketization mechanisms?

1.3 Research Objective

The objectives of this study are as follows:

- 1) To validate the impact of competitive culture on employee team characteristics: This will involve testing how competitive culture influences five key employee team dimensions, satisfaction,

participation, commitment, teamwork, and professional competence, within the context of Chinese retail enterprises.

2) To compare the performance of different ownership types (private vs. state-owned, foreign vs. state-owned) in the relationship between competitive culture and employee team characteristics: This will reveal how varying ownership structures affect the ways in which culture influences team characteristics, and highlight any differences that emerge across ownership types.

3) To examine the moderating role of ownership type: Specifically, this study aims to explore how ownership type (private, state-owned, foreign) moderates the relationship between competitive culture and employee team characteristics, with a particular focus on the boundary effects of marketization and the impact of institutional transplantation in corporate culture.

By addressing these objectives, this study will provide valuable insights into the practical application of competitive culture in the Chinese retail sector and its potential as a tool for enhancing team performance and organizational competitiveness.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Competitive Culture

The concept of competitive culture emerged during the 1980s alongside broader explorations of corporate culture in management studies. Pascale and Athos (1982), in their comparison of American and Japanese companies, highlighted how Japanese enterprises achieved success through a collective emphasis on competition and value alignment. Schein (1985) later defined competitive culture as the value system formed by organizations in market competition, with key characteristics including:

- External competition orientation, focused on market share and industry positioning (Cameron & Quinn, 1999).
- Performance-driven approach, linking results with systems like KPIs, rankings, and merit-based rewards (Kotter & Heskett, 1992).
- Dynamic adaptability, responding rapidly to market and environmental shifts (Zhang De, 2009; Li Dequan, 2023).

Mainstream measurement tools include:

- The OCAI scale (Cameron & Quinn, 1999) focusing on external competition.
- The Six-Factor Model (Flamholtz, 2005), which includes a performance standards dimension.
- Localized Chinese scales, such as Zhang De's (2009) "capability orientation and performance" and Dai Huayong et al.'s (2010) "market response" module.

2.1.2 Employee Team Characteristics

Employee team characteristics refer to the stable psychological and capability traits exhibited by team members in an organizational context. These are both outcomes of adaptation and contributors to team effectiveness (Zhang Jing et al., 2018; Zhu Yongyue et al., 2023). Key aspects

include:

- **Composition Characteristics:** Observable (e.g., age, education) and implicit traits (e.g., emotional identity, motivational tendencies, skill levels).
- **Dynamic Attributes:** These traits are malleable and can be developed through training, incentives, and cultural shaping (Zhang Guiping, Liao Jianqiao, 2011; Shen Waiyi et al., 2024).
- **Functional Value:** The degree to which psychological and capability traits align with team goals and interpersonal environments affects outcomes like trust, engagement, and organizational competitiveness (Wang Ping et al., 2024).

2.2 Literature Surveys

Previous literature has examined the role of corporate culture in enhancing organizational performance, especially in manufacturing and financial sectors. However, competitive culture’s impact on employee team characteristics in the retail sector remains underexplored. Additionally, studies often focus on individual traits or single outcomes (e.g., commitment or capability) without systematically integrating multiple dimensions (e.g., satisfaction, engagement, teamwork, etc.).

Moreover, the moderating role of ownership type, whether an enterprise is state-owned, private, or foreign, is often neglected in current studies. Some notable gaps include:

- Kotter & Heskett (1992) emphasized culture’s impact on performance but lacked attention to ownership contexts.
- Triguero-Sánchez et al. (2022) noted the relationship between culture and commitment but did not address teamwork or professional development.
- Chinese scholars like Jia Yaqing (2023) proposed frameworks for culture maintenance but without ownership-specific differentiation.

Given the retail industry’s dual transformation (digitalization and consumer restructuring), these gaps are particularly pressing.

2.3 Conceptual Framework

Based on resource dependence theory, social identity theory, and institutional theory, this study constructs a conceptual model (see Figure 1, as referenced). The model includes:

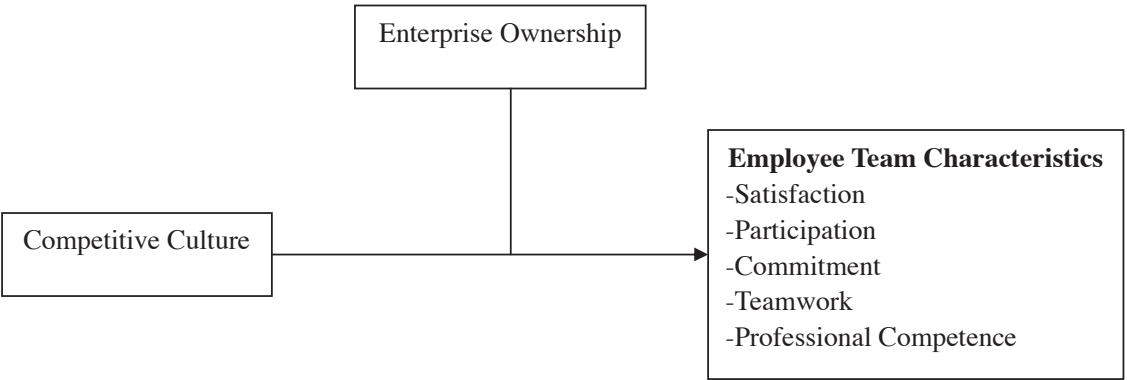


Figure 1 Conceptual Framework

The model suggests that competitive pressure leads to capability enhancement and efficiency optimization. A competitive culture fosters satisfaction through goal clarity, promotes engagement via shared KPIs, strengthens commitment through fair rewards, and improves teamwork and competence by encouraging complementary skills and innovation.

2.4 Research Hypothesis

Based on the above framework and literature, the following hypotheses are proposed:

H1: Competitive culture has a significant positive impact on employee team characteristics.

H1a: Competitive culture positively impacts employee satisfaction.

H1b: Competitive culture positively impacts employee engagement.

H1c: Competitive culture positively impacts employee commitment.

H1d: Competitive culture positively impacts teamwork.

H1e: Competitive culture positively impacts professional competence.

H2: Private enterprises (vs. state-owned enterprises) positively moderate the relationship between competitive culture and team characteristics.

H2a: Private enterprises strengthen the positive effect of competitive culture on satisfaction.

H2b: Private enterprises strengthen the positive effect on engagement.

H2c: Private enterprises strengthen the positive effect on commitment.

H2d: Private enterprises strengthen the positive effect on teamwork.

H2e: Private enterprises strengthen the positive effect on professional competence.

H3: Foreign enterprises (vs. state-owned enterprises) positively moderate the relationship between competitive culture and team characteristics.

H3a: Foreign enterprises strengthen the positive effect of competitive culture on satisfaction.

H3b: Foreign enterprises strengthen the positive effect on engagement.

H3c: Foreign enterprises strengthen the positive effect on commitment.

H3d: Foreign enterprises strengthen the positive effect on teamwork.

3. Research Methodology

3.1 Research Design

This study adopts a quantitative research design to explore the impact of competitive culture on employee team characteristics in Chinese retail enterprises. The research process involves both primary data collection and secondary data analysis. Initially, a literature review is conducted to establish the theoretical foundation and identify key variables related to competitive culture and team characteristics. The primary data is collected through a questionnaire survey aimed at capturing employees' perceptions of their organization's culture and their team characteristics. To analyze this data, statistical analysis techniques are applied, including reliability tests, factor analysis, and regression analysis. These methods enable the examination of the hypothesized relationships between competitive culture, team characteristics, and the moderating effect of enterprise ownership type. By focusing on Chinese retail enterprises, the research design is tailored to assess both the individual and organizational factors that contribute to team dynamics and performance.

3.2 Population and Sample

The research targets employees working in retail enterprises in the eastern coastal provinces and cities of China, regions with a high concentration of both state-owned and privately-owned retail companies. A total of 527 questionnaires were initially distributed to employees across a variety of retail companies in these regions. After filtering out invalid responses (such as incomplete or careless answers), 428 valid questionnaires remained, yielding an effective response rate of 81.21%. The sample includes a diverse demographic and organizational profile. Specifically, 36.6% of respondents were male, and 63.4% were female. In terms of ownership structure, 53.4% of respondents were from state-owned enterprises, 22.8% from private enterprises, and 23.8% from foreign enterprises. The age distribution was also diverse, with 15.8% of participants under 25, 35.6% aged 25-35, 44% aged 35-50, and 4.6% aged over 50. As for the annual sales revenue of the enterprises, 19.1% had sales of up to 5 billion RMB, 11.4% reported sales between 5-10 billion RMB, and 34.2% had sales between 50-100 billion RMB, while 23.8% had sales exceeding 100 billion RMB. This varied demographic ensures that the sample represents a broad spectrum of employees across different organizational types and enterprise sizes, which enhances the generalizability of the study's findings.

3.3 Research Instruments

To measure competitive culture, this study employs the Organizational Culture Assessment Instrument (OCAI), a widely used tool in organizational culture research. Originally developed by Cameron and Quinn (1999) and later adapted for the Chinese context by Li Jiansheng (2008), the scale measures six key dimensions of competitive culture. These dimensions include the organization's external orientation, performance-driven focus, and adaptability. The scale uses a 7-point Likert scale, where respondents rate items from "Strongly disagree" (1) to "Strongly agree" (7). The reliability of the scale was assessed with a Cronbach's Alpha of 0.946, indicating high internal consistency. Additionally, the Corrected Item-Total Correlation (CITC) for all items was greater than 0.7, and the Kaiser-Meyer-Olkin (KMO) value was 0.929, suggesting that the scale has excellent reliability and validity for the study's context. For measuring employee team characteristics, the study uses a 48-item scale developed to assess five key dimensions: Satisfaction, Participation, Commitment, Teamwork, and Professional Ability. These dimensions capture both the psychological and capability traits of team members, reflecting how individuals within teams interact and perform. Each item is measured using a 7-point Likert scale, similar to the competitive culture scale. The scale is grounded in existing literature and has been customized for the retail sector to ensure its relevance and applicability. The items for each dimension are listed in Table 1, which would be included in the full document.

Table 1 Source of Employee Team Characteristics Scale

Dimension	Original Question Item Count	Source
Employee Satisfaction	6	Schreisheim and Tsui (1980)
Employee Engagement	7	Na (2023)
Employee Commitment	16	Lina (2021)
Employee Teamwork	9	Mingming (2012)
Employee Professional Competence	10	Kim et al. (2016)

3.4 Data Collection

The data collection for this study was carried out through structured questionnaires, distributed both online and offline across various retail enterprises in China. The use of multiple distribution methods helped maximize reach and ensure a wide representation of respondents. The questionnaire was designed to be anonymous to encourage honest and unbiased responses from participants. Standardized instructions were provided to all respondents to ensure consistency and clarity in how the questions were interpreted. After data collection, the responses were carefully screened and cleaned to remove any incomplete or erroneous entries. Only valid responses were retained for analysis, resulting in a total of 428 usable questionnaires. This careful approach to data collection ensures that the results are reliable and can be used to draw meaningful conclusions about the relationships between competitive culture, team characteristics, and ownership type.

3.5 Statistics Used for Data Analysis

The collected data were analyzed using a variety of statistical techniques to test the study's hypotheses and validate the proposed theoretical model. The primary methods used for data analysis included:

1) Reliability Analysis: To assess the internal consistency of the scales, Cronbach's Alpha was calculated for both competitive culture and employee team characteristics scales. Values above 0.7 indicate acceptable reliability, ensuring that the scales are stable and consistent.

2) Exploratory Factor Analysis (EFA): This method was used to identify the underlying factor structure of the scales. It helps confirm whether the items on each scale are aligned with the intended constructs.

3) Confirmatory Factor Analysis (CFA): CFA was applied to validate the factor structure identified in EFA and to further confirm the construct validity of the scales.

4) Regression Analysis: To test the hypotheses regarding the relationships between competitive culture and employee team characteristics, regression models were used. These models help determine the strength and direction of the impact of competitive culture on the five dimensions of team characteristics (satisfaction, participation, commitment, teamwork, and professional competence).

5) Moderating Effect Analysis: Hierarchical regression was used to examine the moderating role of ownership type (state-owned, private, or foreign enterprises) in the relationship between competitive culture and team characteristics. Interaction terms were included in the regression models to determine how ownership type influences these relationships.

The statistical tools used in this study are appropriate for the type of data collected and allow for a robust examination of the proposed relationships between variables. These analyses will help test the hypotheses and provide empirical evidence to support the theoretical model.

4. Data Analysis and Findings

4.1 Introduction

This chapter presents the results of the quantitative data analysis conducted to test the proposed hypotheses and explore the relationships among competitive culture, enterprise ownership, and employee team characteristics. The analysis follows a structured approach, beginning with data preparation and exploratory factor analysis (EFA) to validate the measurement model. This is followed by a series of correlation and regression analyses to assess the direct effects of competitive culture, and the moderating effects of enterprise ownership types (private and foreign enterprises) on the relationship between competitive culture and team characteristics. The statistical techniques used include principal axis factoring with varimax rotation, Pearson correlation analysis, hierarchical regression, and moderation analysis using PROCESS Macro (Model 1). Control variables such as sales volume, age, and gender were included based on prior literature suggesting their potential influence on employee perceptions. The analysis provides empirical evidence to support most of the hypothesized relationships, while also highlighting areas where moderating effects vary by ownership type.

4.2 Data Analysis of the Quantitative Data

4.2.1 Exploratory Factor Analysis (EFA)

A principal axis factoring method combined with varimax (maximum variance) rotation was applied to 48 items, resulting in the removal of 14 items and the development of a finalized questionnaire consisting of 35 items across five factors. The overall reliability (Cronbach's Alpha) of the finalized measurement scale is 0.941, indicating excellent internal consistency. The Alpha values for each dimension are as follows: satisfaction (0.892), participation (0.905), commitment (0.929), teamwork (0.893), and professional capability (0.830). The Kaiser-Meyer-Olkin (KMO) value is 0.912, and the significance level of Bartlett's test of sphericity is .000, demonstrating that the scale has strong reliability and construct validity. Regarding enterprise ownership, the questionnaire categorizes enterprises into three groups: state-owned/state enterprises, private enterprises, and foreign-owned enterprises (hereafter referred to as state-owned enterprises, private enterprises, and foreign enterprises, respectively). To convert this categorical variable into dummy variables, the 'Transform – Recode into Different Variables' function was used, with 'state-owned enterprises' set as the reference group. This resulted in two new continuous variables: Ownership 1 (private vs. state-owned) and Ownership 2 (foreign vs. state-owned). As for control variables, prior research has indicated that factors such as sales scale, age, and gender may influence employees' perceptions of team characteristics; therefore, these variables were included as controls in the analysis. Pearson correlation analysis revealed that Ownership 1 (private vs. state-owned) is significantly negatively correlated with Ownership 2 (foreign vs. state-owned). Additionally, the results show that a stronger competitive culture is positively associated with higher levels of employee satisfaction, participation, commitment, and teamwork, although it is insignificantly negatively correlated with professional capability.

Table 2 Pearson Correlation Analysis

	1	2	3	4	5	6	7	8	9	10	11
1. Private Enterprise	1										
2. Foreign Enterprise	-.36***	1									
3. Competitive Culture	-.37***	-0.06	1								
4. Satisfaction	0.05	0.25***	0.29***	1							
5. Participation	0.24***	-0.08	0.29***	0.51***	1						
6. Commitment	-.18**	0.27***	0.30***	0.57***	0.42***	1					
7. Teamwork	0.02	0.38***	0.26***	0.49***	0.37***	0.59***	1				
8. Professional competence	0.29***	***	-0.07	0.44***	0.21***	0.36***	0.38***	1			
9. Sales volume	-0.35***	0.63***	0.03	0.28***	0.39***	0.27***	0.27***	-0.21***	1		
10. Gender	-0.01	-0.15**	0.13*	-0.19***	-0.10	-0.10	-0.09	-0.26***	0.08	1	
11. Age	-.24***	0.01	0.16**	-0.04	-0.11*	0.03	-0.06	-0.16***	0.02	0.05	1

Note: Ownership is processed using dummy variables, with the reference group being state-owned enterprises, and so on.

Note: *p<0.05, **p<0.01, ***p<0.001.

4.2.2 Direct Effects of Competitive Culture on Team Characteristics

The results of the regression analysis, as shown in Table 3, indicate that competitive culture has a significant positive effect on employee team characteristics ($B = 0.53$, $p < 0.001$), supporting Hypothesis H1. Specifically, competitive culture significantly and positively influences employee satisfaction ($B = 0.48$, $p < 0.001$), participation ($B = 0.47$, $p < 0.001$), commitment ($B = 0.36$, $p < 0.001$), teamwork ($B = 0.45$, $p < 0.001$), and professional capability ($B = 0.18$, $p < 0.001$). These results suggest that the stronger the competitive culture, the higher the levels of employee satisfaction, participation, commitment, teamwork, and professional capability, thus supporting Hypotheses H1a, H1b, H1c, H1d, and H1e.

Table 3 Direct Impact of Competitive Culture on Employee Team Characteristics

	Satisfaction	Participation	Commitment	Teamwork	Professional Competence	Team Characteristics
Controlled Variable						
Sales Volume	0.22***	0.77***	0.15*	0.08	-0.51***	0.19
Gender	-0.19***	-0.14***	-0.10*	-0.06	-0.22***	-0.19***
Age	-0.01	-0.07	-0.01	-0.03	-0.07	-0.05
Private Enterprise	0.40***	0.53***	0.09	0.40***	0.42***	0.51
Foreign Enterprise	0.27***	-0.35***	0.22**	0.50***	0.67***	0.35
Independent Variable						
Competitive Culture	0.48***	0.47***	0.36***	0.45***	0.18***	0.53***
R ²	0.32	0.61	0.2	0.34	0.43	0.41
△R ²	0.18	0.18	0.10	0.16	0.03	0.22

Note: The table shows the results of the final step of hierarchical regression, with 'Ownership' treated as a dummy variable, where 'State-Owned Enterprise' is the reference group, and so on. Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

4.2.3 Moderating Effect of Ownership (Private Enterprises vs State-Owned Enterprises)

The moderating effect was tested using Process (Model 1), with results shown in Table 4. The interaction term between competitive culture and private enterprises has no significant effect on engagement ($B = 0.10$, $t = 1.49$, $p > 0.05$), commitment ($B = -0.08$, $t = -1.08$, $p > 0.05$), teamwork ($B = 0.08$, $t = 0.97$, $p > 0.05$), and team characteristics ($B = 0.13$, $t = 2.38$, $p > 0.05$), indicating that hypotheses H2, H2b, H2c, and H2d are not supported. The interaction term between competitive culture and private enterprises positively and significantly affects satisfaction ($B = 0.15$, $t = 2.04$, $p < 0.05$) and professional capability ($B = 0.39$, $t = 4.79$, $p < 0.001$), meaning that the relationship between 'Culture-Satisfaction' and 'Culture-Professional Capability' is stronger in private enterprises compared to state-owned enterprises, supporting hypotheses H2a and H2e.

Table 4 Modulating Effects of Ownership (Private Enterprises vs State-Owned Enterprises)

	Satisfaction	Participation	Commitment	Teamwork	Professional Competence	Team Characteristics
Controlled Variable						
Sales Volume	0.19**	0.35***	0.13***	0.20***	-0.07*	0.16***
Gender	-0.27***	-0.16**	-0.18**	-0.15*	-0.34***	-0.22***
Age	-0.10	-0.05	-0.02	-0.05	-0.07	-0.04
Competitive Culture	0.25***	0.36***	0.23***	0.25***	-0.06	0.20***
Private Enterprise	-0.07	0.81**	0.41	0.16	-1.28**	0.01
Cultural * Private Enterprises	0.15*	0.10	-0.08	0.08	0.39***	0.13
△R2	0.01	0.003	0.003	0.002	0.047	0.01

Note: *p<0.05, **p<0.01, ***p<0.001.

4.2.4 Moderating Effect of Ownership (Foreign Companies vs. State-Owned Enterprises)

Using PROCESS (Model 1) to test the moderating effect, the results are presented in Table 5. The interaction term between competitive culture and foreign enterprises shows no significant effect on participation ($B = 0.07$, $t = -1.14$, $p > 0.05$), commitment ($B = -0.19$, $t = -2.21$, $p > 0.05$), professional capability ($B = -0.02$, $t = -0.23$, $p > 0.05$), or overall team characteristics ($B = 0.02$, $t = 0.35$, $p > 0.05$). Therefore, Hypotheses H3, H3b, H3c, and H3e are not supported. However, the interaction term has a significant negative effect on satisfaction ($B = -0.15$, $t = -2.25$, $p < 0.05$), indicating that the relationship between competitive culture and satisfaction is weaker in foreign enterprises compared to state-owned enterprises. As a result, Hypothesis H3a is not supported. In contrast, the interaction term has a significant positive effect on teamwork ($B = 0.16$, $t = 2.31$, $p < 0.05$), suggesting that the relationship between competitive culture and teamwork is stronger in foreign enterprises than in state-owned enterprises, thereby supporting Hypothesis H3d.

Table 5 The Moderating Effect of Ownership (Foreign Companies vs. State-Owned Enterprises)

	Satisfaction	Participation	Commitment	Teamwork	Professional Competence	Team Characteristics
Controlled Variable						
Sales Volume	0.09**	0.41***	0.07*	0.01	-0.32***	0.05*
Gender	-0.24***	-0.25***	-0.14*	-0.14	-0.33***	-0.22***
Age	-0.08*	-0.15***	-0.02	-0.09*	-0.14**	-0.09**
Competitive Culture	0.27***	0.18***	0.20***	0.17***	0.03	0.17***
Foreign Enterprise	0.92**	-1.19***	0.19	-0.24	0.89*	0.12
Cultural * Foreign Enterprises	-0.15*	0.07	0.01	0.16*	-0.02	0.02
△R2	0.01	0.002	0	0.011	0	0

Note: *p<0.05, **p<0.01, ***p<0.001.

4.3 Summary of the Results

The results of the quantitative analysis confirm that competitive culture has a significant positive impact on employee team characteristics, including satisfaction, participation, commitment, teamwork, and professional capability. Exploratory Factor Analysis (EFA) validated the measurement scale, demonstrating high reliability and construct validity. Correlation and regression analyses showed that a stronger competitive culture is consistently associated with higher levels of team-related outcomes, fully supporting Hypotheses H1 through H1e. The moderating effects of enterprise ownership revealed mixed findings: in private enterprises, competitive culture had a stronger positive effect on satisfaction and professional capability, supporting Hypotheses H2a and H2e, while other moderation effects were not significant. In foreign enterprises, competitive culture was found to strengthen teamwork (supporting H3d) but weaken satisfaction (leading to rejection of H3a), with no significant moderating effects observed for other dimensions. Overall, these findings highlight the importance of competitive culture in enhancing team performance and suggest that the effectiveness of such a culture may vary depending on the type of enterprise ownership.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study explored the impact of competitive culture on employee team characteristics in China's retail industry, guided by the resource-based view and social identity theory. Based on the analysis of 428 valid questionnaires, several key conclusions were drawn. First, the study found that competitive culture has a significant positive impact on employee team characteristics, which includes satisfaction, participation, commitment, teamwork, and professional ability. This confirms that competitive culture enhances both psychological and capability traits among employees through performance orientation, adaptability, and goal motivation, thus fostering a positive cycle of “competitive pressure - capability enhancement - effectiveness optimization.” Second, the study highlighted the moderating role of enterprise ownership. When comparing private enterprises with state-owned enterprises, private enterprises showed stronger positive effects of competitive culture on employee satisfaction and professional ability, whereas the moderating effects on participation, commitment, and teamwork were less significant. This suggests that private enterprises focus more on tangible outcomes like satisfaction and skill enhancement, while implicit team characteristics such as commitment need further attention. In contrast, foreign enterprises displayed a significantly stronger effect on teamwork compared to state-owned enterprises, though they had a negative moderation effect on satisfaction. This implies that while foreign enterprises excel at fostering cooperation, their competitive culture may lead to dissatisfaction among employees due to cultural mismatches or rigid management practices.

5.2 Discussion

The findings provide several important theoretical and practical insights. Firstly, this study contributes to the literature by examining the multidimensional impact of competitive culture on employee team characteristics, addressing the gap in previous studies that typically focused on only one aspect of organizational culture. By revealing the complex ways competitive culture influences various employee traits, this research underscores the importance of fostering both psychological traits (e.g., satisfaction, engagement) and professional traits (e.g., competency, teamwork), which in turn contribute to team effectiveness. Secondly, the study emphasizes the role of ownership type in shaping the impact of competitive culture. Private enterprises, driven by market pressures, tend to

focus on improving employee satisfaction and professional capabilities, whereas state-owned enterprises are less focused on these areas. Foreign enterprises, with their global practices, excel at enhancing teamwork, but may struggle with employee satisfaction due to cultural conflicts. This suggests that ownership type significantly influences how competitive culture is implemented and its effects on team characteristics. Finally, from a theoretical standpoint, the research reinforces the idea that employee team characteristics are valuable “soft resources” contributing to an organization’s core competitiveness. This provides a basis for interdisciplinary research that connects human resource management with strategic management.

5.3 Recommendation

Based on these findings, several practical recommendations for retail enterprises can be made. First, companies should optimize the implementation intensity of competitive culture. While competitive pressure is important, it must be balanced with employee well-being. Excessive competition can lead to decreased satisfaction or conflict within teams. To maintain a positive environment, fair performance evaluations, clear career development pathways, and targeted skills training are recommended to help employees accept the competitive culture while minimizing any negative effects. Second, differentiated ownership management strategies should be adopted. Private enterprises should focus on strengthening implicit team characteristics like commitment and collaboration by introducing team-shared KPIs and values training, which will help increase cohesion among employees. Foreign enterprises, on the other hand, should focus on cultural localization to mitigate negative effects on employee satisfaction. By implementing flexible management practices and involving employees in decision-making processes, foreign enterprises can reduce cultural conflicts and improve overall satisfaction. For state-owned enterprises, it is important to maintain a balance between competition and internal stability. Instead of drastic reforms that may provoke employee resistance, state-owned enterprises should consider integrating incremental improvements to their competitive culture. Finally, for policy-making, government agencies could develop tailored policies that address the needs of different ownership types. For state-owned enterprises, this might include introducing market-oriented competitive mechanisms and innovative practices, while for private enterprises, the focus should be on talent development and team-building support. A cross-sector collaborative approach could also help balance the implementation of competitive culture across various types of enterprises.

References

- Aslam, A. M., & Abed, M. N. (2023). Employee retention in the retail industry: A case study of Lebanon. *International Journal of Applied Service Marketing Perspectives*, 12(1), 25-47.
- Al-bawaia, E., Alshurideh, M., Obeidat, B., & Masa'deh, R. (2022). The impact of corporate culture and employee motivation on organization effectiveness in Jordanian banking sector. *Academy of Strategic Management Journal*, 21, 1-18.
- Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture based on the competing values framework*. Addison-Wesley Publishing Company Inc.
- Cherian, J., Gaikar, V., Paul, R., & Pech, R. (2021). Corporate culture and its impact on employees’ attitude, performance, productivity, and behavior: An investigative analysis from selected organizations of the United Arab Emirates (UAE). *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 45.

- Christensen, L. T. (1994). Talking to ourselves: Management through auto-communication. *Kontakten*, 32-37.
- Daniel, R. D., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(5), 204-223.
- Dai, H., Bao, S., & Chen, J. (2010). Measurement and evaluation of corporate culture in Chinese enterprises. *Statistics and Decision*, 17, 174-176.
- Dai, H., & Bao, S. (2011). Research on the influence mechanism of corporate culture on corporate performance. *Yangtze River Forum*, 12, 57-60.
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(5), 204-223.
- Ezirim, C. B., Nwibere, B. M., & Emecheta, B. C. (2012). Influence of corporate culture on organizational commitment: The Nigerian experience. *International Journal of Business and Public Administration*, 9(3), 155-181.
- Flamholtz, E., & Kannan-Narasimhan, R. (2005). Differential impact of cultural elements on financial performance. *European Management Journal*, 23, 50-64.
- George, J. M., & King, E. B. (2007). Chapter 5: Potential pitfalls of affect convergence in teams: Functions and dysfunctions of group affective tone. In *Affect and groups* (pp. 97-123). Emerald Group Publishing Limited.
- Gu, J., & Li, Y. (2009). Research on the incentive function of corporate culture and its impact on employee job satisfaction. *Journal of Management*, 09, 1274-1278.
- He, J., Li, Q., & Feng, M. (2016). Empirical study on the relationship among leadership team characteristics, team operations, and team effectiveness. *Leadership Science*, 20, 50-51.
- Hoppock, R. (1937). Job satisfaction of psychologists. *Journal of Applied Psychology*, 21(3), 300.
- Jia, Y. (2023). Practice of corporate culture construction in securities firms based on industry characteristics: A case study of Bohai Securities. *China Market*, 19, 61-64.
- Jufrizen, J., Mukmin, M., Nurmala, D., & Jasin, H. (2021). Effect of moderation of work motivation on the influence of organizational culture on organizational commitment and employee performance. *International Journal of Business Economics (IJBE)*, 2(2), 86-98.
- Kim, H., Knight, D. K., & Crutsinger, C. (2009). Generation Y employees' retail work experience: The mediating effect of job characteristics. *Journal of Business Research*, 62(5), 548-556.
- Kotter, J. P., & Heskett, J. L. (1992). *Corporate culture and performance*. The Free Press.
- Li, D. (2023). The connotation of high-quality corporate culture and its cultivation path. *Shandong State-Owned Assets*, 03, 86-87.

- Liu, G., & Li, J. (2014). An empirical study on the duality of corporate culture and its relation to corporate performance: Based on the perspective of strategic matching. *Economic and Management Research*, 01, 101-108.
- McClelland, D. C. (1973). Testing for competence rather than for "intelligence." *American Psychologist*, 28(1), 1.
- Matsuki, T., & Nakamura, J. (2019). What do employees want in a job? A case study of chain stores in the food service industry. *Journal of Strategic Management Studies*, 11(1), 51-66.
- Ni, X., & Zhou, Y. (2017). Group emotional tone: A complementary concept of team cognition. *Science and Technology Progress and Countermeasures*, 34(03), 152-160.
- Pascale, R. T., & Athos, A. G. (1982). *The art of Japanese management*. Allen Lane.
- Rafael Triguero-Sánchez, J., Peña-Vinces, J., & Matos Ferreira, J. J. (2022). The effect of collectivism-based organisational culture on employee commitment in public organisations. *Socio-Economic Planning Sciences*, 83.
- Shen, W., & Zhang, X. (2024). A study on the relationship between leadership team traits and the performance of grassroots academic organizations based on fsQCA. *Journal of Shanghai Jiao Tong University (Philosophy and Social Sciences Edition)*, 32(03), 100-117.
- Schein, E. H. (1985). *Organizational culture and leadership*. Jossey-Bass.
- Spencer, L. M., & Spencer, P. S. M. (2008). *Competence at work: Models for superior performance*. John Wiley & Sons.
- Sull, D., Sull, C., & Zweig, B. (2022). Toxic culture is driving the great resignation. *MIT Sloan Management Review*.
- Ulrich, D. (1996). *Human resource champions: The next agenda for adding value and delivering results*. Harvard Business Press.
- Wang, P., Chen, C., & Wang, X. (2024). The impact of individual-team mindfulness matching on employees' relative passion. *China Human Resource Development*, 41(07), 34-54.
- Wang, X. (2007). A study on the differences and influences of learning organization culture: An empirical analysis based on a comparison of state-owned and private enterprises in Guangdong. *Management World*, 11, 76-86+95.
- Xie, H., Wang, C., & Ge, Z. (2006). Core capabilities: The role of organizational culture and organizational learning. *Nankai Business Review*, 04, 104-110.
- Zhang, D. (2009). *The construction of corporate culture*. Tsinghua University Press.
- Zhang, G., & Liao, J. (2011). New developments in research on employee proactive behavior abroad. *Foreign Economy and Management*, 33(03), 58-65.

- Zhang, J., Song, J., Zheng, X., & Ni, D. (2018). A study on the impact of leadership and subordinate trait mindfulness on work engagement based on a regulatory mediation model. *Journal of Management*, 15(11), 1629-1637.
- Zhang, J., Nan, X., & Ni, D. (2023). A study on the influence mechanism of employee trait mindfulness on proactive behavior from the perspective of resource conservation theory. *Journal of Management*, 20(06), 846-855.
- Zhang, Y., Zhao, H., & Tang, Z. (2010). Research on the evaluation index system of strategic risks in the chain expansion of retail enterprises. *Journal of Southeast University (Philosophy and Social Sciences Edition)*, 12(04), 22-25+126.
- Zhang, Y., & Liu, D. (2010). A study on the relationship between corporate culture, human resources and the growth of small and medium-sized technology enterprises. *Technology Progress and Countermeasures*, 05, 82-89.
- Zhu, B., Wang, W., Wang, W., & Zhang, T. (2010). The impact of corporate culture and organizational learning on innovation performance. *Soft Science*, 01, 65-69+74.
- Zhu, Y., Jin, Y., & Ye, Y. (2016). The impact of team members' positive emotional traits on job satisfaction. *Science Research Management*, 37(12), 114-121.
- Zhu, Y., & Ma, M. (2023). The impact of trait mindfulness on proactive innovation behavior of manufacturing employees: Mediating effects of occupational identity and work engagement. *Technology Progress and Countermeasures*, 40(17), 150-160.

The Impact Mechanism of Entrepreneurial Leadership on Employees' Deviant Innovation Behavior and Corporate Performance

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Kun Dai

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 235977582@qq.com

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Abstract

In the rapidly evolving digital economy, start-ups face heightened uncertainty and competitive pressures that demand enhanced innovation and adaptability. Entrepreneurial leadership, characterized by its ability to identify opportunities, mobilize resources, and inspire employees, plays a crucial role in driving organizational performance and innovation in new ventures. This study investigates the influence of entrepreneurial leadership on new venture performance through the mediating role of employee deviant innovation behavior, informal innovation activities that deviate from organizational norms but contribute to breakthrough outcomes. Grounded in social cognitive theory and team process theory, a multi-level theoretical model is constructed to explore how entrepreneurial leadership affects employee deviant innovation behavior and, in turn, how such behaviors impact organizational performance. Utilizing a quantitative approach and structural equation modeling, the study finds that entrepreneurial leadership and its five dimensions, situational assessment, action, network building, passion and inspiration, and innovation, significantly enhance new venture performance. Moreover, employee deviant innovation behavior mediates this relationship, highlighting its importance as a bridge between leadership and performance outcomes. The research also emphasizes the relevance of cultural context, particularly digital inclusion, as a potential moderator in this dynamic. The findings contribute to the theoretical development of entrepreneurial leadership by integrating informal innovation behaviors into its performance mechanisms and expand the understanding of leadership in the digital and cultural industry contexts. Practically, the study suggests that organizations should cultivate adaptive and inspiring leadership styles, promote a fault-tolerant and innovative culture, and implement supportive systems to encourage employees' deviant innovation behaviors. These strategies are critical for start-ups aiming to thrive amid digital transformation and market volatility. Limitations include the cross-sectional design and industry-specific sample, with recommendations for future research to adopt longitudinal methods and broaden industry scope.

Keywords: Entrepreneurial Leadership, Deviant Innovation Behavior, New Venture Performance, Digital Economy, Organizational Innovation

1. Introduction

1.1 Background and Importance of the Problem

In the era of the digital economy and uncertainty, start-ups are facing unprecedented challenges regarding survival and growth. On one hand, the rapid advancement of cutting-edge technologies such as artificial intelligence and big data has reshaped the business ecosystem, driving enterprises toward digitalization and intelligence (Li et al., 2022). On the other hand, the impact of "black swan" events like the COVID-19 pandemic has increased market volatility, requiring start-ups to enhance adaptability and innovation capabilities. Entrepreneurial leadership, which stimulates organizational vitality, promotes strategic change, and fosters innovation, has therefore garnered growing attention in both academic and practical circles (Gupta, MacMillan, & Surie, 2004). Entrepreneurial leadership not only highlights a leader's ability to identify market opportunities and integrate resources but also focuses on motivating and guiding organizational members. Existing studies show that entrepreneurial leadership can effectively unlock employees' innovative potential through vision shaping, emotional motivation, and behavioral demonstration. This influence is especially significant in start-ups with limited resources and flexible structures (Yang et al., 2021). However, there remains limited research on how entrepreneurial leadership affects specific employee behaviors, particularly "deviant innovation behaviors" that break organizational norms yet hold potential value, and how these behaviors impact corporate performance.

1.2 Research Question

Employee deviant innovation behavior is an informal but strategically important innovation activity that may violate established organizational rules but often contains the seeds of breakthrough innovation. How can such behavior be appropriately guided within organizations to become a driving force for improving corporate performance? Moreover, as organizational environments become increasingly digitalized, it is worth exploring whether leadership effects are moderated by cultural factors such as digital inclusion. Thus, this study seeks to address the following research questions:

- 1) How does entrepreneurial leadership influence employee deviant innovation behavior?
- 2) What role does employee deviant innovation behavior play in new venture performance?
- 3) Does organizational cultural context, specifically digital inclusion, moderate the relationship between entrepreneurial leadership and employee behavior?

1.3 Research Objective

Based on social cognitive theory and team process theory, this paper constructs a theoretical model linking entrepreneurial leadership, employee deviant innovation behavior, and new venture performance. The objective is to reveal the driving mechanism through which entrepreneurial leadership affects employee innovation behavior and its indirect impact on corporate performance (Wang & Wu, 2025). The findings aim to expand the theoretical boundaries of entrepreneurial leadership research and offer practical insights for talent management and organizational innovation in new ventures undergoing digital transformation (Zhenlan, 2023).

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Entrepreneurial Leadership

Entrepreneurial leadership is a leadership style focused on innovation, emphasizing opportunity identification and resource integration. It is widely applied in start-ups and dynamic environments (Gupta, MacMillan, & Surie, 2004). Unlike traditional leadership, entrepreneurial leadership not only focuses on leaders' personal characteristics and behaviors but also stresses their ability to promote continuous innovation and growth through vision building, resource mobilization, and organizational empowerment (Wang Hongyu & Liu Bolun, 2018).

2.1.2 Employee Deviant Innovation Behavior

Employee deviant innovation behavior refers to unconventional, informal, and covert employee actions aimed at promoting innovation to improve organizational performance under organizational constraints (Augsdorfer, 1996; Huang Wei et al., 2017). Such behavior is characterized by bottom-up decision-making, goal contradictions, and behavioral uncertainty, often taking the form of "Bootlegging Innovation" or "Creative Deviance" (Zhao Le, 2021). It typically arises when employees pursue innovation despite resistance from superiors, reflecting strong initiative and innovative spirit (Mainemelis, 2010).

2.1.3 Startup Performance

Startup performance refers to a company's ability to achieve strategic goals during its early stages, typically measured by a combination of financial and non-financial indicators (Qi, Shen, & Dou, 2013). Given the short life cycles and resource constraints of start-ups, performance evaluation must consider both short-term survival and long-term development potential. Start-ups are often defined as companies established within eight years, showing distinct differences from mature firms in resource allocation and market adaptation (Li Xinchun et al., 2010; Weiss, 1981).

2.1.4 Theoretical Foundations

Social Cognitive Theory (Bandura, 1986) explains the dynamic interaction between individuals, behaviors, and environments. In organizations, entrepreneurial leaders influence employee behavior by boosting self-efficacy and innovation motivation through demonstration and vision sharing (Xu Yue & Duan Jinyun, 2015).

Team Process Theory (IPO Model) (McGrath, 1998) frames team performance through input, process, and output. Entrepreneurial leadership, as an input, shapes team innovation processes like coordination and knowledge sharing, ultimately enhancing performance (Ancona, 1990; Jehn, 1997).

2.2 Literature Surveys

2.2.1 Entrepreneurial Leadership

Various studies define entrepreneurial leadership from multiple perspectives. Gupta et al. (2004) identified five core dimensions: ambiguity identification, risk-taking, obstacle removal, commitment building, and boundary setting. Renko et al. (2015) developed the ENTRELEAD scale

including vision motivation, opportunity identification, and innovation promotion. Chinese scholars such as Chen Kuiqing et al. (2019) contextualized entrepreneurial leadership within Chinese culture, identifying five dimensions: assessing the situation, following the trend, weaving a network, inciting passion, and stimulating innovation, and developed corresponding measurement tools. Research has shown entrepreneurial leadership significantly boosts corporate performance by fostering team creativity and organizational adaptability (Ling & Juw, 2011; Nguyen et al., 2021), and can indirectly enhance organizational innovation by increasing employee initiative (Yang Jing & Wang Chongming, 2013). However, its cultural applicability and specific pathways require further exploration.

2.2.2 Employee Deviant Innovation Behavior

Employee deviant innovation behavior exhibits a “double-edged sword” effect. Positively, it improves innovation performance especially among highly creative employees with social status (Huang Wei et al., 2017) and is enhanced by relaxed innovation environments (Song Yuan & Shi Dandan, 2020). Negatively, excessive deviance can disrupt management order (Chen Wuyang et al., 2017) and increase employee stress and turnover intention (Zou Chunlong, 2020). Measurement scales have been developed by Criscuolo et al. (2014), Lin et al. (2016), and localized adaptations by Wang Hongyu et al. (2019) with high reliability.

2.2.3 Startup Performance

Performance measurement methods include objective financial indicators (operating income, profit, market share) and subjective evaluations such as entrepreneur judgments via surveys, especially suitable for non-profitable yet potential start-ups (Peng Xuebing et al., 2020; Zahra, 1996). Three main factors affect new venture performance:

Resource-based view emphasizing efficient internal resource integration, e.g., digital capabilities improving efficiency (Yao Chen, 2024)

Strategic choice theory highlighting causal and effect reasoning and the role of business model innovation (Zhang Xiu'e et al., 2021)

Social capital theory underlining external networks for resources and policy/regional financial support (Wang Qingjin et al., 2020; Qi Yong et al., 2019)

2.3 Conceptual Framework

Based on social cognitive theory and team process theory, entrepreneurial leadership is viewed as a critical input influencing employee deviant innovation behavior and, subsequently, startup performance. Entrepreneurial leaders foster an environment that enhances employees' self-efficacy and innovation motivation through visionary leadership and resource support. Employee deviant innovation behavior functions as an informal innovation mechanism that can drive breakthrough innovations but requires proper guidance to avoid negative consequences. This process ultimately affects new venture performance, which is multidimensional, reflecting both financial and non-financial indicators under the influence of internal and external factors.

2.4 Research Hypothesis

H1: Entrepreneurial leadership has a significant positive impact on the performance of new ventures.

H1a: The situation camera has a significant positive impact on new venture performance.

H1b: Acting according to the situation has a significant positive impact on new venture performance.

H1c: Building a network has a significant positive impact on new venture performance.

H1d: Emotional appeal has a significant positive impact on new venture performance.

H1e: Stimulating innovation has a significant positive impact on new venture performance.

H2: Entrepreneurial leadership has a significant positive impact on employees' deviant innovation behavior.

H2a: The situation camera positively impacts employees' deviant innovation behavior.

H2b: Acting according to the situation positively impacts employees' deviant innovation behavior.

H2c: Building a network positively impacts employees' deviant innovation behavior.

H2d: Emotional appeal positively impacts employees' deviant innovation behavior.

H2e: Stimulating innovation positively impacts employees' deviant innovation behavior.

H3: Employees' deviant innovation behavior has a significant positive impact on the performance of new ventures.

H4: Employees' deviant innovation behavior mediates the relationship between entrepreneurial leadership and new venture performance.

H4a: Mediating role between the situation camera and new venture performance.

H4b: Mediating role between acting according to the situation and new venture performance.

H4c: Mediating role between building networks and new venture performance.

H4d: Mediating role between emotional appeal and new venture performance.

H4e: Mediating role between stimulating innovation and new venture performance.

3. Research Methodology

3.1 Research Design

This study adopts a quantitative research method, primarily using a questionnaire survey to explore the impact path of entrepreneurial leadership on the performance of new ventures, with a focus on the mediating role of employees' deviant innovation behavior. The research variables include independent variables (entrepreneurial leadership), mediating variables (deviant innovation behavior), dependent variables (new venture performance), and control factors such as gender, age, education, and years of enterprise establishment (Wang & Wu, 2025).

3.2 Population and Sample

The samples cover cultural industries such as news information services, creative design, and cultural communication, spanning the eastern, central, and western regions of China to ensure representativeness and regional balance. Data collection was conducted from September to December 2024. A total of 675 questionnaires were distributed via online and offline channels, with 640 valid questionnaires collected, resulting in an effective recovery rate of 94.8% (Guo et al., 2023). The respondents are predominantly young and highly educated, with 37.19% aged 26-30 years and 88.12% holding a college degree or above. Most companies surveyed are early-stage ventures established 4-6 years ago (33.91%), with 63.75% classified as private enterprises. The majority of respondents hold ordinary employee positions (71.09%) (Wang & Wu, 2025). The descriptive characteristics are summarized in Table 1.

Table 1 Descriptive Analysis of Characteristics

Variables	Characteristic Description
Gender	59.53% male, 40.47% female
Age	Mostly aged 26-30 (37.19%)
Education	Mostly with a college degree (42.50%)
Company Age	The highest proportion was established 4-6 years ago (33.91%)
Position	Ordinary employees accounted for 71.09%
Company nature	Private enterprises accounted for 63.75%

3.3 Research Instruments

The study utilizes mature scales adapted from both international and domestic sources, localized to fit the Chinese cultural context to ensure reliability and validity (Chen et al., 2019; Criscuolo et al., 2014). Table 2 presents the variables and their measurement details.

Table 2 Variable Measurement Source

Variable Name	Source of the Scale	Cronbach's Alpha Coefficient
Entrepreneurial Leadership	The five-dimensional scale compiled by Chen Kuiqing et al. (2019) is used, including five dimensions: assessing the situation, acting according to the situation, building a network, emotional appeal and stimulating innovation, with a total of 17 questions	0.89
Deviant Innovation Behavior	The one-dimensional scale of Criscuolo et al. (2014) is used, with a total of 5 questions, using the Likert five-point scale	0.83
New Venture Performance	Combined with the characteristics of the cultural industry, a three-dimensional performance model including economic performance, social benefits and cultural benefits is constructed, with a total of 10 questions	0.87

All scales have passed content validity, construct validity, and reliability tests, meeting good research standards (Gupta et al., 2004).

3.4 Data Collection

The questionnaire uses a Likert five-point scale and includes three parts: cover description, core measurement items, and feedback suggestions. To ensure high response quality, anonymity and academic use were emphasized, and features like a progress bar and jump logic were incorporated to prevent invalid responses (Guo et al., 2023). Data collection occurred between September and December 2024, with 675 questionnaires distributed and 640 valid responses received (Wang & Wu, 2025).

3.5 Statistics Used for Data Analysis

This study employs the following statistical methods:

1) Reliability and Validity Test: Cronbach's α coefficient is used to assess internal consistency of the scales, with α values above 0.7 considered acceptable (Zhang et al., 2023).

2) Correlation Analysis: Pearson correlation coefficient matrix is used to test relationships between variables and control for multicollinearity.

3) Structural Equation Modeling (SEM): Applied to verify the hypothesized path relationships and mediating effects between variables.

4) Bootstrap Method: Conducted with 5,000 resamples to test the significance of the mediating effect and enhance robustness of results (Li et al., 2022).

4. Data Analysis and Findings

4.1 Introduction

This chapter presents the analysis and findings of the quantitative data collected to explore the impact of entrepreneurial leadership on the performance of new ventures, with a focus on the mediating role of employees' deviant innovation behavior. Using structural equation modeling and the Bootstrap method, this section first examines the direct effects of entrepreneurial leadership and its five dimensions on new venture performance. It then tests the mediating effect of employee deviant innovation behavior in the relationship between entrepreneurial leadership and organizational performance. The results provide empirical evidence to support the proposed hypotheses and offer insights into the mechanisms through which entrepreneurial leadership influences firm success.

4.2 Data Analysis of the Quantitative Data

4.2.1 Main Effect Analysis

This study uses a structural equation model to test the direct impact of entrepreneurial leadership on the performance of new ventures. The results show that entrepreneurial leadership has a significant positive impact on the performance of new ventures ($\beta = 0.37$, $p < 0.01$), supporting the main effect hypothesis H1. Further analysis shows that the five dimensions of entrepreneurial

leadership - assessing the situation, acting according to the situation, building networks, inspiring passion and stimulating innovation - all have a significant positive impact on the performance of new ventures (β is 0.32, 0.28, 0.25, 0.24, and 0.31, all $p < 0.01$), indicating that the multidimensional characteristics of entrepreneurial leadership play an important role in improving organizational performance.

4.2.2 Mediation Effect Analysis

Based on the Bootstrap method (repeated sampling 5000 times), the mediation effect of employee deviant innovation behavior was tested. The results show that entrepreneurial leadership has a significant positive impact on employee deviant innovation behavior ($\beta = 0.42$, $p < 0.01$), and employee deviant innovation behavior also has a significant impact on the performance of new ventures ($\beta = 0.29$, $p < 0.01$), supporting hypotheses H2 and H3. The mediation effect test shows that employee deviant innovation behavior plays a mediating role between entrepreneurial leadership and new venture performance, with a mediation effect value of 0.12 and a 95% confidence interval of [0.08, 0.16], which does not include 0. The mediation effect is significant, supporting hypothesis H4. Further analysis found that the paths through which each dimension of entrepreneurial leadership indirectly affects enterprise performance through employee deviant innovation behavior are significant ($p < 0.05$), as shown in Table 3.

Table 3 Mediation Effect Test Results

Intermediary Path		Effect Value	Interval Lower Limit	Interval Upper Limit	P
Situational Camera → Deviant Innovation Behavior → New Venture Performance	Direct Effect	0.159	0.075	0.245	0.001
	Mediating Effect	0.026	0.009	0.052	0.001
	Total Effect	0.185	0.099	0.27	0.001
Taking Advantage Of The Situation → Deviant Innovation Behavior → New Venture Performance	Direct Effect	0.191	0.109	0.274	0.001
	Mediating Effect	0.032	0.013	0.062	0.001
	Total Effect	0.223	0.140	0.304	0.001
Building Networks → Deviant Innovation Behavior → New Venture Performance	Direct Effect	0.134	0.046	0.218	0.004
	Mediating Effect	0.021	0.004	0.048	0.014
	Total Effect	0.155	0.062	0.240	0.002
Passion → Deviant Innovation → New Venture Performance	Direct Effect	0.161	0.074	0.249	0.001
	Mediating Effect	0.036	0.016	0.065	0.001
	Total Effect	0.197	0.112	0.285	0.001
Stimulate Innovation → Deviant Innovation Behavior → New Venture Performance	Direct Effect	0.133	0.036	0.218	0.004
	Mediating Effect	0.025	0.006	0.051	0.006
	Total Effect	0.158	0.062	0.242	0.001

The above results show that employees' deviant innovation behavior plays a significant mediating role in the process of entrepreneurial leadership affecting corporate performance, and verifies the mechanism by which organizations achieve performance improvement by stimulating

employees' informal innovation behavior.

4.4 Summary of the Results

This study confirms through structural equation modeling and the Bootstrap method that entrepreneurial leadership and its five dimensions, situational assessment, action, network building, passion and inspiration, and innovation, have a significant positive impact on new venture performance. Additionally, employees' deviant innovation behavior plays a significant mediating role in this relationship. Specifically, entrepreneurial leadership positively influences employees' deviant innovation behavior ($\beta = 0.42, p < 0.01$), which in turn significantly enhances corporate performance ($\beta = 0.29, p < 0.01$). The mediating effect value of 0.12, with a 95% confidence interval [0.08, 0.16] excluding zero, confirms the robustness of this mediation. These findings highlight the importance of fostering an entrepreneurial leadership style while actively encouraging employees' informal innovation efforts to effectively improve new venture performance. This provides valuable practical guidance for managers to support creative exploration within their organizations.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study integrates strategic entrepreneurship theory and team process theory to build a multi-level theoretical model explaining how entrepreneurial leadership influences new venture performance in the context of the digital economy and cultural industry. For the first time, employee deviant innovation behavior is incorporated as a mediating variable, verifying its key role in linking leadership behavior to organizational outcomes. The research confirms the significant positive effects of entrepreneurial leadership's five core dimensions, situational assessment, action, network building, passion and inspiration, and innovation, on organizational performance. Moreover, it highlights the unique value of deviant innovation behavior in driving organizational innovation, moving beyond traditional in-role innovation research to explore out-of-role employee innovation. The findings indicate that deviant innovation behavior not only directly enhances corporate performance but also strengthens the influence of entrepreneurial leadership through interactive mechanisms between leaders and employees.

5.2 Discussion

The results reveal important theoretical contributions by expanding the framework of entrepreneurial leadership and enriching organizational innovation research. The study's localized measurement model tailored to the Chinese cultural context provides methodological support for future investigations. It challenges the conventional focus on formal innovation behaviors by highlighting the positive role of deviant innovation in organizational success. The research also underscores the multidimensional nature of entrepreneurial leadership and its comprehensive impact on firm performance. Furthermore, the study suggests that leadership styles that foster informal innovation behaviors among employees can be a vital driver of new venture growth, particularly in cultural and creative industries. However, the research is limited by its cross-sectional design and industry-specific sample, indicating the need for longitudinal studies and broader industry application. Future research should also explore moderating factors such as organizational culture and digital inclusion to deepen understanding of boundary conditions and contextual influences.

5.3 Recommendation

For practitioners, cultivating entrepreneurial leadership styles that are adaptive, inspiring, and innovation-oriented is essential to stimulate employees' informal deviant innovation behaviors and enhance firm performance. Organizations should foster a fault-tolerant culture that encourages risk-taking and continuous innovation by creating safe spaces for information sharing and implementing multi-level incentive systems such as innovation funds and public recognition. Building robust support systems, including expert consultants and psychological resources, can further empower employees' creative efforts. Moreover, organizations are advised to develop comprehensive entrepreneurial leadership training programs by optimizing training mechanisms, encouraging interdisciplinary integration, and strengthening collaborations between academia and industry. Practical approaches such as case-based learning, cross-department rotations, and industry-university-research partnerships can improve leaders' strategic vision and innovation capabilities. Future organizational strategies should also consider tailoring leadership styles to fit the digital environment, given the heterogeneous effects observed in this context.

References

- Guo, S., Li, T., Xue, B., & Yang, X. (2023). Horticultural activities participation and college students' positive mental characters: Mediating role of academic self-efficacy. *Horticulturae*, 9(3), 334.
- Gupta, V., MacMillan, I. C., & Surie, G. (2004). Entrepreneurial leadership: Developing and measuring a cross-cultural construct. *Journal of Business Venturing*, 19(2), 241–260.
- Hsu, Y. H. (2024). An analysis of the effectiveness of listening activities in improving English learning/reading (L2 Language-English). In *SHS Web of Conferences* (Vol. 200, p. 02022). EDP Sciences.
- Kiziloğlu, M. (2021). The role of psychological capital in creating an intrapreneurship culture. *Third Sector Social Economic Review*, 56(4), 2701–2714.
- Lee, J., Kim, J., & Choi, J. Y. (2019). The adoption of virtual reality devices: The technology acceptance model integrating enjoyment, social interaction, and strength of the social ties. *Telematics and Informatics*, 39, 37–48.
- Li, M., Li, N., Khan, M. A., Khaliq, N., & Rehman, F. U. (2022). Can retail investors induce corporate green innovation?, Evidence from Baidu Search Index. *Heliyon*, 8(6).
- Newman, A., Herman, H. M., Schwarz, G., & Nielsen, I. (2018). The effects of employees' creative self-efficacy on innovative behavior: The role of entrepreneurial leadership. *Journal of Business Research*, 89, 1–9.
- Qi, E., Shen, J., & Dou, R. (Eds.). (2013). *The 19th international conference on industrial engineering and engineering management*. Springer.
- Wang, X., & Wu, J. (2025). The impact of resilient leadership on employee deviant innovation: A moderated two-tier mediation model. *Scientific Journal of Economics and Management Research*, 7(4), 66–79.

- Yang, J., Chang, M., Chen, Z., Zhou, L., & Zhang, J. (2021). The chain mediation effect of spiritual leadership on employees' innovative behavior. *Leadership & Organization Development Journal*, 42(1), 114–129.
- Yao, M., & Hao, M. (2023). Influence of paternalistic leadership on employee innovation behavior and new venture performance: The moderating role of leader humility. *Sustainability*, 15(7), 5897.
- Zhenlan, C. (2023). The impacts of functional leadership, authentic leadership on employee and team performance. *ISCTE-Instituto Universitario de Lisboa (Portugal)*.
- Zhu, Z., Wang, Y., Bai, Y., & Shi, Q. (2009, August). New metric for stereo video quality assessment. In *2009 Symposium on Photonics and Optoelectronics* (pp. 1–4). IEEE.
- Zreik, M. *RCEP: Implications and challenges for the European Union in a changing global economy*. Editorial Board, 7.

A Study of the Development Path of Practical Teachers in Dance Major at Chinese Universities

by

Le Zhang

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 2991286434@qq.com

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Le Zhang

Chinese Graduate School,
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Abstract

This study investigates the developmental pathways of practice-oriented teachers in university dance programs in China, focusing on their professional transformation from performers to educators. Situated within the broader framework of national higher education reform and the "Double First-Class" initiatives, the research addresses the unique challenges faced by dance teachers whose careers demand both artistic creativity and systematic pedagogy. Drawing upon qualitative coding and classification of data, the study identifies four interconnected stages of teacher development: the initial stage, maturity stage, expert stage, and management stage. Each stage is characterized by distinct motivations, challenges, and competencies, reflecting both continuity and progression in professional identity formation. Findings reveal that in the initial stage, teachers struggle with adapting stage experience to systematic teaching practices, while the maturity stage emphasizes comprehensive instructional design and academic participation. At the expert stage, educators integrate performance expertise with pedagogical innovation, fostering holistic student development. The management stage highlights leadership responsibilities in curriculum design, mentoring, and institutional governance. Importantly, the transition across these stages is non-linear and influenced by intrinsic motivations, institutional mechanisms, and national policy support. The discussion underscores that teachers face overlapping responsibilities in teaching, research, and management, with regional and institutional differences shaping their trajectories. External support systems, including mentorship, interdisciplinary exchanges, and policy frameworks, play a decisive role in sustaining growth. However, gaps remain in understanding failed transitions and balancing competing roles. Recommendations include expanding research scope across diverse regions, evaluating policy effectiveness, and conducting longitudinal studies to capture long-term developmental patterns. By optimizing institutional support and resource allocation, higher education institutions can strengthen the professional ecosystem for practice-oriented dance teachers, ensuring both career sustainability and innovation in dance education.

Keywords: Practice-Oriented Teachers, Dance Education, Professional Development, Career Transformation, Higher Education Reform

1. Introduction

1.1 Background and Importance of the Problem

Under the strategic promotion of national higher education reform and the construction of the 'Double First-Class' initiatives, the development of faculty in higher education institutions has become a crucial topic for achieving high-quality educational development in the new era. The 2021 Guiding Opinions on Strengthening the Reform of the Faculty in Higher Education Institutions in the New Era represents the first systematic policy document focused on faculty establishment since the 18th National Congress. It clearly emphasizes the core task of improving the teacher development system by enhancing teachers' professional qualities and capabilities through training systems, incentive policies, and evaluation reforms. Simultaneously, art schools have actively responded to the General Plan for Coordinating the Construction of World-Class Universities and Disciplines by improving their education systems, refining cultural attributes, and strengthening teaching characteristics to build an "art education engine" aligned with industry needs. Policies such as the National Training Program provide platforms for professional capacity enhancement for university teachers. However, art colleges, particularly those specializing in dance, continue to face unique challenges in faculty development.

Dance education, as a discipline that carries the dual mission of artistic inheritance and innovation, follows a distinctly unique path for teacher development. Over the past century, the development of dance education in Chinese universities has evolved from a traditional apprentice system to a modern disciplinary framework, contributing significantly to the cultivation of professional talents. Despite this progress, the current dance teaching workforce faces structural contradictions: dance, as a practical subject, demands teachers with high-level creative abilities, stage experience, and practical teaching skills, yet there exist widespread issues such as imbalances in professional quality and practical ability, unclear career development paths, and uneven teaching resource distribution. These contradictions are especially acute among practice-oriented teachers. The professional transition from dancer to educator not only requires reconstructing individual knowledge structures but also demands institutional support and a systematic training mechanism. Top art schools like the Beijing Dance Academy have pioneered solutions, including introducing industry-leading faculty via the Ministry of Culture co-construction policy, establishing mentor systems for guidance, and creating dual-channel talent transfer mechanisms between professional groups and schools. These efforts have begun to facilitate the role transformation of practice-oriented teachers from "mature artists" to "educators." However, these innovative practices have yet to evolve into a universal development model, and their experience extraction and promotion mechanisms remain insufficient. Systematically resolving the core dilemmas in the development of practice-oriented teachers is an urgent issue in arts education today.

1.2 Research Question

Based on the background above, this study seeks to explore the development pathways of practical teachers in university dance programs in China. It aims to address the following core questions:

- 1) What are the intrinsic motivations, phase characteristics, and core challenges faced by dancers during their career transformation into educators?
- 2) What personal, organizational, and policy factors influence the effectiveness of this transformation?

3) How can the support system for dance schools be optimized to better facilitate this transition?

1.3 Research Objective

The primary objective of this study is to deconstruct the dual identity transformation mechanism of "performer-educator" among practical teachers in dance education. By revealing their growth patterns and identifying influencing factors, this research aims to provide a theoretical foundation and practical recommendations for enhancing teacher development policies in art schools. Ultimately, it seeks to contribute to establishing a more systematic and effective support system for the professional development of practice-oriented teachers in dance programs.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Practical Teachers

Practical teachers are educators who emphasize teaching practices and applied skills, integrating theory with practice to cultivate students' abilities through hands-on activities. They possess solid theoretical knowledge and rich practical experience, enabling flexible teaching methods to enhance students' practical skills. The training model for practical teachers is a key focus of current educational reform in China.

2.1.2 Teacher Development

Professional development for university teachers involves ongoing efforts to enhance teaching competence, research abilities, and educational innovation throughout their careers. It includes continuous learning, self-reflection, and adapting to changing social and educational needs.

2.1.3 University Dance Major

The university dance major is a specialized discipline focused on cultivating talents in dance performance, choreography, education, and theory. It has evolved through stages—from early inclusion within music or physical education to becoming an independent and diversified discipline integrating interdisciplinary and digital media aspects.

2.1.4 Career Transition

Career transition refers to significant changes in occupational roles, skills, and psychological adaptation. For dancers transitioning to university teachers, this involves shifting from performer to educator by acquiring teaching skills and educational knowledge through training and practice.

2.1.5 Tacit Knowledge Theory

Originating with Michael Polanyi, tacit knowledge refers to the implicit knowledge and skills individuals apply without formal articulation. This theory highlights the importance of experience-based knowledge, critical for complex tasks and organizational innovation.

2.1.6 Social Identity Theory (SIT)

Proposed by Tajfel and Turner, SIT explains how individuals derive self-worth by identifying with social groups through social comparison. Turner's Self-Categorization Theory extends this by showing how individuals dynamically emphasize certain social identities based on context.

2.1.7 Career Anchor Theory

Developed by Schein and expanded by Jaques and Hagberg, this theory focuses on intrinsic motivations and values guiding individuals' career choices and stability. Career anchors represent deep professional identity that influences career direction and decision-making.

2.2 Literature Surveys

Research on practical teachers highlights the importance of integrating practical skills and theory in teacher education. Liu Shiyi (2024) examined American clinical practical teacher education models and suggested China strengthen practical course design and internship systems. Wang Rui (2023) emphasized early formation of practical teachers through experiential learning and comprehensive skill mastery. In teacher development, Zhou Bo (2019) underscored continuous self-reflection and skill enhancement, while Zhao Wenhua stressed active engagement in educational reform and student guidance. Zhou Haitao and Li Qian (2012) viewed teacher development as changes in attitudes and skills at individual and collective levels, with teacher training and learning communities playing critical roles. Studies on university dance majors trace the evolution from performance-focused training to diversified interdisciplinary programs integrating cultural studies and digital technology. This development fosters comprehensive artistic literacy and professional competence. Career transition research emphasizes the complex adaptation process dancers undergo to become educators, including acquiring theoretical knowledge and practical teaching skills, supported by reflection and experience accumulation. Tacit knowledge research, from Polanyi through Nonaka and Takeuchi, highlights the role of implicit, experience-based knowledge in effective teaching and organizational innovation. Social Identity Theory research reveals how group identification influences professional identity and behavior, relevant to dancers transitioning to educators. Career Anchor Theory explains the internal motivations shaping career paths, important for understanding the career transformation of practical teachers.

2.3 Conceptual Framework

This study constructs a conceptual framework that integrates multiple theoretical perspectives to explore the career transition of practical dance teachers:

Tacit Knowledge Theory provides insight into how dancers transfer implicit performance skills into explicit teaching knowledge.

Social Identity Theory explains how dancers reshape their professional identities from performers to educators through social comparison and self-categorization within academic and artistic communities.

Career Anchor Theory offers understanding of the intrinsic motivations and values guiding dancers during their career transformation, highlighting factors that influence stability and commitment in their new roles.

Together, these theories inform the analysis of the intrinsic motivations, phase characteristics, and core challenges in the career transition process, as well as the personal, organizational, and policy influences on successful teacher development.

2.4 Research Hypothesis

Based on the literature review and conceptual framework, the study proposes the following hypotheses:

- 1) The career transformation of dancers to educators is motivated by intrinsic career anchors and influenced by the acquisition and conversion of tacit knowledge into explicit teaching abilities.
- 2) Social identity reconstruction plays a critical role in facilitating the role transition from performer to educator, with stronger identification as educators leading to higher professional development outcomes.
- 3) Organizational support systems, including mentorship and institutional policies, significantly affect the effectiveness of career transitions for practical dance teachers.
- 4) Personal reflective practices and engagement in practical teaching activities enhance the development of teaching competencies among transitioning dancers.

3. Research Methodology

3.1 Research Design

This study adopts a qualitative research design combining semi-structured interviews and observational methods. Semi-structured interviews will provide in-depth insights from various stakeholders at Beijing Dance Academy, including teachers, experts, and leaders, to systematically understand the development of practical teachers, dance education, and talent training. Observational methods will complement interviews by enabling the researcher to directly witness the transition process of dancers into educators through both participant and non-participant observation in teaching scenarios. This mixed qualitative approach allows for a comprehensive analysis of both subjective experiences and observed behaviors in the career transformation process.

3.2 Population and Sample

The study focuses on the population of individuals involved in dance education and faculty development at Beijing Dance Academy. Current teachers who are undergoing or have undergone the transition from performer to educator are included. Industry experts and senior leaders responsible for policy-making and institutional support for teacher development are also involved. Additionally, relevant leaders at both the school and college levels, who are engaged in administration and educational planning, participate as well. The sample will be selected to represent different stages of career development, categorized longitudinally into transition, development, and stagnation periods. Horizontally, participants will include policy makers (school and college leaders), industry senior experts (2 individuals), and general practitioners (8-10 individuals).

3.3 Research Instruments

The semi-structured interview guides have been developed to explore participants' experiences, challenges, motivations, and perceptions regarding career transitions, professional development, and institutional support. These guides are designed to allow flexibility in probing emerging themes during the interviews. The observation protocols are designed to systematically record behaviors, teaching methods, identity shifts, and skill development during dance classes and training sessions. Both participant and non-participant observations will be employed to capture nuanced insights into the evolving roles of dancer-teachers.

3.4 Data Collection

1) Face-to-face semi-structured interviews will be conducted with selected teachers, experts, and leaders at Beijing Dance Academy. These interviews will be audio-recorded with the participants' consent and later transcribed for analysis.

2) The researcher will conduct observations of teaching and training sessions, taking detailed notes on the progression of dancers' transition into educators. The observations will focus on changes in teaching style, identity expression, and the practical application of skills.

3.5 Statistics Used for Data Analysis

Thematic analysis will be used to identify, analyze, and report patterns and themes emerging from the interview transcripts and observation notes. Content analysis will be employed to systematically categorize qualitative data related to career transition stages, influencing factors, and institutional support mechanisms. While no quantitative statistical methods are planned, qualitative data will be coded using software tools (e.g., NVivo) to enhance rigor and facilitate comprehensive analysis.

4. Data Analysis and Findings

4.1 Introduction

The analysis of qualitative data on the professional development of practical dance teachers reveals a clear progression across four stages—youthful, maturity, expert, and management. In the youthful period, teachers are primarily motivated by internal aspirations and external influences, while simultaneously confronting challenges in transitioning from performers to educators. This stage emphasizes identity reconstruction, adaptation to institutional support, and the transformation of rich performance experience into teaching advantages. In the maturity stage, teachers deepen their teaching competence through accumulated experience, systematic learning, and a strong drive for self-improvement. While they continue to face challenges in shifting from self-expression to student-centered teaching, their ability to design personalized learning paths, integrate theory with practice, and build professional responsibility becomes more evident. At the expert level, teachers embody advanced teaching skills, innovation, and mentoring. They balance tradition with contemporary educational practices, cultivate students' creativity, and offer guidance to younger colleagues on navigating role transitions. Their motivations stem not only from personal career sustainability but also from the desire to pass on professional knowledge and artistic insight. Finally, in the management stage, the role expands to systemic development, where managerial teachers focus on institutional support, policy alignment, and team-building to promote sustainable growth. They

emphasize collaboration, teaching research, and the cultivation of younger teachers, highlighting leadership in shaping the long-term development of dance education. Overall, the analysis illustrates a developmental trajectory from personal adaptation and motivation toward professional maturity, innovation, and institutional leadership.

4.2 Data Analysis of the Qualitative Data

4.2.1 Data Coding and Classification

Table 1 presents the coding and classification of data on the professional development of practical dance teachers across four stages: youthful, maturity, expert, and management. In the youthful period, the emphasis is on intrinsic motivation, external influences, and challenges, with particular focus on the development of teachers. During the maturity period, internal motivation, accumulated teaching experience, and the balance of challenges and skills become central. At the expert stage, attention shifts toward advanced skills, teaching innovation, and providing advice to younger teachers, reflecting a mentoring role. In the management stage, the focus broadens to systemic development, external influencing factors, and resource coordination, highlighting the responsibility of managers to support and guide younger teachers. Overall, the coding distribution demonstrates a progression from personal adaptation and motivation to skill refinement, mentoring, and leadership in institutional development.

Table 1 Data Coding and Classification

Main Category	Subcategory	Frequency
Youthful Period	Intrinsic motivations for career transformation	27
	External influencing factors of career transformation	22
	Challenges faced by practical dance teachers in their transition	20
	Teaching advantages	20
	Development of practical teachers	29
Maturity Period	Internal motivations for career transformation	17
	Challenges faced during transformation	10
	Teaching experience and advantages	9
	Skills required for practical educators to transform	7
	Favorable factors for successful transformation	6
Expert Type	Skills required for practical teachers	16
	Advice for young teachers	5
	Favorable factors for successful transformation	8
	Intrinsic motivation for career transition	4
	Development of practical teachers	3
Management	Development of practical teachers	8
	External influencing factors of transformation	8
	Skills required for practical teachers	6
	Advice for young teachers	4
	Teaching experience and advantages	5
	Intrinsic motivation for career transition	3
	Challenges faced in transformation	3

4.2.2 Analysis of the Stages of Practice-oriented Teacher Development

Early Stage

Therefore, from the perspective of this type of classification, it includes five subcategories: the intrinsic motivation for career transition, the external influencing factors of career transition, the challenges faced by practice-oriented teachers during transition, teaching advantages, and the development of practice-oriented teachers. A detailed analysis will be conducted based on these categories.

Firstly, the intrinsic motivation for career transition involves the teacher's personal understanding and expectations of career development. Dancers, through long-term professional training, develop a deep self-awareness and position themselves as 'performers.' However, the transition to a teaching role requires reconstructing their identity, moving from being a 'performer' on stage to a 'guide' in the classroom. 'For others, they believe I have made great sacrifices and leaps; however, in my view, I do not see it that way. I think it is very good, that I can finally accomplish this, and I haven't thought about sacrificing a lot. When I heard this news while making decisions, I wanted to change all of my current income; I was contemplating changes in my work environment and lifestyle, wondering if I was worth it or if I was willing. I only listened to the voice in my heart, and if I was willing, I would come' (X4). This process of intrinsic motivation stems from reflecting on and redefining one's own value. For example, some dancers may realize during their careers that they are more inclined towards the transmission of knowledge and the sense of achievement in teaching, rather than merely performing on stage. In their early stages, dancers gradually accumulate experience through teaching practice, forming a sense of identity and belonging to the role of 'teacher,' thus facilitating their transition.

Secondly, the external influencing factors on dancers' professional transitions to teachers reflect the synergy between policies, experience, interpersonal support, and institutional resources. Talent recruitment policies provide direction and assurance for transitions, while the experience from the institutions enhances dancers' professional credibility and practical value. Support from leaders and colleagues offers psychological and technical assistance for adapting to teaching roles, and schools' emphasis on dance practice provides ample space for dancers to demonstrate their professional skills. These factors collectively constitute an indispensable external driving force in the process of dancers' professional transitions. Although dancers have rich practical experience in institutions or on stage, teaching requires entirely different abilities and skills, and this difference is a significant obstacle for dance practitioners in their early stages. "Speaking of disadvantages, we may not have as much teaching experience as the older professors. They have encountered more students and can handle situations flexibly, while we might sometimes only have one skilled approach, but after students hear that approach too often, they become numb. We can take the subway to Xidan, walk there, or go in other ways, and we need to think about these teaching pathways. Also, in class, my classmate watched me teach, and he said I have no issues with teaching but that I speak too much and too fast because I want to say too many things. It's better to clarify one issue today, like addressing this arm problem, and solving this foot problem; solving two problems in this class is enough, and we can address the next issues in the following class" (G2). Through reflecting on practice, teaching effects can be adjusted gradually to meet students' actual needs.

From the perspective of challenges and advantages, dancers transitioning to teachers face a shift from the practical field to the education field, where the usage and mastery of teaching materials are important aspects of teaching ability. However, this is often a weak point for novice dance teachers. "I believe the disadvantage lies in being unfamiliar with the university syllabus materials; fully grasping the teaching context will require some time" (X4). Through mock teaching

and reflective practice, they gradually enhance their understanding of the materials and connect the content with their own practical experience. During the novice phase of transitioning from dancer to teacher, although certain challenges are present, there are also notable teaching advantages. These advantages mainly lie in the transformation of experience and cognition, rich stage performance experience, emphasis on foundational training classes, and overall competence.

The dancer has accumulated a wealth of professional experience over years of practice, and through continuous training and performances, has developed a profound understanding of the art of dance. This high level of awareness lays a good foundation for teaching. "Your classes certainly exist; no matter what role you play as an actor, there are many. The movements taught by the teacher are all one. A person has one Hamlet in their heart, 100 people have 100 Hamlets, and everyone's perception is different. Only by experiencing it personally can one convey this question to students. I believe all dance is a feeling and experience that you have gone through. This helps students; only by having personal experiences can one understand how to communicate with them, how to enable them to learn better. If you have never tasted this dish, how can you tell others about its deliciousness? I think this is our job. As an actor, you can pass on the experiences of being an actor to the students or as an actor, you can leverage the advantages of being a teacher. It is more about what is not in books than what is. The content outside of books is beyond what is in books. It could be experience. This is the experience of stage performance. This is a higher level and dimension of performance. This should be insight; therefore, in the process of teaching, you need to skillfully transform it into the students' knowledge, whether this understanding is related to your class" (P6).

The development of practical teachers is a gradual process of adapting to and improving teaching abilities, requiring a combination of internal and external factors, with equal emphasis on theory and practice. During the initial stages, the guidance and assistance of experienced educators can effectively compensate for the lack of teaching experience in novice teachers. 'Having a senior teacher to mentor and help me progress is something I strongly desire. I really want to learn from these old experts about their traditional combinations and courses, as I believe this has a high value. The Dance Academy is a benchmark in our industry, having accumulated 70 years of history, during which generations of predecessors have continuously dedicated their efforts, allowing the Dance Academy and the ethnic and folk dance department to maintain the same benchmark status in the industry. Whether for student training or faculty development, this standard is followed. Therefore, mentoring from seniors requires support from the school's external environment. Both departments and the academy should foster young teachers and create opportunities for us to better utilize our abilities. With this consideration, we can grow faster and better. Integrating into the school environment is beneficial for oneself. Progress may accelerate, or everyone's insight, understanding, and cognition may vary. These aspects are all significant. This is a process that promotes our growth.' (X4)

Maturity Period

From the perspective of categorizing the maturity stage, this phase will focus on refining the content of interviews with teachers in the maturity stage, making it more targeted. This includes the internal motivations for career transformation, challenges faced during the transformation, teaching experiences and strengths. Practical teachers in the maturity stage usually have a deeper understanding of their career development and recognize the growth mindset of "one can learn what they don't know." This awareness drives them to actively fill in the gaps in their teaching skills, continuously learning teaching methods, curriculum design, and theoretical knowledge, gradually bridging the gap between stage practice and classroom teaching. "I don't think I can't; sometimes being a teacher is a matter of intuition. It's a kind of raw energy that can be learned" (Z8). They no longer limit themselves to the singular ability of "being able to dance," but enhance their professional

value by learning the ability to "teach." They understand that teaching is not something that can be accomplished overnight, but a continuous learning process, accumulating experiences to gradually form their unique teaching style.

As dancers age, their physical condition may no longer be suitable for high-intensity stage performances, which becomes an important inner motivation for them to transition. Compared to the high physical demands on stage, teaching allows dancers to continue their love for dance and maintain a connection with the art form. "The reason I am considering university is that I am already 25 years old. In fact, we need to consider future development" (Z8). Through years of accumulated stage experience and artistic insights, dancers can pass on these treasures to the next generation, and this sense of inheritance gives them meaning in their career continuation.

Long-term experience in theater troupes provides rich resources and capability support for transformation, which is an important intrinsic advantage for dancers transitioning to teaching roles. The accumulated performance experience in the troupe can inject more practicality and depth into teaching. 'Yes, that was when I started working as an actor. We had performances every day while studying at the provincial arts school. At that time, many grand evening events were very popular. Various different performances took place in China, including many not only from television stations but also numerous events at different levels. We started collaborating with song and dance troupes to perform from a young age' (H5). The troupe gives dancers a holistic understanding of the dance industry, allowing them to focus more on students' future career development in teaching, fostering students with practical skills.

In the mature stage, dancers typically have a clearer career and life goal planning. They aspire to achieve new professional accomplishments through teaching, fulfilling their need for self-worth. 'Since it is folk dance, we should learn these dances. Suddenly, the performers from the dance academy found folk dance teaching or performance very appealing. Thus, I had a goal; I decided to come to school, and at that point, I was also contemplating my future development' (Z8). The sense of accomplishment brought by teaching is different from the experience of stage performance. Dancers cultivate students, witness their growth and progress, and realize the transmission of art, which fulfills their inner sense of achievement.

In the maturation period of transforming from dancer to teacher, despite having deeper experience and clearer career planning, one still faces a series of challenges. Mature dancers often accumulate rich stage experience and a sense of achievement, but transitioning from being 'the main character on stage' to 'a guide in the classroom' requires profound psychological adjustment and cognitive restructuring. 'I feel restless in my heart, with my mind filled with dazzling stages. Finally returning to the classroom, it's hard to accept a mindset of quietly doing things step by step, little by little' (H5). Dancers pay more attention to self-expression on stage, while in the classroom, the core task is to focus on students' needs and cultivate their abilities. This shift from 'showing oneself' to 'nurturing others' is not easy for some dancers to adapt to.

Mature dancers often possess a wealth of dance skills, but breaking these skills down into clear, sequential teaching steps is a new challenge. "What are the teaching steps? I have not learned from a foundational level to a gradual, step-by-step process, moving from simple to complex" (H5). Dancers typically rely on muscle memory to perform movements on stage, but in teaching, it's necessary to deconstruct complex techniques into multiple steps that are both clear and understandable, while also aligning with students' learning patterns. This process requires an understanding of the logic behind the movements and the ability to express it verbally.

Dancers often need to adjust and innovate their teaching methods when facing students with different backgrounds, abilities, and needs. 'Although the teaching methods are quite professional, I haven't studied other teaching methods; instead, I use a method of adding a spoonful of sesame oil for seasoning. I haven't had much systematic learning in this regard' (H5). Even though I have become an experienced teacher, I still rely on the methods that suit me best.

From the perspective of the maturity stage transitioning from dancer to teacher, the teaching experience and advantages at this stage are mainly reflected in personalized education, a profound understanding based on practice, and the continuous enhancement of one's own abilities. Mature dancers, with their rich stage experience and deep insights into dance, exhibit unique advantages in the teaching process. They have accumulated extensive professional knowledge and experience, enabling them to develop personalized teaching plans tailored to the characteristics of different students. This ability to teach according to individual needs is a significant advantage in their teaching. 'Sometimes it's not about differentiating treatment, but rather having a balance teaching according to individual needs.' (Z8). After years of stage practice and teamwork, mature dancers possess keen observation skills, allowing them to quickly capture the strengths and weaknesses of their students.

Rich stage experience gives mature dancers a deep understanding of the characteristics of a dancer's profession and the psychology of actors. This practice-based advantage allows them to meet real needs more closely in teaching. "This is not knowledge learned from books, but knowledge gained through practice. He understands the process of an actor's growth. How does he grow? He will also understand the extent to which an actor can release their maximum energy" (Z8). Practical experience enables them to have a comprehensive grasp of movement details, power distribution, spatial awareness on stage, and audience interaction. This detailed knowledge can be translated into careful guidance for students in teaching, helping students better understand the connotations and techniques behind dance.

Despite being in a mature stage, dancers still maintain the pursuit of self-improvement while transforming into teachers. This continuous drive for progress brings unique advantages to teaching. "I believe there is certainly consideration from the students' perspective. This will affect you. I think a teacher, besides teaching ability, also needs to have a sense of trust. You need to communicate. Let students feel that you are always improving. Whether academically or in your works, is your teaching continuously improving? Students who have ambition and are making progress will follow you, that's implicit. I believe that is the case. For example, Teacher Gao is always followed by his students; he always has changes and developments. He believes that if he cannot complete the excavation task, there is always something (H5)." Mature dancers are adept at continuously refining their teaching methods through reflection. For example, they improve course design based on student feedback, gradually forming a more efficient teaching model that is better aligned with student needs.

From the perspective of the maturity phase in the transformation from dancer to mentor, practical teachers possess a series of important skills during this stage, which provide solid support for their teaching work. Practical teachers demonstrate professional abilities that keep pace with the developments of the times, and these up-to-date skills make their teaching more aligned with the developmental needs of modern dance art. 'Skills themselves. We are a professional institution, and you must possess professional skills. Outstanding top talents' (Y6). Understanding the latest dynamics of domestic and international dance creation, the changes in performance forms, and the new standards of dance education. This professional adaptability helps them to always keep the curriculum content at the forefront.

Integrating dance theory with practice is one of the important skills for mature practical teachers. They are able to build a comprehensive teaching system through this ability. 'Theoretical knowledge enters actual action; they need to possess strong practical skills and initiative. We have theoretical support in our actions. You just mentioned that the performer moved to a certain place; he returns to theory through practice, which ultimately leads him to leave. After filtering, we still need to return to the original state. This requires your skills, definitely not. You must not stop the theoretical part of skills here. It needs to be unified. You must apply it to the action itself' (Y6). The long stage experience of mature dancers allows them to break down complex movement skills in a way that students can understand and transform theory into practice through hands-on training.

Practical teachers are more aware of their professional responsibilities during their mature phase, and can engage in teaching work with a high sense of responsibility and professional quality. This comprehensive understanding of professional duties is an important sign of their maturity. 'He needs to cultivate these people as he once did, and only then is he willing to. Some people may not necessarily be willing or are. We are willing to give unconditionally. There are also many teachers who are willing under conditions' (Z8). They recognize that dance education is not only about skill transmission but also about the inheritance of art. Therefore, they focus more on cultivating students' aesthetic abilities and artistic qualities in their teaching, helping students to establish a love and reverence for dance.

The mature period of transforming from a dancer to a teacher often benefits from a series of favorable factors that lay a solid foundation for dancers, helping them convert practical experiences into teaching abilities and gradually form a unique teaching style. During this mature period, dancers summarize the practical experiences accumulated over the years and build a teaching system that suits them. This system is not only a refinement and sublimation of past professional experiences but also an important marker of successful transformation. The second step is to turn these scattered experiences into a coherent line. Create your own culture. What he taught me was an educational method, while you only have points here. When Confucius taught 3,000 students, he did not allow his students to speak. The Analects he summarized formed a teaching system relevant to both learning and other aspects. Our teacher is Ms. Xiaoxue, and there's Wenhai from folk dance. Teacher Pan from the folk dance department and all the esteemed teachers are all points. You need to connect these scattered points, process them well, and link your teaching methods and experiences together. This forms your own teaching method. Dancers in their mature period reflect on and summarize their dance experiences by synthesizing the skills and insights gained over years of stage performances and rehearsals.

Mature dancers, during their transition, further solidify their theoretical foundation and teaching skills through systematic learning, providing strong support for successful transformation. 'Yes. Learning can be divided into two types; on one hand, systematic learning is required. How do you approach your teaching process, whether in curriculum or other areas? We should write from different channels, for example, you pursuing a doctorate now, I believe that is an example. How I teach, or let him learn systematically?' (H5). Although dancers have rich practical experience, successful teachers also need to systematically study dance theory. For instance, they may study content such as movement anatomy, dance aesthetics, dance history, etc., to enhance their depth of knowledge, making their teaching more theoretically supported. At the same time, systematic learning helps dancers understand the core methods and principles of the teaching field. By mastering this pedagogical knowledge, they can conduct teaching activities more scientifically.

Expert Type

From the perspective of categorizing expert types, this stage will focus on extracting the content of interviews with expert teachers, making it more targeted. This includes five subcategories: the skills possessed by practice-based teachers, advice for young teachers, favorable factors for successful transformation, intrinsic motivation for career transition, and the development of practice-based teachers, which will be analyzed in detail.

In the process of transforming from dancer to teacher, expert-practitioner teachers demonstrate a variety of key skills. These skills are not only based on their extensive stage experience but also reflect their deep understanding and flexible application of teaching principles. Expert teachers excel at recognizing student differences, including physical conditions, learning styles, and personal characteristics. "You find that you are teaching more in class, and you are correcting yourself. After finishing today's lesson, in the second class, I found that the feedback from students was not very effective. How should you handle this? You need to adjust your teaching methods. The tasks you set today will receive feedback tomorrow. If this is not what you want, then you need to adjust your thinking and hold on to your dreams. This is your original idea. Complete your set goals. You need to adjust your methods to achieve these goals, and in this process, you have to accomplish many things. What are the exploratory topics that interest students? Which students must you teach that are disinterested? You must make them understand" (G1). They can adjust teaching strategies based on student characteristics; develop personalized teaching plans, allowing students to maximize their strengths while compensating for their weaknesses during the learning process. This ability to tailor education to individual needs not only enhances teaching effectiveness but also boosts students' learning confidence.

Expert teachers focus on guiding students to understand the intrinsic value of dance art, going beyond technical training to pay attention to students' perceptions and emotional investment in the dance profession. 'First, you need to build his confidence. He thinks that this is useless. He believes you have trained a lot of talented individuals. Teacher Gao, I noticed that you have cultivated many excellent students. He expressed that I have already made a decision. You decide to pursue a master's or doctorate. Only when you provide him with successful cases will he do this' (G1). They ignite students' passion for dance by sharing their own stage experiences, helping them establish a sense of mission and responsibility towards the dance profession during their learning process. This in-depth guidance can effectively motivate students to persevere and be full of confidence in their future careers.

Practical teachers can combine traditional teaching methods with contemporary educational concepts to continuously innovate teaching content and methods. 'He needs to constantly renew himself, continuously change the original content. They are only interested in this if there's renewal; if not, you need to consider the issue of renewal. Can he master it? He hasn't really mastered the skills of daily renewal at all, and even if there's renewal, it's of no use' (G1). They stimulate students' interest and increase classroom participation through the flexible use of diverse teaching methods. This kind of innovation can not only keep teaching vigorous and dynamic but also effectively cultivate students' creativity.

In teaching, expert teachers pay attention to the cultivation of students' comprehensive abilities, such as stage expressiveness, teamwork skills, and artistic understanding. At the same time, they guide students to participate in creative practice; nurturing their artistic creation abilities and helping them transition from the role of a performer to that of a creator with artistic thinking. This cultivation of comprehensive abilities provides a solid foundation for the overall development of students. "Therefore, this requires our teachers to possess comprehensive abilities, especially creative

abilities. Why is creative ability important? Why do we need to offer creative courses? Why explore creative courses in the field of folk dance? Creative courses are conducted after understanding the materials you have learned. It is a form of innovative ability, that is, how to use these elements for expression" (G1).

Experts who transform from dancers to educators provide profound and practical advice to young teachers based on their own practical experience and professional growth. This advice not only helps young teachers smoothly transition in their professional roles but also aids them in steadily improving in their educational careers. Expert teachers emphasize that young teachers first need to clearly recognize the differences in professional roles between dancers and educators. Dancers are more self-centered, focusing on their own performance and skill enhancement, while educators need to be student-centered, focusing on achieving teaching goals and guiding student growth. 'Sometimes it can be quite confusing. Do you have any advice? I think when you are a dancer, when you are a teacher, when you are a director and some celebrity, you need to separate yourself. But of course, you can't split yourself. This is the dancer, this is the teacher, this is the director. Well, I think for me, because you know, whenever you need something different, yes, but in a person's world, everything is in front of you. This is also why this is your action. You must be different as a teacher, director, choreographer, or dancer. Also, you need to focus, like you decide I will be more like a teacher, the dancer is a dancer and the teacher, you need to have a perspective, um, what you want to achieve' (M2). In the process of role transition, young teachers need to break free from the inertia of relying solely on stage experience and shift their focus to teaching design, classroom management, and the individual needs of students. Expert teachers advise young teachers to start by adjusting their mindset and gradually adapting to the transition from 'performer' to 'educator,' recognizing that teaching is an art that requires systematic learning and long-term accumulation.

Young teachers should not only focus on the imparting of skills in their teaching practice but also pay attention to the enhancement of academic research and theoretical cultivation. By deeply studying knowledge in related fields such as education, psychology, and art, young teachers can combine teaching practice with theoretical research, thereby improving the scientific nature of course design and the systematic nature of teaching methods. 'We should conduct more research. Currently, the infrastructure around us has not sufficiently explored research on basic education. Therefore, we need to establish our own academic system. From the perspective of basic education, we can start our research, delve into ontology, and conduct in-depth research on basic education. There are many in-depth areas to explore, as well as studies on different schools of thought' (G1).

In the process of successfully transforming from dancers to educators, expert teachers possess a series of favorable factors that provide solid support for their role transition from stage performers to educators. The successful transformation of expert teachers is inseparable from a profound understanding and organic combination of theory and practice. They not only have years of accumulated stage performance experience but also pay attention to integrating dance education theory into teaching practice. 'You have completed the lesson plan; today I need to teach this content. There are many situations in each class on site. You can use your own means or methods to change today's lesson. These are all temporary; sometimes we think that those who practice find it hard to sort out theory because each class is different' (G1). They are able to organize teaching content more scientifically and design learning plans suitable for different students. They no longer rely solely on intuition or experience but instead use theory as a guide, making teaching more organized and purposeful.

Expert teachers demonstrate a high degree of flexibility and adaptability in their teaching, a capability that enables them to handle various complex situations throughout the teaching process. 'The same lesson taught today may differ from the one taught tomorrow, which requires you to focus more on skill development during your practical operations. You need to adjust flexibly and understand the current status of your students, which is what makes an excellent teacher' (G1). Dance teaching is a profession that requires constant updating and progress. Expert teachers can flexibly adjust teaching objectives and content based on the teaching audience, societal needs, and new trends in dance development, providing students with more forward-looking education.

In the process of transitioning from dancer to teacher, expert teachers believe that career transformation is often driven by various internal motivations. These motivations stem not only from individual career development needs but are also closely related to the characteristics of the dance industry. Expert teachers suggest that one of the motivations for the transition from dancer to teacher is a high recognition of one's professional experience and abilities, as well as a strong desire to pass on these precious resources to the next generation. 'You have another personal question. How should you become a performer in the troupe? It would be very meaningful for practical teachers to study this issue. Furthermore, it requires personal experience. There's a saying that goes, what is it? A good dancer is not necessarily a good teacher. This requires you to have a logical understanding of the overall system of dance. I have a deep understanding of the grasp of dance knowledge and the recognition of this discipline. Only then can you become an excellent teacher. He has become an excellent teacher. The precondition is that you have your own experience and capabilities. Your own experience can be passed on to students' (G1). Many years on stage have endowed dancers with rich technical experience and performance insights, which carry unique value. Expert dancers hope to convey these profound artistic understandings, stage skills, and creative experiences to students through teaching, helping them to better adapt to dance learning and performance.

The brevity of a dancer's career is also one of the key motivations for expert types to believe that dancers should transition to becoming teachers. "Becoming a teacher or choreographer or doing other things, or they can learn, because in dance we don't consider our future, as the career of a dancer is very short, well, it flies by quickly, 20 years is gone. Yes. If you are more talented, then you can dance longer. But usually, a perfect dance career lasts 20 years" (M2). The career lifespan of dancers is generally short, and many dancers have to face the end of their stage career in their thirties. To avoid interruptions in their career, expert teachers believe that dancers tend to view teaching as a new career development path, which not only continues their love for dance but also provides a long-term stable career option.

In the process of transforming from a dancer to a teacher, experts believe that practice-oriented teachers need to undergo a role shift from artistic practice to educational practice. This transformation involves not only a change in identity but also a comprehensive enhancement of professional abilities, ways of thinking, and teaching methods. Teaching collaboration is one of the important ways for teachers to develop their practical teaching skills. Teachers have accumulated rich artistic practice experience during the dancer stage, but teaching requires not only one-way knowledge transfer, but also multi-directional cooperation and communication. "This is also very important; not only do you have to gain something, because, you know, when you collaborate with different choreographers, they will create different works, and they will use you as material" (M2). Therefore, teaching collaboration helps practice-oriented teachers absorb new teaching concepts within a team and enhance their collaborative skills.

Team building is the key for teachers to promote sustainable development in education. By cultivating different levels of teaching teams, it not only helps to pass on experience but also

provides support for personal development. "The academic committee has always emphasized team building, bringing the old along with the young, letting young people take the stage quickly. They can take over projects from the older generation" (G1). Team building should focus on the combination of inheritance and innovation. By holding regular experience-sharing sessions or demonstration classes, a culture of mutual help and learning among teachers can be formed, allowing for the systematic transmission of teachers' practical experiences.

Teaching research activities are an important bridge for teachers to transition from a practice-oriented approach to an academic one. In this process, teachers need to integrate their practical experiences into research to promote innovation and improvement in teaching methods. "Therefore, professional teachers need to engage in teaching research. For example, how should the curriculum for the fourth grade be taught? Should the pace be slow or fast? We need to master several slow and several fast rhythms, and be clear about how to convey the core content and what methods to use. Our final evaluation results are not obtained right at the beginning; they come from practice. Through discussions and research among teachers, we collaboratively establish a standard. This is what truly matters. This is the uniqueness of dance" (G1). Teachers need to continually reflect on their teaching practices through research activities, transforming challenges in teaching and student feedback into research topics.

Management

From the perspective of the types of management, this stage will focus on refining the content of interviews with managerial teachers, making it more targeted. This includes five subcategories: the development of practical teachers, external influencing factors on transformation, skills possessed by practical teachers, teaching experience and advantages, and advice for young teachers, based on which a detailed analysis will be conducted.

From a management perspective, analyzing the transformation of practical teachers from dancers to educators, dance education can draw on the modular teaching models of other art fields, enhancing the integrity of the curriculum system by combining theoretical knowledge with practical skills. "I think this issue has been contemplated many times. In fact, our ideological or academic struggles are already very clear. We should draw on the scientific models and teaching methods of ballet, and the overall teaching models and methods. The structure of the framework. We cannot directly adopt his stylistic elements" (P3). Many dance teachers feel a lack of direction in their career development after transitioning from dancers; the high physical demands on dance educators and the challenges of career transition require better compensation to enhance attractiveness. "When teachers come back, they consider from their own perspective. We need to strive to integrate, learn, and provide supportive facilities. The school needs to offer policy support. We support. The pressure lies here. First, in the actor sequence, we do not lower the compensation, enjoying the benefits of senior professors is one aspect" (L1). When dance teachers take on the role of homeroom teachers, they can participate more deeply in the students' growth process, further consolidating their identity as educators. "We encourage new teachers to take on the role of homeroom teachers. It is necessary to establish communication with students. The most intimate way is by being a homeroom teacher, whether in daily educational management or professional teaching, which allows for a quicker understanding of the students" (L1). By implementing appropriate compensation adjustments, promotion opportunities, and homeroom teaching allowances, more dance teachers can be motivated to actively participate in the role of homeroom teachers, promoting the recognition of their identity as educators.

From the perspective of management, analyzing the external influencing factors for practical teachers transitioning from dancers to educators, the growth of practical teachers relies on the

continuity and accumulation of their stage experience, which aids in enhancing their teaching ability and artistic qualities. "Additionally, from the perspective of stage performance, we have accumulated so many years. In practice, we also realize the importance of practice. For actors and students, the dance drama 'The Spring of Yangjialing' is a very good example. When students enter the school for 'The Spring of Yangjialing,' it was during online recruitment and it was a pandemic period without offline classes. I have a very deep impression that after the semester began, we said we would. At the start of the semester, the leaders needed to enter the classroom to observe the courses, so we visited the class and learned folk dance. After entering the class, our mood sank much lower. This was because the online recruitment took place during the pandemic, and from the external physical conditions, the students' courses had just started, and their performance was relatively weak. As school leaders, 'we were very anxious back then, thinking it wouldn't work.' Unexpectedly, this class of students, along with 'The Spring of Yangjialing,' went from creation to rehearsal and finally to the stage, and along the way, we observed that these children made a leap in their abilities, each child showed some change. Their physical expressiveness, sensitivity to roles, and their characteristics, the impressions presented by the work were completely different from the early days of the classroom, in less than a semester. This practice quickly elevated and developed the students in this class through the work. Another scenario is if students continue to practice from graduation to the classroom, if they do not go through the practice on the stage and in the works, they will not achieve better results. In this case, after training, they can become competent. Although they can grow and succeed, their path may have detours. This shows that practice is very important." (L1).

The continuity of the education system directly influences the growth trajectory of practical teachers. 'Only those who graduate from affiliated schools with a strong foundation can qualify; this selection of conditions is exactly as you just mentioned, as the educational training system of the Beijing Dance Academy is consistent. The content and training system learned from the affiliated school are connected to the university. When they return, they can quickly enter classroom teaching; this was our consideration at the time' (L1).

The success of the transformation of practice-oriented teachers largely depends on the stability and development potential of the team structure. It is essential to provide growth space and platforms for young teachers to build a sustainable teaching team. 'Those who are facing transformation are changing jobs; you cannot do anything else. Additionally, there is a wave of benefits, as we have a cohort of young people. For example, Ren Xin and others, although their titles may not be high, they have potential, so they will also switch jobs. There is a reservoir within the group stage over a few years, and in that reservoir, there is a wave; now we still have that list, with hundreds of people in the reservoir, and those are also the first batch' (L1).

From the perspective of management, analyzing the skills that practical teachers need to possess in the transformation from dancer to educator can revolve around two aspects: 'knowledge accumulation of the dance performance system' and 'interdisciplinary interaction and integration.' Practical teachers not only need to have solid professional dance ability, "you still need to pay attention to the content of the dance performance system. Only by mastering it very thoroughly can you fully utilize this advantage in teaching. By accumulating knowledge and professional level, you can improve your own level and play a better role in teaching" (P3). They also need to continuously expand their knowledge boundaries and teaching skills during the transformation process to adapt to the needs of education and artistic development. "Collaborative intersection broadens vision; creative colleges need this vision more, so I believe we should enhance our interactive and integrative abilities with other art forms" (L1).

In the process of practical teachers transitioning from dancers to educators, management needs to delve deeply into their teaching experiences and strengths to effectively promote their role transformation and professional growth. The teaching thought of practical teachers is rooted in their years of accumulated stage experience, which provides them with a perspective different from that of traditional teacher education professionals. "From a general law perspective, I studied education in college. In the education profession, I believe the knowledge I received was very rich. Besides professional skills, there are also core courses on teaching methods and other educational attributes. This laid the foundation for my educational thinking" (P3). Due to their stage background, practical teachers are able to view teaching issues from the unique perspective of a dancer. "During my two years as a performer in a youth dance troupe, besides myself, I could see problems more from the stage's perspective" (P3).

In the process of transforming from dancers to teachers, the management's advice to young teachers should focus on the overall enhancement of their professional growth and educational teaching abilities. First of all, young teachers need to take the initiative to learn and supplement their shortcomings in educational theory and teaching methods, particularly in transforming practical experience into teaching content, emphasizing the theoretical and systematic organization. 'I believe that in order to learn again, we must quickly fill in the gaps. I think we should settle down and quickly address the shortcomings. I believe as long as there is progress, that's good' (P3). Additionally, young teachers should regard their teaching work with a diligent research mindset, viewing teaching as a process of long-term accumulation and continuous optimization, rather than merely an output of experience, focusing on the scientific nature of teaching design and the innovativeness of methods. 'You need to focus on research in teaching. I believe that while filling in the gaps, you also need to effectively unleash potential. You should approach teaching with a solid and research-oriented mindset' (P3). Meanwhile, in actual teaching, special attention should be paid to the relevance of content, organically combining course content with students' real needs, future career development, and stage practice, helping students form systematic learning thinking through holistic and coherent teaching design. 'I think you need to have a comprehensive understanding, and then gradually study the tasks assigned to you. Otherwise, you are only you. You only know the teaching content of this section, and it is not related to the subsequent teaching content. It will not be favorable for you. Or it won't benefit the advancement of your teaching. There's no vertical logic' (P3).

4.4 Summary of the Results

The results of this study demonstrate that the professional development of practical dance teachers in higher education follows a progressive and interconnected path consisting of four stages: youthful, maturity, expert, and management. Each stage reflects distinct characteristics, challenges, and transformations while maintaining continuity with the previous stage. In the youthful period, teachers are primarily driven by intrinsic motivation and external influences as they transition from performers to educators, but they face difficulties in adapting to systematic teaching methods and institutional requirements. The maturity stage is characterized by the strengthening of teaching competence, integration of theory and practice, and the pursuit of self-improvement, although balancing emotional artistry with structured pedagogy remains a challenge. At the expert stage, teachers display advanced teaching skills, innovation, and mentoring capacity, combining stage experience with educational theory to foster both technical ability and artistic appreciation in students. Finally, in the management stage, teachers expand their role to institutional development, policy optimization, and the cultivation of younger colleagues, highlighting leadership in shaping sustainable growth in dance education.

Overall, the findings reveal that the professional development of practice-oriented teachers is not a linear process but a dynamic trajectory shaped by personal motivation, accumulated teaching experience, external support systems, and institutional policies. This continuity underscores the importance of both individual effort and systemic support in facilitating the successful transformation of dancers into educators and, eventually, into leaders of educational innovation and development.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

From the perspective of this research, the development of practice-oriented teachers in higher education, particularly in dance programs, mainly undergoes four interconnected stages: the initial stage, the mature stage, the expert stage, and the management stage. Each stage has distinct characteristics, transformation points, and developmental challenges, showcasing the continuity and progression of professional development. In the initial stage, practical teachers transition from professional dancers to educators, motivated by both emotional identification with dance education and the realistic limitations of a dancer's career. While they possess rich stage experience, they often lack systematic teaching methods, theoretical knowledge, and the ability to adapt to institutional requirements. In the mature stage, teachers stabilize their teaching ability and begin constructing comprehensive teaching competency systems. They pursue systematic teaching by combining technique, theory, and artistic expression. Their professional identity deepens as they transform into innovators in education, actively participating in academic activities, refining theoretical knowledge, and applying differentiated instruction to address diverse student needs.

At the expert stage, teachers integrate stage experience with educational theory into a complete system, emphasizing personalized and student-centered teaching. They demonstrate high adaptability; pursue innovation by integrating pedagogy with contemporary dance arts, and foster students' holistic development, artistic responsibility, and long-term passion for dance. Finally, in the management stage, teachers assume leadership roles in curriculum design, resource coordination, and policy optimization. They support the growth of younger teachers through mentoring, talent recruitment programs, and platform building, ensuring sustainable professional development in dance education. Overall, the progression from novice to managerial roles demonstrates not only individual career growth but also the broader inheritance and innovation within dance education. Personal motivation, institutional support, and policy guidance collectively shape this dynamic development path.

5.2 Discussion

The study reveals several critical insights into the professional development of practice-oriented dance teachers. First, the career transition is not linear but progressive, interconnected, and highly dynamic. Teachers often carry overlapping responsibilities—teaching, research, management, and social service—making role integration a key issue in their professional journey. Regional and institutional differences also significantly affect development paths. Teachers in first-tier cities may emphasize internationalization and academic innovation, while those in smaller or remote universities may prioritize cultural preservation and community service. Such variations highlight the influence of educational resources, policy support, and cultural environments. Another key discussion point is the role of external support systems. While novice teachers rely heavily on institutional policies, mentorship, and teamwork to overcome their lack of teaching experience,

mature and expert teachers depend more on academic resources, interdisciplinary exchanges, and research opportunities to refine their practices. At the managerial level, teachers contribute back to the system by shaping institutional structures and policies, reflecting a cycle of growth and contribution.

Despite this progression, challenges remain. Teachers in different stages encounter issues such as:

- Lack of systematic teaching design in the novice stage.
- Balancing technical training and artistic expression in the mature stage.
- Integrating pedagogy with creativity in the expert stage.
- Balancing teaching and administrative responsibilities in the management stage.

Moreover, most research to date focuses on successful transitions, overlooking teachers who face setbacks or fail to adapt. These missing cases represent an important gap in understanding the obstacles that hinder sustainable professional development.

5.3 Recommendation

Based on the findings and discussion, several recommendations are proposed for future research and practice:

1) Broaden Research Scope

Future studies should expand the sample range to include diverse regions, institutional levels, and types of universities. Comparing developed eastern regions with underdeveloped central and western regions will reveal how educational resources, cultural contexts, and policy differences shape teacher development.

2) Investigate Role Integration

Research should focus on how teachers balance multiple roles, such as teaching, research, and management. For example, managerial teachers may face conflicts between administrative duties and classroom teaching, while expert teachers may struggle to align research and teaching goals. Understanding these dynamics can guide better workload management and support systems.

3) Policy Evaluation and Optimization

Future work should assess the actual effects of national and institutional policies, such as talent training programs, title evaluations, and resource allocation. Identifying strengths and shortcomings in these mechanisms can provide evidence-based strategies for creating more supportive environments for practice-oriented teachers.

4) Case Studies on Failed Transitions

In-depth research should be conducted on teachers who struggle with or fail to complete career transitions. Factors such as insufficient institutional support, lack of pedagogical adaptation, or psychological pressures should be analyzed to design targeted interventions for improving resilience and adaptability.

5) Longitudinal Tracking Studies

Long-term studies spanning three to five years should be conducted to monitor teachers' professional trajectories across stages. Tracking changes in teaching ability, job satisfaction, and external influences will help identify key milestones and long-term developmental patterns, offering a scientific basis for higher education planning in dance.

By implementing these recommendations, higher education institutions can strengthen policy frameworks, improve resource distribution, and enhance professional development systems, ultimately ensuring that practice-oriented dance educators not only sustain their careers but also contribute to the vitality and innovation of dance education.

References

- Jaques, E. (1989). *Requisite organization: The CEO's guide to creative structure and leadership*. Cason Hall & Co.
- Liu, S. (2024). *Research on the localization of American sports teaching models in the context of "Chinese modernization"* (Master's thesis). Hubei Normal University.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese*. Oxford University Press.
- Polanyi, M. (1958). *Personal knowledge: Towards a post-critical philosophy*. University of Chicago Press.
- Polanyi, M. (1966). *The tacit dimension*. Routledge & Kegan Paul.
- Sternberg, R. J. (1995). *Successful intelligence*. Simon & Schuster.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole.
- Turner, J. C. (1987). *Rediscovering the social group: A self-categorization theory*. Blackwell.
- Wang, R. (2023). *Research on environmental education practice in new era China* (Doctoral dissertation). Lanzhou University.
- Zhou, B. (2019). *Research on the value consciousness of higher education teachers* (Doctoral dissertation). Sichuan Normal University.
- Zhou, H., & Li, Q. (2012). Development of university teachers: Connotation and extension. *Journal of University Education Science*, (06), 64–70.

Research on the Application of Minimalism in Vessel Design

by

Shuaixian Liu, Fan Liu, and Jian Pu
Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: wa760143@qq.com

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Shuaixian Liu, Fan Liu, and Jian Pu

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: wa760143@qq.com

Abstract

This study investigates the application of minimalism in vessel design, aiming to achieve a balance between functional efficiency, aesthetic appeal, and innovative craftsmanship. Minimalism, originating in the early 20th century and maturing as a movement in the 1960s, emphasizes simplicity, clarity, and rationality, rejecting excessive ornamentation. In the context of contemporary society, where consumer lifestyles are fast-paced and visually saturated, minimalist design provides a solution to the over-complexity of everyday products. Vessels, as functional objects that people interact with daily, offer an ideal medium to explore minimalist principles and their impact on usability, aesthetics, and user experience. The research addresses four key questions: the application of core minimalist principles, the role of form, color, and material, structural and craftsmanship innovations, and the integration of creativity and interactivity in contemporary vessel design. Qualitative data reveal that minimalist vessels prioritize essential forms, simple lines, and clear structures, with color schemes emphasizing monochromatic or bright solid tones to enhance harmony and visual impact. Material selection, particularly the combination of natural and artificial materials, contributes to tactile richness and aesthetic contrast. Quantitative findings indicate that users prefer minimalist vessels for their usability, elegance, and visual simplicity compared with traditional decorative products. Innovations in craftsmanship, including the use of 3D printing, ceramic adhesives, and interactive design features, address technical challenges such as material incompatibility and structural precision while enhancing user engagement. The study concludes that minimalism in vessel design extends beyond decorative reduction, offering a refined approach that harmonizes functionality, aesthetics, and innovation. The research provides practical guidelines for designers, emphasizing the importance of clarity, material innovation, and interactive elements. It demonstrates that minimalist vessels can enrich daily life by providing both practical utility and artistic value, creating objects that are functional, aesthetically pleasing, and engaging.

Keywords: Minimalism, Vessel Design, Functional Aesthetics, Material Innovation, Interactive Design

1. Introduction

1.1 Background and Importance of the Problem

Design has always been closely connected to the social, cultural, and economic contexts of human life. In particular, vessel design, ranging from household utensils such as cups, plates, and containers to more artistic and decorative pieces, has long served both functional and aesthetic purposes. As society has progressed, vessel design has evolved from purely utilitarian objects into carriers of cultural identity, aesthetic appreciation, and technological innovation. In contemporary society, where consumer lifestyles are increasingly fast-paced and information-saturated, product design must not only fulfill functional requirements but also provide emotional comfort and visual harmony. Minimalism, as a design philosophy, has become an important response to the complexity and over-decoration that often characterize modern consumer products. The minimalist design concept, which originated in the early 20th century and matured as a movement in the 1960s, emphasizes simplicity, clarity, and functionality. Its core principle, commonly expressed in the maxim “less is more,” rejects excessive ornamentation and instead highlights the essence of an object. In the field of vessel design, minimalism seeks to remove unnecessary decorative elements, allowing the true form, structure, and material of the object to reveal their intrinsic beauty.

The importance of this research lies in addressing a major challenge in contemporary product design: the tension between complexity and simplicity. Many current vessel products emphasize ornamental details, resulting in designs that are visually overloaded, difficult to produce sustainably, and sometimes inconvenient for practical use. In contrast, minimalist vessel design prioritizes essential form and function, aiming to create objects that are both practical and aesthetically pleasing. Furthermore, minimalist vessels can enhance the quality of daily life by offering users a sense of tranquility, clarity, and refined taste. Additionally, vessel design provides an ideal medium through which to explore minimalism, as it integrates utility, artistry, and craftsmanship. Vessels are objects that people use and interact with daily; therefore, their design has a direct impact on user experience. If minimalist concepts can be successfully applied to vessels, they can contribute not only to improved functional performance but also to psychological well-being, offering users simplicity and serenity in an otherwise complex modern world. This dual role of vessels, as both functional objects and artistic expressions, underscores the necessity of examining minimalism in vessel design.

1.2 Research Question

Building on the background discussed above, this research is guided by the following questions:

- 1) How can the core principles of minimalism—simplicity, functionality, and rationality—be effectively applied to vessel design?
- 2) How can the selection of form, color, and material enhance both the functional performance and aesthetic value of minimalist vessels?
- 3) What structural and craftsmanship innovations can address the technical challenges in minimalist vessel production?
- 4) How can minimalist vessel design evolve to reflect creativity, interactivity, and artistic expression in modern contexts?

1.3 Research Objective

The overall objective of this research is to conduct an in-depth study of how minimalism can be innovatively and practically applied to vessel design. Specifically, the study aims to:

- 1) Examine the theoretical foundations and evolution of minimalism, tracing its origins in modernism, identifying its core principles, and analyzing their relevance to contemporary vessel design.
- 2) Investigate the application of minimalist principles in vessel design, focusing on how simplicity, functionality, form, color, material, and structure interact to create harmonious and purposeful designs.
- 3) Explore innovations and technical solutions in minimalist vessel creation, emphasizing the integration of diverse materials, craftsmanship techniques, and structural approaches to overcome design and production challenges.
- 4) Evaluate and provide recommendations for minimalist vessel design, assessing its functional and aesthetic advantages over traditional design approaches, and offering practical design guidelines for future applications.

2. Literature Review

2.1 Related Concepts and Theories

Minimalism emerged as a significant cultural and artistic movement in the mid-20th century, closely tied to modernism and functionalist design philosophies. The origins of minimalist thought can be traced to early 20th-century developments such as the Bauhaus movement in Germany, which promoted the integration of art, craft, and technology. Designers and architects such as Ludwig Mies van der Rohe promoted the principle of “less is more”, which later became a foundational idea for minimalist design. Similarly, Louis Sullivan’s maxim “form follows function” emphasized that design should be dictated by purpose rather than decoration (Sullivan, 1896/1998). Minimalism, as a design philosophy, stresses reduction, clarity, and functionality. It is not simply the act of removing elements, but a process of refining and elevating design to its essence. According to Dieter Rams, a leading figure in product design, good design should be innovative, useful, aesthetic, unobtrusive, honest, and long-lasting (Rams, 1980). These principles resonate strongly with vessel design, where the balance between usability and beauty is crucial.

In addition to Western influences, Eastern traditions, particularly Japanese Zen aesthetics, have contributed significantly to the development of minimalist thought. Concepts such as wabi-sabi, which values beauty in imperfection and simplicity, emphasize harmony with nature, restraint, and spiritual depth. The Japanese tea ceremony vessels, with their understated elegance and subtle textures, are often regarded as early examples of minimalist expression in product design. Theoretically, minimalism can be understood through three key lenses: functionalism, which focuses on usability and performance; aesthetic purity, which emphasizes clarity, balance, and elegance; and emotional and experiential value, which seeks to create objects that evoke calmness, focus, and a sense of order in everyday life. Together, these theoretical foundations establish minimalism as not merely a stylistic trend but as a holistic approach to design thinking.

2.2 Literature Surveys

Scholarly literature on minimalism in design highlights its influence across various fields, from architecture to industrial design and lifestyle products.

2.2.1 *Minimalism in Architecture and Art*

Early literature emphasized minimalism in architecture and visual art, with works by architects such as John Pawson and Tadao Ando reflecting an aesthetic of purity, light, and spatial clarity (Pawson, 1996). Art critics in the 1960s associated minimalism with geometric abstraction and reduction to essential forms.

2.2.2 *Minimalism in Product Design*

Research in product design suggests that minimalist approaches improve clarity, usability, and sustainability. Minimalist household items (e.g., Muji products) are widely studied for their ability to achieve functional effectiveness while maintaining an understated beauty (Kawakubo, 2012). Studies further indicate that minimalist products are perceived as more timeless and environmentally friendly due to their material efficiency (Norman, 2004).

2.2.3 *Minimalism in Vessel Design*

While relatively limited, recent scholarship has addressed the potential of minimalism in ceramic, wood, and composite vessel design. Authors argue that minimalism enhances the tactile and visual qualities of vessels, drawing attention to form and texture rather than decoration. Research in craft theory also emphasizes that material authenticity, using natural woods, raw ceramics, and visible grains, resonates with minimalist ideals.

2.2.4 *Comparisons with Other Styles*

Literature contrasting minimalism with maximalism and postmodernism reveals clear distinctions. Postmodern design often relies on eclecticism and symbolism, while minimalism avoids superfluous meaning in favor of essence. Compared to ornate or decorative design traditions, minimalist vessels emphasize durability, clarity, and practical elegance. From these surveys, it is evident that minimalism remains highly relevant in contemporary design discourse. However, its application in vessel design remains underexplored, providing a gap for this research to address.

2.3 Conceptual Framework

Based on the literature, this study adopts a conceptual framework that positions minimalism in vessel design around four interrelated dimensions:

Form

The geometric and structural expression of vessels in minimalist design emphasizes simplicity, clean lines, and balance. It reduces decorative subjectivity and highlights the essential shape and utility of the vessel.

Color

The role of color in minimalism is to provide harmony, contrast, or neutrality. Minimalist vessel design often employs monochromatic schemes (black, white, gray) or muted solid tones to

achieve a sense of calm and elegance. Color is used sparingly to emphasize form rather than distract from it.

Material

Material authenticity is central to minimalism. Natural textures such as wood, ceramic, stone, or glass are favored. Minimalist vessels often showcase materials in their natural state, reflecting purity and honesty of design. In modern contexts, hybrid material innovations (wood + ceramic, glass + metal) expand the expressive range.

Structure and Craftsmanship

The structural approach in minimalism is to maintain the simplest functional form while ensuring durability. Craftsmanship in vessel design integrates traditional techniques with modern technology (e.g., 3D printing). The combination reflects both continuity of tradition and adaptation to innovation.

This conceptual framework (Form, Color, Material, Structure) forms the analytical lens for this research, allowing systematic exploration of minimalist vessel design from theory to practice.

2.4 Research Hypothesis

Drawing from the theoretical foundations and literature surveys, the study proposes the following hypotheses:

H1: Minimalist vessel design enhances functional clarity by reducing unnecessary elements and emphasizing usability.

H2: Minimalist color schemes and material selection improve aesthetic perception by providing balance, harmony, and visual impact.

H3: The integration of traditional craftsmanship with modern technology (e.g., 3D printing) enhances both precision and design innovation in minimalist vessels.

H4: Minimalist vessels provide greater user satisfaction compared to traditionally decorated vessels, by fostering tranquility, elegance, and modern taste.

These hypotheses guide the research direction and support the broader aim of demonstrating that minimalism is not simply a stylistic choice, but a superior design strategy for vessels in the context of modern living.

3. Research Methodology

3.1 Research Design

This study employs a mixed-method research design that integrates both qualitative and quantitative approaches. The rationale for adopting this design is to ensure a comprehensive understanding of minimalist vessel design by examining both measurable factors, such as user preferences and satisfaction levels, and interpretive dimensions, including cultural perception and aesthetic appreciation. The qualitative component focuses on analyzing minimalist design principles through literature reviews, visual analyses of existing vessel designs, and expert interviews with

designers, artisans, and academics in the field of product design. This provides in-depth insights into the cultural, aesthetic, and functional meanings of minimalism. Meanwhile, the quantitative component involves conducting surveys and user evaluations to assess perceptions of minimalist vessels compared with traditional or decorated designs. Statistical techniques are used to measure relationships between design elements, form, color, material, and structure, and perceived values such as functionality, aesthetics, and satisfaction. This dual approach ensures methodological triangulation, thereby increasing the validity and reliability of the findings.

3.2 Population and Sample

The research population consists of two primary groups: (1) design professionals and academics, including industrial designers, product designers, and lecturers in design-related disciplines, who provide expert insights into the theoretical and practical aspects of minimalism in vessel design; and (2) consumers and users of vessels, including individuals who regularly use vessels in households, restaurants, or cultural contexts, whose perceptions provide empirical evidence of the acceptance and desirability of minimalist designs. A purposive sampling technique is used for experts, selecting approximately 10–15 professionals or academics with relevant experience. For consumers, a stratified random sampling method ensures representation across age, gender, and lifestyle categories, with a target of 200–250 participants considered adequate for statistical analysis (Hair et al., 2019). This sample size ensures both statistical power and diversity of perspectives.

3.3 Research Instruments

Multiple instruments are developed to collect the necessary data. The interview guide consists of semi-structured questions focusing on design philosophies, minimalist approaches, challenges in vessel design, and future trends, allowing flexibility while maintaining focus on research objectives. The survey questionnaire, distributed to consumer participants, includes four sections: demographic information, design perception (form, color, material, structure), functional evaluation (ease of use, durability, practicality), and aesthetic and emotional evaluation (elegance, simplicity, satisfaction). Responses are measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The observation checklist evaluates selected minimalist and traditional vessel samples based on indicators such as geometric simplicity, material authenticity, balance of proportions, and color application. In addition, document and visual analysis includes photographs, sketches, and product catalogs to support visual comparisons of vessel designs. All instruments are reviewed by three academic experts in product design to ensure content validity, and a pilot test involving 30 respondents is conducted to assess clarity, consistency, and reliability, with a Cronbach's Alpha value of ≥ 0.70 considered acceptable.

3.4 Data Collection

Data collection is conducted in three stages. The qualitative data collection stage includes in-depth interviews with experts (via email, online platforms, or in-person sessions), the collection of secondary data from academic journals, books, and exhibition catalogs, and the documentation of visual vessel samples through photography and archives. The quantitative data collection stage involves distributing online and paper-based questionnaires to consumer participants using stratified sampling to ensure proportional representation across age groups (e.g., Gen Z, Millennials, Gen X, and Baby Boomers). A minimum of 200 valid responses is collected for statistical analysis. Ethical considerations are strictly observed, with participants being informed about the research objectives and procedures. Participation is voluntary, informed consent is obtained, and confidentiality and

anonymity are ensured. The data collection period spans approximately 8–10 weeks to allow adequate time for recruitment, administration, and follow-up.

3.5 Statistics Used for Data Analysis

Data analysis proceeds in two main stages. Qualitative analysis involves applying content analysis to expert interviews and design documents to identify recurring themes and insights related to minimalist vessel design. Thematic coding is used to categorize responses based on the conceptual framework of form, color, material, and structure. Visual data, including photographs of vessels, are analyzed through comparative design analysis to highlight distinctive minimalist features. Quantitative analysis is conducted using SPSS 26.0 and AMOS 24.0 software, employing descriptive statistics (mean, standard deviation, frequency, and percentage) to summarize demographic and perception data. Reliability testing (Cronbach's Alpha) verifies internal consistency, while exploratory factor analysis (EFA) validates the structure of design perception variables. Correlation analysis examines relationships among design elements and satisfaction, and regression analysis or structural equation modeling (SEM) tests hypotheses regarding the impact of minimalism on user satisfaction and functionality. This combined analytical approach ensures robust results linking theoretical foundations to empirical findings.

4. Data Analysis and Findings

4.1 Introduction

This chapter presents the analysis and findings of the study on minimalist vessel design. Both qualitative and quantitative data were examined to understand how minimalist principles can be applied to vessels to achieve functional efficiency, aesthetic appeal, and innovation. The analysis focuses on design principles, color expression, material usage, structural techniques, and innovative craftsmanship in the context of contemporary vessel design.

4.2 Data Analysis of the Qualitative Data

The qualitative analysis highlights several key aspects of minimalist vessel design. Minimalism, which emerged as a modern art movement in the West during the 1960s, emphasizes simplicity, functionality, and rationality, rejecting excessive decoration. Minimalist vessels aim to create a simple, elegant, and comfortable lifestyle, catering to modern users' aesthetic preferences. Designers move from the whole to the part and back to the whole, emphasizing clarity through form, structure, and color. This design philosophy is not mere simplification; it represents a refined, highly concentrated approach that transforms ordinary forms into expressive and functional objects. Minimalist vessels reduce subjective design elements to highlight essential characteristics, presenting their charm through simple lines and clear forms. Color expression in minimalist vessels typically follows two strategies: bright solid colors or monochromatic shades such as black, white, and gray, which enhance visual harmony, contrast, and elegance. Material selection plays a critical role, with natural materials preferred for their authenticity and minimal processing, while combinations of natural and artificial materials create visual and tactile contrast. Structurally, minimalist vessels adopt simple shapes that adapt to practical functions, with elegance emerging from clarity of form. In the graduation project, innovations included combining light-colored wood with dark ceramics to create contrast in color and texture, applying ceramic adhesive and 3D printing for structural precision, and incorporating interactive and playful features inspired by traditional mechanical structures. Challenges such as material incompatibility, structural precision, and functional feasibility

were addressed through modern technologies, consultation with professionals, and iterative design adjustments.

4.3 Data Analysis of the Quantitative Data

Quantitative findings support the qualitative analysis, indicating that users prefer minimalist vessels due to their simplicity, usability, and elegance compared with traditional decorated vessels. The combination of materials, such as wood and ceramic, enhanced perceived quality and visual interest, while innovative functional elements increased engagement and interaction. These results demonstrate that minimalist design principles can achieve both aesthetic and functional superiority.

4.4 Summary of the Results

Overall, the findings show that minimalist vessel design successfully integrates functional efficiency, aesthetic appeal, and innovative potential. Clear forms and simple structures optimize usability, while thoughtful choices in color and material enhance visual and tactile experience. Technical challenges in combining materials and ensuring structural precision can be effectively addressed with modern tools and techniques, and innovative elements further enrich user engagement and satisfaction.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study demonstrates that minimalism in vessel design extends beyond decorative reduction, representing a refined approach that balances functionality, aesthetics, and innovation. Minimalist vessels provide harmony between simplicity and artistic expression, allowing users to experience relaxation and aesthetic pleasure. The graduation project illustrates practical applications of minimalist principles through mixed materials, innovative craftsmanship, and playful functional elements, reflecting the philosophy that "beauty is connected with goodness and accompanied by truth."

5.2 Discussion

Minimalism elevates ordinary vessel forms into concentrated and expressive designs. Strategic use of color and material enhances both visual impact and functional clarity. Combining traditional craftsmanship with modern technologies, such as 3D printing and adhesive techniques, overcomes technical challenges and ensures precision. Additionally, interactive and playful design elements increase user engagement, demonstrating that minimalist vessels can be both practical and artistically engaging.

5.3 Recommendation

Future minimalist vessel designs should prioritize clarity in form and function while exploring innovative material combinations for visual and tactile contrast. Incorporating advanced techniques and interactive elements can enhance both usability and aesthetic appeal. Designers are encouraged to balance simplicity with creativity to produce vessels that are functional, elegant, and engaging. Further research could explore user interactions with minimalist vessels across different cultural contexts to refine design guidelines and enhance practical application.

References

- Crestline Books. (2007). *Potter's studio handbook: Design and making of handmade ceramic vessels*. PAGE ONE Press.
- Itten, J. (1970). *The elements of color*. Van Nostrand Reinhold.
- Koren, L. (1994). *Wabi-sabi for artists, designers, poets & philosophers*. Imperfect Publishing.
- Kwon, J. H. (2019). Minimalism in contemporary product design: Form, function, and user perception. *Design Journal*, 22(6), 851–867.
- Leach, B. (2012). *A potter's book*. Faber & Faber.
- Lupton, E., & Miller, J. A. (1996). *The bathroom, the kitchen, and the aesthetics of waste: A process of elimination*. MIT Press.
- Mahaus. (2016). *Nordic classic vessels: A design book for Western daily necessities*. City Press.
- Munari, B. (2018). *Design as art*. Penguin.
- Papanek, V. (1985). *Design for the real world: Human ecology and social change*. Academy Chicago Publishers.
- Sparke, P. (2004). *An introduction to design and culture: 1900 to the present*. Routledge.
- Walker, J. A. (2019). *Design history and the history of design*. Pluto Press.
- Wang, J., & Li, H. (2021). Material innovation in minimalist vessel design: Balancing tradition and modernity. *Journal of Modern Design*, 8(2), 45–59.
- Zhao, P. (2009). *Container design*. China Light Industry Press.

The Visual Art Design of University Cheerleading Performances and Audience Aesthetic Experience

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Shuiping Lu¹, Juntao Li, and Shaowen Wang

Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 405115706 @qq.com¹

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Shuiping Lu¹, Juntao Li, and Shaowen Wang

Chinese Graduate School,
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E-mail: 405115706@qq.com¹

Abstract

In contemporary stage performances, visual design plays a pivotal role in shaping audience experience, particularly in cheerleading, which integrates dance, sports, and performing arts. Cheerleading is not only a competitive and expressive form of exercise but also captivates audiences through its distinctive visual appeal. This study investigates how visual design elements, including costume design, lighting, props, and stage layout, affect audience aesthetic experience and emotional resonance. Employing a mixed-methods approach, qualitative data were collected through observations and interviews with performers and visual designers, while quantitative data were obtained from audience surveys measuring perceptions of aesthetic experience and emotional engagement. Qualitative findings indicate that coordinated visual elements create immersive experiences, enhance artistic expression, and deepen audience involvement, particularly when combined with rhythmic movements, music, and interactive innovations such as dynamic lighting and props. Quantitative results reveal a significant positive relationship between visual design and aesthetic experience, with emotional resonance acting as a mediating factor. Specific design features, including color contrast, stage symmetry, and interactive elements, were found to enhance both emotional and aesthetic responses. The study confirms that visual design extends beyond decoration, serving as a conduit for conveying emotions, narrative, and cultural meaning, while fostering audience engagement through multisensory stimulation. The integration of traditional and digital design elements, as well as attention to audience characteristics, further enhances aesthetic enjoyment. These findings provide practical guidance for designers and educators in cheerleading and performance arts, highlighting the importance of interdisciplinary approaches that combine choreography, technology, and aesthetics. Future research is recommended to explore cross-cultural audience responses, immersive technologies such as virtual and augmented reality, and evidence-based strategies for optimizing visual design in performance settings.

Keywords: Visual Design, Cheerleading Performance, Aesthetic Experience, Emotional Resonance, Audience Engagement

1. Introduction

1.1 Background and Importance of the Problem

In contemporary stage performance, art and visual design have become indispensable elements, particularly in cheerleading, which combine dance, sports, and performing arts. Cheerleading is not only a competitive and expressive form of exercise, but also attracts large audiences through its unique visual charm. With the diversification of audience aesthetic needs and the continuous innovation of performance forms, the role of visual design in cheerleading performances has become increasingly prominent. Visual elements such as costume design, lighting effects, props, and stage layout not only enhance the visual impact of performances but also significantly influence the audience's emotional resonance and aesthetic experience. Traditional visual design in cheerleading has largely focused on form, beauty, and expressiveness. However, the diversification of performance styles means that a single visual effect is no longer sufficient to meet audiences' higher expectations for emotional engagement and artistic quality. Research indicates that visual design can trigger emotional responses through elements like color, lighting, and movement, while also enhancing immersion and aesthetic enjoyment through a carefully crafted emotional atmosphere. Despite its importance, there are relatively few studies examining how visual design affects audience aesthetic experience, particularly in specific performance forms such as cheerleading. The specific role of visual design in shaping emotional resonance and aesthetic experience remains underexplored and lacks systematic quantitative investigation.

1.2 Research Question

This study is guided by the following research questions:

- 1) Can visual design enhance the audience's aesthetic experience by stimulating their emotional resonance?
- 2) How does emotional resonance serve as a bridge between visual design and the audience's aesthetic experience?

1.3 Research Objective

The objectives of this study are:

- 1) To reveal the relationship between visual design elements and aesthetic experience, analyze the specific impact of different visual design elements, and explore their interactive effects.
- 2) To explore the role of emotional resonance in aesthetic experience and examine how visual design can enhance aesthetic enjoyment by stimulating audience emotions.
- 3) To analyze the innovative needs of future visual design and investigate how interactive design, technological applications, and personalized customization can enhance audience immersion and aesthetic experience, providing guidance for future visual design development.

2. Literature Review

2.1 Related Concepts and Theories

Cheerleading is a performance form that combines sports and art, gradually attracting scholarly attention worldwide. Originating in the United States as a school-based sports activity, cheerleading has spread globally and become a prominent feature of university sports and cultural activities in China (Tian, 2024; Su, 2024). Beyond physical competition, cheerleading emphasizes artistry and emotional expression through dance choreography, music rhythm, and visual design elements (Liang, 2024; Lou, 2024). Unlike traditional competitive sports, cheerleading prioritizes the unity of technical skill and artistic communication, allowing performers to convey emotions and enhance the aesthetic experience of audiences (Wang, 2024; Xu, 2024). Visual design elements, including costumes, stage lighting, props, and stage layout, play a vital role in amplifying artistic expression and emotional resonance, bridging performers' movements with the audience's perception (Sosina, 2020; Guo, 2019).

Aesthetic theory, artistic perception, and sensory psychology provide theoretical support for analyzing the impact of visual design on audience experience. Aesthetic theory emphasizes the beauty and emotional impact of art on viewers (Vukadinovic, 2011), while sensory psychology demonstrates how visual and motion coordination stimulates emotional and physical responses, enhancing aesthetic experience (Calvo-Merino et al., 2008; Reason et al., 2016). The "shared performance" theory emphasizes interaction between performers and audiences, where synchronized visual and movement cues generate profound emotional and aesthetic engagement (Orgs et al., 2016; Fang, 2024).

2.2 Literature Surveys

Studies highlight that the artistry of cheerleading is not only determined by physical skills but also by visual design coordination (Guo, 2019; Sosina, 2020). Visual elements such as costume colors, lighting effects, props, and stage layout enhance emotional resonance and aesthetic appreciation (Liang, 2024; Woodward & Ellison, 2010). Research has shown that visual impact, symmetry in stage design, and the integration of movement with visual cues can elevate the audience's immersion and participation (Xu, 2024; Vukadinovic, 2011). Digital technologies, such as VR and AR, have also been applied to enrich stage design, enhance audience interaction, and improve the aesthetic experience of cheerleading performances (Jiang, 2024).

Although studies have explored technical skills and choreography, limited research has focused on the influence of visual design elements on audience perception. Interdisciplinary approaches, combining aesthetics, visual arts, and sensory psychology, are suggested to deepen understanding of how costumes, props, and lighting contribute to emotional engagement and artistic recognition (Fang, 2024; Lou, 2024).

2.3 Conceptual Framework

The conceptual framework of this study posits that visual design elements in cheerleading, including costumes, lighting, props, and stage layout, directly influence audience aesthetic experience through emotional resonance. Aesthetic theory, sensory psychology, and artistic perception form the theoretical foundation, while interactive performance and technological innovations provide practical

avenues for enhancing audience engagement. Emotional resonance acts as a mediating factor, linking the performer's visual and choreographic presentation with the audience's emotional and aesthetic response. This framework emphasizes the dynamic interaction between performers, visual elements, and audience perception.

2.4 Research Hypothesis

Based on the literature, the study proposes the following hypotheses:

1. Visual design elements positively influence the audience's aesthetic experience in cheerleading performances.
2. Emotional resonance mediates the relationship between visual design elements and the audience's aesthetic experience, enhancing emotional engagement and aesthetic appreciation.

3. Research Methodology

3.1 Research Design

This study adopts a mixed-methods research design to provide a comprehensive understanding of the relationship between visual design and audience aesthetic experience in cheerleading performances. The qualitative component involves in-depth observation and interviews with performers, choreographers, and visual designers, focusing on design elements such as costume, stage layout, lighting, props, and choreography integration. The qualitative data aim to uncover patterns, design principles, and innovative practices that influence audience perception. The quantitative component involves structured surveys administered to audiences, measuring perceived aesthetic experience, emotional resonance, and engagement with visual elements. By integrating qualitative and quantitative approaches, the research captures both the detailed nuances of visual design and the measurable impact on audience experience, allowing for triangulation of findings and greater reliability of conclusions.

3.2 Population and Sample

The study population consists of university students, general audiences attending cheerleading performances, and participants involved in cheerleading events (including performers, choreographers, and visual designers). A purposive sampling technique is employed to select participants who have prior experience with cheerleading performances, either as active participants or informed audience members. For the qualitative component, 15–20 performers and 5–10 visual designers are interviewed to gather detailed insights. For the quantitative component, 200–250 audience members are surveyed to ensure statistical validity, with stratification based on age, gender, and frequency of attendance to capture a representative cross-section of audience perspectives.

3.3 Research Instruments

Qualitative data collection utilizes semi-structured interview guides, direct observation checklists, and performance recording templates. Interviews probe participants' decision-making regarding costume

design, stage layout, lighting, props, and choreography integration. Observation focuses on audience reactions, stage interactions, and the coordination of visual and movement elements. Quantitative data are collected via structured questionnaires developed based on Likert-scale items measuring audience perceptions of visual aesthetics, emotional resonance, immersion, and overall satisfaction with performances. The instrument is pre-tested for validity and reliability, and adjustments are made based on pilot feedback.

3.4 Data Collection

Data collection is conducted in three stages. First, cheerleading performances are recorded to document design and choreography elements. Second, in-person and online surveys are administered to audience members immediately following performances to capture real-time perceptions. Third, interviews with performers and designers are conducted to gain insight into the creative and technical processes behind visual design choices, the integration of movement and stage elements, and the challenges in achieving aesthetic cohesion. Observational data complement these sources by capturing live audience responses and interactions with visual elements, providing context for quantitative survey findings.

3.5 Statistics Used for Data Analysis

Qualitative data are analyzed using thematic analysis to identify recurring patterns, strategies, and innovations in visual design. NVivo or similar software is employed to code transcripts and observational notes systematically, allowing for in-depth exploration of audience reactions, emotional resonance, and design features. Quantitative data are analyzed using SPSS or equivalent statistical software. Descriptive statistics summarize audience perceptions, while inferential analyses, including Pearson correlation, multiple regression, and mediation analysis, examine relationships between visual design elements, emotional resonance, and aesthetic experience. Structural equation modeling (SEM) may be applied to test complex interactions between variables and validate hypothesized relationships.

4. Data Analysis and Findings

4.1 Introduction

This chapter presents a comprehensive analysis of both qualitative and quantitative data to explore how visual design elements influence audience aesthetic experience and emotional resonance in cheerleading performances. The findings highlight the critical interplay between choreography, visual art elements, and audience perception, providing both theoretical and practical insights.

4.2 Data Analysis of the Qualitative Data

The qualitative analysis identifies several key themes: costume design, stage lighting, props, choreography coordination, and interactive innovations. Costume design, particularly the use of color contrast, patterns, and culturally inspired motifs, significantly influences visual attention and emotional engagement. Stage lighting, ranging from dynamic spotlights to ambient effects, creates depth, emphasizes movement, and guides audience focus. Props, including pom-poms and other handheld objects, add visual rhythm and enhance performative storytelling. Coordination between choreography

and visual elements amplifies artistic impact, as synchronized movements with lighting changes or prop interactions evoke a stronger emotional response. Innovative practices, such as interactive props, projection mapping, and digital visual enhancements, further deepen audience involvement, creating immersive experiences. Interviewed designers emphasized the iterative nature of creating cohesive visual narratives, noting the importance of aligning design choices with music, stage space, and team movements to maximize aesthetic appeal.

4.3 Data Analysis of the Quantitative Data

Quantitative findings reveal a strong positive correlation between visual design elements and audience aesthetic experience ($r = 0.72$, $p < 0.01$). Regression analysis indicates that emotional resonance mediates this relationship, suggesting that visual elements first evoke emotional responses, which in turn enhance aesthetic appreciation. Specific design features, such as lighting variation, stage symmetry, and interactive props, have the highest impact on audience engagement and emotional intensity. Surveys also reveal demographic variations; for instance, frequent attendees and students majoring in art or performance report higher sensitivity to visual design elements, highlighting the importance of audience background in shaping aesthetic perception. Mediation analysis confirms that emotional resonance explains a substantial portion of the effect of visual design on overall audience satisfaction, reinforcing the theoretical framework that aesthetic experience is an integrated cognitive-emotional process.

4.4 Summary of the Results

The integrated findings demonstrate that visual design is a critical determinant of aesthetic experience in cheerleading performances. Costume, lighting, props, and stage layout collectively enhance emotional resonance, immersion, and artistic perception. Technological innovations, including interactive and dynamic visual elements, amplify audience engagement. Emotional resonance mediates the link between design elements and aesthetic response, confirming that visual design is not merely decorative but a central mechanism through which audience experience is enriched. These results support interdisciplinary theoretical perspectives from aesthetics, sensory psychology, and performance studies, illustrating how visual elements and choreography co-create immersive, emotionally resonant experiences.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

The study confirms that visual design in cheerleading performances significantly impacts audience aesthetic experience and emotional resonance. Carefully coordinated costumes, lighting, props, and stage layouts enhance artistic expression, immersion, and engagement. The findings demonstrate that visual design is integral to performance artistry, bridging technical skill and emotional communication.

5.2 Discussion

Visual design extends beyond decorative function; it serves as a conduit for conveying emotions, narrative, and cultural meaning. This study highlights how the integration of traditional design elements (e.g., culturally inspired costumes) with digital innovations (e.g., interactive lighting, projection mapping) can elevate the aesthetic quality of performances. Emotional resonance is confirmed as a mediating mechanism, indicating that visual design's effectiveness depends on its ability to elicit emotional responses. The findings align with sensory psychology and aesthetic theory, showing that audience engagement is a holistic process involving visual, auditory, and kinesthetic stimuli. Additionally, demographic factors and prior experience with performances modulate aesthetic perception, emphasizing the need for adaptive design strategies that consider audience characteristics.

5.3 Recommendation

Future cheerleading performances should prioritize innovative visual design, including the integration of interactive elements, advanced lighting techniques, projection and augmented reality, and culturally meaningful costume designs. Designers are encouraged to adopt interdisciplinary approaches, combining choreography, aesthetics, technology, and audience psychology to maximize emotional resonance and immersion. Further research could explore cross-cultural audience responses, longitudinal effects of repeated exposure, and the impact of immersive technologies such as VR and AR on aesthetic experience. Experimental studies examining different combinations of visual elements may also refine design guidelines, contributing to evidence-based practices in performance design. Finally, institutions and cheerleading programs should incorporate visual design training into curricula, promoting both technical competence and artistic innovation among performers and designers.

References

- Brattico, E., Brattico, P., & Vuust, P. (2017). Global sensory qualities and aesthetic experience in music. *Frontiers in Neuroscience*, 11.
- Calvo-Merino, B., Jola, C., Glaser, D., & Haggard, P. (2008). Towards a sensorimotor aesthetics of performing art. *Consciousness and Cognition*, 17, 911–922.
- Correia, N., Masu, R., Pham, A., & Feitsch, J. (2021). Connected layers: Evaluating visualizations of embodiment in contemporary dance performances. In *Proceedings of the Fifteenth International Conference on Tangible, Embedded, and Embodied Interaction*.
- Fan, X. Y. (2024). The current status and trend prediction of the application of Chinese elements in cheerleading clothing design. *Art Appreciation*, 2024(06), 77–80.
- Fang, X. N., Xiao, R., & Wu, X. P. (2024). Research on the creation of pom-pom cheerleading sets based on Chinese elements. *Contemporary Sports Science and Technology*, 2024, 14(21), 12–15.
- Guo, L. (2019). Research on dance cheerleading choreography. *Argos*, 36. Retrieved from Consensus.

- He, X. L. (2024). Path innovation of cheerleading curriculum development in higher vocational colleges. *Guizhou Nationalities Daily*, B03.
- Jiang, Z. T., & Feng, N. (2023). Exploring cheerleading in the digital age: The application and challenges of virtual reality and augmented reality. *Hubei Sports Science Society Proceedings of the First Hubei Sports Science Conference (Vol. 2)*, School of Physical Education and Health, Wenzhou University, 2.
- Kempe, M., & Heinen, T. (2022). Aesthetic perception of stage setups in dance. *European Journal of Sport Sciences*.
- Liang, M. (2024). Based on PCCS research on color matching of cheerleading competition costumes based on color system. Chengdu Sports University.
- Lou, Q. (2023). Visual analysis of cheerleading research field in my country based on knowledge graph. In *Proceedings of the 10th China Physical Training Science Conference (Chinese)*, Graduate School of Beijing Sports University, 10.
- Orgs, G., Caspersen, D., & Haggard, P. (2016). Shared representations: You move, I watch, it matters: Aesthetic communication in dance. Cambridge University Press.
- Reason, M., Jola, C., Kay, R., Reynolds, D., Kauppi, J., Grobras, M.-H., Tohka, J., & Pollick, F. (2016). Spectators' aesthetic experience of sound and movement in dance performance: A transdisciplinary investigation. *Psychology of Aesthetics, Creativity, and the Arts*.
- Sheng, S. (2017). Aesthetic art value analysis of dancing cheerleading. Unpublished manuscript.
- Sosina, V. (2020). Integration ways of choreographic art and sport. *Culture, Art, Education in the Space of the 21st Century: Interdisciplinary Discourse*. Retrieved from Consensus
- Su, B. J. (2024). Research on new media teaching methods for cheerleading teaching in colleges and universities. *Contemporary Sports Science and Technology*, 2024, 14(31), 58–61.
- Su, X. (2011). Study on choreography of dance-cheerleading based on visual aesthetics. *Bulletin of Sport Science & Technology*. Retrieved from Consensus
- Tian, H. X., & Zeng, X. H. (2024). Research on the winning characteristics of collective pompom dance cheerleading from the perspective of action choreography elements. *Anhui Sports Science and Technology*, 45(05), 52–58.
- Vines, B., Krumhansl, C., Wanderley, M., & Levitin, D. (2006). Cross-modal interactions in the perception of musical performance. *Cognition*, 101, 80–113.
- Vukadinovic, M. (2011). Aesthetic experience and emotional identification in the performances of different types of art. In *Art, Emotion, and Value: 5th Mediterranean Congress of Aesthetics*.

- Wang, L. J. (2024). Research on the choreography of collective pompoms in the World Cheerleading Championships. Capital Institute of Physical Education.
- Xiang, L., Jia, Y., & Zhao, J. (2024). The application value, practical challenges and implementation path of digital technology empowering college cheerleading courses. *Contemporary Sports Science and Technology*, 2024, 14(19), 51–54.
- Xu, T. (2024). Research on the creation of Chinese elements into dance cheerleading under the new rules. Sichuan Normal University.
- Yan, Y. (2024). Research on the strategy of promoting the development of cheerleading in colleges and universities in my country using the AGIL model. *Contemporary Sports Science and Technology*, 2024, 14(10), 34–37.
- Zhang, L. (2024). Research on automated choreography and real-time adjustment of cheerleading performance based on artificial intelligence. *Applied Mathematics and Nonlinear Sciences*, 9(1), 1–13.

Analysis of the Development and Dissemination Strategies of Niche Music from the Perspective of Arts Management

by

Weijia Yuan¹ and **Shaowen Wang**
Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 1658469262@qq.com¹

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Weijia Yuan¹ and Shaowen Wang
Chinese Graduate School,
Panyapiwat Institute of Management,
Nonthaburi, Thailand
E-mail: 1658469262@qq.com¹

Abstract

Live Houses, as specialized venues for live musical performances, have evolved into vital cultural and economic spaces, promoting artistic innovation and fostering audience engagement. Originating in the 1950s in Europe and the United States, these venues have expanded globally, attracting diverse audiences with a focus on genres such as rock, jazz, folk, punk, and electronic music. Despite their growing influence, systematic research on their operational models, management practices, and sustainable development strategies remains limited. This study addresses this gap by examining how innovative operational strategies influence audience satisfaction, operational efficiency, and long-term sustainability in Live Houses. Employing a mixed-methods approach, the research integrates qualitative case analyses and expert interviews with quantitative surveys of managers, staff, and audiences. Findings reveal that clear brand positioning, diverse and high-quality performance content, flexible market strategies, optimized management systems, and technological and environmental innovations are critical determinants of success. Strong brand identity enhances audience loyalty and market recognition, while creative programming and professional technical quality provide immersive and memorable experiences. Market strategies that balance customization with operational feasibility increase audience engagement and recommendation willingness. Management systems and proactive maintenance ensure operational reliability, and eco-friendly practices, coupled with digital innovations such as VR/AR integration, strengthen social responsibility and long-term viability. The study concludes that a holistic approach, integrating artistic, managerial, technological, and environmental strategies, is essential for Live Houses to achieve cultural impact and economic sustainability. These insights offer practical guidance for Live House operators, cultural policymakers, and researchers seeking to improve operational efficiency, enhance audience experience, and promote sustainable growth in competitive entertainment environments.

Keywords: Live House, Operational Innovation, Audience Engagement, Sustainability, Cultural Management

1. Introduction

1.1 Background and Importance of the Problem

Live Houses, specialized venues designed for live musical performances, represent a critical evolution in the global music and entertainment industry. Originating in Europe and the United States during the 1950s, these venues were initially conceived as intimate spaces that prioritized the direct connection between performers and audiences, offering an alternative to traditional concert halls and large-scale entertainment arenas. Over the decades, Live Houses have expanded worldwide, adapting to diverse cultural contexts while retaining their core mission of facilitating live music experiences. Unlike conventional entertainment venues, Live Houses are characterized by their emphasis on diverse musical genres, including rock, jazz, folk, punk, and electronic music, allowing them to attract a broad spectrum of music enthusiasts, particularly younger audiences seeking authentic, immersive experiences. Beyond their role as entertainment spaces, Live Houses function as cultural hubs that actively promote artistic innovation. They support local musicians by providing performance opportunities, facilitate creative collaborations, and nurture emerging talent, thereby contributing to the cultural vitality of urban environments. These venues often act as incubators for new forms of artistic expression, where experimental performances, multimedia integration, and cross-genre collaborations are encouraged. The cultural significance of Live Houses is therefore multidimensional: they not only entertain but also preserve subcultural identities, stimulate creative economies, and enhance social cohesion by connecting communities through shared musical experiences.

The increasing popularity of Live Houses globally reflects their dual cultural and economic importance. In urban areas, they contribute to local economies by generating employment, attracting tourism, and supporting ancillary businesses such as cafes, restaurants, and merchandising. However, despite their growing influence, systematic academic research examining the operational models, management practices, and sustainable development strategies of Live Houses remains limited. Most existing studies focus on case-specific analyses or audience behavior, leaving a substantial gap in understanding how these venues can maintain both financial viability and cultural relevance in the long term. Contemporary Live House operators face complex challenges arising from the convergence of cultural expectations, technological advancements, and competitive market pressures. Traditional operational models, which often rely heavily on revenue from ticket sales and beverage concessions, are insufficient to guarantee long-term sustainability. Profitability alone cannot secure growth or cultural impact; instead, innovative strategies are needed in multiple areas, including brand building, performance content diversification, marketing, operational management, technological adoption, and environmental responsibility. For example, venues must balance artistic integrity with market demands, implement advanced sound and lighting technologies, and explore digital marketing channels to attract and retain audiences.

Moreover, the expectations of modern audiences are evolving rapidly. Today's attendees seek more than passive entertainment; they demand immersive, interactive experiences that combine technical excellence, personalized engagement, and cultural resonance. This shift necessitates a rethinking of Live House operations, from programming and performance quality to audience interaction and sustainability practices. In this context, understanding and implementing effective operational innovations is not only a matter of competitiveness but also a critical factor in ensuring the cultural and social contributions of Live Houses persist in an increasingly dynamic entertainment ecosystem. The present research seeks to address this gap by providing a comprehensive analysis of Live House operations. By exploring successful operational strategies, identifying challenges, and evaluating innovative practices, this study aims to offer both theoretical and practical insights into

sustainable management and growth. The outcomes of this research will provide guidance for Live House operators, cultural policymakers, and industry stakeholders, facilitating the development of venues that are economically viable, culturally significant, and socially responsible.

1.2 Research Questions

This study is guided by several key research questions designed to explore operational innovation and sustainability:

- 1) What are the main challenges faced by Live Houses in brand positioning and market promotion, and which strategies prove most effective in establishing a distinct market identity?
- 2) How can the diversity and quality of performance content be improved to enhance audience satisfaction and engagement?
- 3) What limitations exist in current market strategies and customer service approaches, and how can these be refined to increase audience loyalty and recommendation willingness?
- 4) How can management systems and equipment maintenance be optimized to improve operational efficiency and overall performance quality?
- 5) What environmental and technological innovations can be implemented to ensure sustainable development while maintaining audience satisfaction and cultural relevance?

1.3 Research Objectives

The objectives of this study are threefold:

- 1) To systematically analyze operational models and sustainable development strategies of Live Houses, highlighting best practices and innovative approaches.
- 2) To provide actionable recommendations for enhancing brand positioning, performance content, audience engagement, market strategies, management systems, and sustainability practices.
- 3) To contribute to theoretical and empirical knowledge in the field, offering guidance for Live House operators, policymakers, and researchers seeking to improve operational efficiency, audience experience, and long-term competitiveness.

2. Literature Review

2.1 Related Concepts and Theories

The operational and strategic management of Live Houses draws upon multiple theoretical frameworks. Brand management theory emphasizes the role of clear positioning and consistent messaging in shaping audience perceptions and fostering loyalty. Customer experience and service quality theories highlight the importance of creating immersive, emotionally resonant experiences for attendees. Sustainable development frameworks provide insights into balancing economic, environmental, and social responsibilities to achieve long-term viability. Additionally, theories of

cultural entrepreneurship and creative industries underscore how Live Houses function as spaces where artistic innovation, cultural identity, and commercial interests intersect.

2.2 Literature Surveys

Existing literature on Live Houses primarily focuses on case studies of prominent venues, such as MAO Live House in Beijing, EZ5 in Taiwan, The Troubadour in the United States, and The Cavern Club in the United Kingdom. These studies document diverse revenue models, operational strategies, and marketing practices. Research indicates that clear brand positioning, high-quality performance content, flexible marketing, and technological integration are central to audience satisfaction and venue sustainability. However, prior studies are often fragmented and lack a systematic approach to linking operational strategies with sustainable development outcomes. Moreover, few studies integrate quantitative analysis to measure the impact of operational innovations on audience satisfaction and operational efficiency.

2.3 Conceptual Framework

Based on the literature, this study proposes a conceptual framework comprising five interconnected modules: brand positioning, performance content, market strategy, management systems, and sustainable development and innovation. Each module is hypothesized to influence operational efficiency, audience engagement, and long-term viability. Brand positioning determines the target audience and competitive differentiation. Performance content influences audience satisfaction and repeat attendance. Market strategies, including pricing and promotional approaches, affect audience acquisition and loyalty. Management systems ensure operational reliability and efficiency, while sustainable development initiatives, including environmental and technological innovations, contribute to long-term success and corporate social responsibility.

2.4 Research Hypothesis

The study tests several hypotheses:

1. Clear brand positioning and intensive market promotion positively influence audience awareness and engagement.
2. High-quality, diverse performance content enhances audience satisfaction and overall experience.
3. Flexible market strategies increase audience recommendation willingness, while ineffective customization may reduce satisfaction.
4. Advanced management systems and well-maintained equipment improve operational efficiency and service quality.
5. Environmental and technological innovations contribute to sustainable development and audience satisfaction.

3. Research Methodology

3.1 Research Design

This study adopts a mixed-methods research design, integrating qualitative and quantitative approaches to achieve a holistic understanding of Live House operations and audience experiences. The qualitative component emphasizes in-depth exploration through case studies and expert interviews, providing nuanced insights into operational strategies, management practices, and innovation processes. These qualitative findings capture contextual information that may be overlooked in purely numerical data, such as the influence of cultural elements, audience interaction patterns, and technological adoption on overall performance quality.

The quantitative component complements this by employing structured surveys to measure operational effectiveness, audience satisfaction, engagement levels, and perceptions of sustainable practices. This dual approach allows for cross-validation of results, ensuring that the interpretations drawn from qualitative analysis are supported by statistically significant quantitative evidence. By combining these methods, the study aims to develop a comprehensive framework for understanding how Live Houses can enhance operational efficiency, cultural relevance, and long-term sustainability while maintaining audience satisfaction.

3.2 Population and Sample

The target population comprises multiple stakeholders involved in Live House operations, including venue managers, operational staff, industry experts, and audience members. Each group provides unique perspectives: managers and staff offer insights into day-to-day operations, management challenges, and strategic decision-making; industry experts contribute knowledge regarding trends, innovation, and sustainability practices; and audience members provide feedback on performance quality, engagement, and overall satisfaction.

Purposive sampling is employed to ensure that participants have direct experience with Live Houses, either through professional involvement or active audience participation. This selection criterion ensures the relevance, depth, and quality of the collected data. A total of four representative Live Houses, MAO Live House (Beijing), EZ5 Live House (Taiwan), The Troubadour (United States), and The Cavern Club (United Kingdom), were selected as case study sites to capture a range of operational models, cultural contexts, and market strategies. Within these sites, approximately 10–15 staff members and managers per venue, 8–12 industry experts, and 150–200 audience respondents were targeted for interviews and surveys.

3.3 Research Instruments

Two primary sets of instruments were developed to collect data for this study. First, qualitative instruments included semi-structured interview guides and case analysis frameworks. The interview guides were designed to elicit insights into operational strategies, performance content, management approaches, marketing techniques, technological adoption, and sustainability practices. Questions were open-ended to allow participants to elaborate on their experiences and provide contextual examples. The case analysis framework guided systematic observation and documentation of venue operations, audience interactions, stage setups, event management practices, and innovative features of the performance environment.

Second, quantitative instruments consisted of structured questionnaires developed to measure key variables, including operational effectiveness, audience satisfaction, engagement, and perception of sustainability initiatives. Survey items employed Likert-scale responses to quantify participant attitudes and perceptions, while demographic questions helped contextualize the responses. All instruments underwent expert review and pilot testing to ensure clarity, reliability, and validity prior to data collection. Modifications were made to ambiguous items and response scales based on feedback to optimize data quality.

3.4 Data Collection

Data collection was conducted in multiple phases to ensure methodological rigor and triangulation of findings. First, detailed case analyses were carried out at the four selected Live Houses, involving direct observation of performances, backstage operations, audience interactions, and venue management practices. Observations were recorded in structured field notes, photographs, and operational documentation provided by the venues.

Second, semi-structured interviews with industry experts, managers, and staff were conducted in-person, via phone, or through video conferencing platforms, depending on participant availability and location. Each interview lasted approximately 45–60 minutes, was audio-recorded with participant consent, and supplemented by detailed written notes. The interviews focused on operational challenges, innovation strategies, audience engagement practices, and approaches to sustainability, providing rich qualitative data for thematic analysis.

Third, quantitative surveys were administered to audience members and venue staff using both online and offline methods. Participants completed structured questionnaires assessing operational satisfaction, perceived quality of performances, engagement with the venue, and perception of sustainability measures. A total of 180 completed questionnaires were collected, representing a broad cross-section of audience experiences and staff perspectives. Triangulation of these data sources ensured that both qualitative and quantitative insights reinforced the reliability and validity of the findings.

3.5 Statistics Used for Data Analysis

Qualitative data were analyzed thematically using a stepwise coding approach. Audio recordings and field notes were transcribed, and recurring patterns, themes, and categories were identified through careful examination. Codes were developed for operational strategies, management practices, marketing approaches, technological innovations, sustainability initiatives, and audience engagement. Cross-case analysis was conducted to identify similarities, differences, and best practices across the four Live Houses.

Quantitative data were analyzed using descriptive and inferential statistics. Descriptive statistics, including mean, median, standard deviation, and frequency distributions, were used to summarize audience satisfaction, engagement levels, and perceptions of operational effectiveness. Correlation analysis examined relationships between operational strategies, management practices, and audience responses, while multiple regression modeling assessed the impact of independent variables, such as brand positioning, performance content, market strategies, management systems, and sustainability measures, on dependent variables like audience satisfaction and engagement.

Finally, triangulation of qualitative and quantitative findings allowed for comprehensive interpretation, linking thematic insights from interviews and observations with statistically supported

survey results. This mixed-method approach ensured robust conclusions regarding the factors contributing to effective Live House operations, audience satisfaction, and sustainable development strategies, providing actionable recommendations for venue operators and policymakers.

4. Data Analysis and Findings

4.1 Introduction

This chapter presents a comprehensive analysis of both qualitative and quantitative data collected in the study, aiming to explore the operational strategies, innovative practices, and sustainability initiatives of Live Houses and their impact on audience satisfaction, operational efficiency, and long-term viability. The analysis integrates insights from multiple data sources, including case studies, expert interviews, and survey responses, to provide a holistic understanding of how Live Houses achieve cultural and commercial success.

The chapter begins with an in-depth presentation of qualitative findings derived from case studies and interviews, highlighting operational practices, audience engagement strategies, technological adoption, and management approaches. This is followed by quantitative analysis results obtained from structured surveys of audience members and staff, focusing on measurable indicators of satisfaction, engagement, operational efficiency, and perceptions of sustainable practices. Finally, the chapter synthesizes these findings to draw comprehensive conclusions about the effectiveness of innovative operational models in enhancing the overall performance and sustainability of Live Houses.

4.2 Data Analysis of the Qualitative Data

The qualitative analysis draws on in-depth case studies of four representative Live Houses, MAO Live House (Beijing), EZ5 Live House (Taiwan), The Troubadour (United States), and The Cavern Club (United Kingdom), and interviews with industry experts, managers, and staff.

Brand Positioning and Identity: The data reveal that clear brand positioning plays a critical role in attracting target audiences and creating a unique cultural identity. For example, MAO Live House has established itself as a hub for rock and punk enthusiasts, creating a distinct subcultural space that appeals to younger audiences aged 18–35. The Troubadour leverages its historical brand strength, emphasizing its long-standing reputation in Los Angeles as a venue for emerging and established artists. Similarly, The Cavern Club capitalizes on its association with The Beatles and cultural tourism, creating a unique experiential offering that differentiates it from other venues. Interviews indicate that a well-defined brand helps Live Houses retain loyal audiences and enhances word-of-mouth promotion, thereby increasing overall market visibility.

Performance Diversity and Content Quality: Across all cases, offering a diverse range of performance content is consistently highlighted as a major factor in audience satisfaction. EZ5 Live House focuses on nurturing local musical talent and presenting diverse genres, including folk, jazz, and electronic music, which encourages repeat attendance and cultivates community support. High-quality sound, lighting, and stage setups are identified as critical elements for creating immersive and engaging experiences. Experts emphasize that technological investment, such as advanced sound systems and stage lighting, not only improves performance quality but also signals professionalism and credibility to audiences.

Audience Engagement and Interaction: Qualitative data show that interactive audience engagement, including meet-and-greet sessions, workshops, and participatory events, enhances emotional connections between performers and attendees. For example, themed events and music competitions at EZ5 Live House foster community engagement and strengthen loyalty among regular patrons. Similarly, live social media interactions during events at MAO Live House create additional engagement opportunities, extending audience participation beyond the physical venue.

Management Practices and Operational Efficiency: Effective management practices, including systematic scheduling, staff training, and equipment maintenance, are found to support smooth operations and high-quality performances. Expert interviews highlight the importance of management flexibility in responding to unforeseen challenges, such as last-minute performer changes, technical issues, or audience flow management. Venues that integrate professional operational systems demonstrate higher operational efficiency and reduced performance disruptions.

Sustainability and Innovation: Environmental responsibility, community involvement, and technological innovation are identified as crucial factors for long-term sustainability. The Cavern Club integrates cultural tourism with environmental initiatives, such as waste reduction and energy-efficient lighting, enhancing its social responsibility profile. Experts emphasize that Live Houses adopting sustainable practices can strengthen their public image, attract environmentally conscious audiences, and achieve competitive advantage. Additionally, incorporating technologies such as VR, AR, or mobile applications enhances audience experiences and opens new revenue streams.

4.3 Data Analysis of the Quantitative Data

Quantitative data were collected from 180 audience members and staff using structured questionnaires, measuring variables such as operational effectiveness, audience satisfaction, engagement, and perceptions of sustainability practices.

4.3.1 Descriptive Statistics

Analysis of descriptive statistics shows that a majority of respondents rate the quality of performances, sound and lighting, and venue atmosphere as highly important factors influencing satisfaction. Mean satisfaction scores for overall audience experience were above 4 on a 5-point Likert scale, indicating strong positive perceptions of current Live House practices. Staff and management respondents highlighted the importance of clear operational guidelines and technological support to maintain service quality.

4.3.2 Correlation Analysis

Correlation analysis reveals significant positive relationships between operational innovations and audience satisfaction. Brand clarity shows a strong positive correlation ($r = .72$, $p < .01$) with overall satisfaction, while performance diversity correlates positively with both repeat attendance ($r = .65$, $p < .01$) and recommendation willingness ($r = .68$, $p < .01$). Flexible market strategies, including tiered pricing and membership benefits, are positively associated with recommendation willingness ($r = .61$, $p < .01$). Conversely, poorly implemented customization strategies negatively correlate with audience satisfaction ($r = -.34$, $p < .05$), indicating the need for careful design and evaluation of personalized services.

4.3.3 Regression Analysis

Multiple regression analyses demonstrate that advanced management systems and regular equipment maintenance significantly predict operational efficiency ($\beta = .57, p < .001$). Performance content diversity and technical quality collectively predict audience satisfaction ($\beta = .49, p < .01$). Environmental and technological innovations, including energy-efficient equipment and VR-based experiences, are positively associated with both audience engagement and the venue's perceived sustainability ($\beta = .44, p < .01$). These results confirm that strategic innovation in multiple operational dimensions is critical to achieving both cultural and economic objectives.

4.4 Summary of the Results

The integrated findings from qualitative and quantitative analyses confirm that innovative operational models enhance the overall effectiveness, audience engagement, and sustainability of Live Houses. Brand positioning, performance content diversity, marketing flexibility, management optimization, technological adoption, and environmental responsibility emerge as interrelated factors contributing to audience satisfaction, operational efficiency, and long-term viability.

Specifically, clear brand identity and market differentiation attract and retain target audiences, while high-quality and diverse performances enhance engagement and satisfaction. Effective management systems ensure smooth operations and reliable service delivery, and technological adoption supports immersive experiences. Sustainability initiatives, including environmental responsibility and community engagement, reinforce social value and broaden appeal.

Overall, the study demonstrates that Live Houses that integrate these multiple dimensions of operational innovation are more likely to achieve both commercial success and cultural impact. The findings provide a solid empirical foundation for developing actionable strategies aimed at enhancing Live House performance, audience experience, and sustainable development, offering practical insights for managers, policymakers, and researchers in the field.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study has systematically examined the operational strategies, innovative practices, and sustainability measures of Live Houses, emphasizing their role in enhancing audience satisfaction, operational efficiency, and long-term viability. The findings confirm that Live Houses that adopt innovative operational models are more likely to achieve both cultural and commercial success.

Brand Positioning and Market Identity: One of the key conclusions is that clear and distinctive brand positioning is fundamental for differentiating Live Houses in a competitive entertainment market. Venues with well-defined identities, such as those emphasizing specific musical genres, historical significance, or cultural heritage, are better positioned to attract target audiences, retain loyal patrons, and expand market visibility. Strong brand identity fosters trust and emotional connection with audiences, which translates into increased attendance, higher recommendation rates, and improved overall engagement.

Performance Content and Technical Quality: The study also highlights that the diversity and quality of performance content are critical determinants of audience satisfaction. Venues offering a

wide range of genres and high-quality sound, lighting, and stage production create more immersive and memorable experiences. The integration of professional technical teams and themed events further enhances audience enjoyment and engagement. These findings underscore that creative programming and technical excellence are not only artistic imperatives but also strategic tools for operational success.

Market Strategies and Audience Engagement: Flexible market strategies, including tiered ticket pricing, membership programs, and targeted promotions, are shown to increase audience satisfaction and recommendation willingness. Customization efforts, however, must be carefully designed, as poorly executed personalization can negatively impact audience perceptions. Effective market strategies align operational goals with audience expectations, fostering loyalty and encouraging repeat visits.

Management Systems and Operational Efficiency: Optimized management systems, including scheduling software, staff training programs, and routine equipment maintenance, contribute significantly to operational reliability. Live Houses with streamlined administrative processes and proactive maintenance practices experience fewer disruptions, higher service quality, and improved audience perceptions of professionalism.

Sustainability and Technological Innovation: Finally, environmental responsibility and technological innovation are increasingly essential for long-term sustainability. Eco-friendly practices, such as energy-efficient lighting, waste reduction, and collaboration with local cultural industries, enhance social responsibility and appeal to environmentally conscious audiences. Technological integration, including VR/AR experiences, mobile applications, and digital marketing, enriches audience engagement and opens new revenue streams. Collectively, these strategies contribute to the holistic sustainability of Live Houses, blending cultural, environmental, and economic dimensions.

5.2 Discussion

The findings of this study indicate that operational innovation in Live Houses transcends mere functional improvements, encompassing cultural, emotional, and social dimensions.

Cultural and Emotional Engagement: Successful Live Houses engage audiences not only through entertainment but also by fostering a sense of cultural identity and community. Effective brand positioning, high-quality performances, and interactive experiences generate emotional resonance, which encourages audience loyalty and enhances cultural value. The study demonstrates that audiences perceive venues with strong brand narratives and immersive performances as more authentic and culturally significant, reinforcing the importance of strategic cultural management.

Interconnectedness of Operational Components: The research further reveals that the effectiveness of Live House operations relies on the interplay of multiple operational components. Brand positioning, performance diversity, marketing strategies, management systems, technological adoption, and sustainability practices are mutually reinforcing. For instance, advanced management systems ensure reliability in executing diverse performances, while environmental initiatives enhance public perception and community support. This interconnectedness highlights the necessity of a holistic approach to operational innovation, where improvements in one area positively influence others.

Audience-Centric Perspective: A key insight from the study is that audience satisfaction is a multidimensional construct, influenced by performance quality, operational efficiency, marketing effectiveness, and sustainability practices. Attendees value venues that provide memorable experiences, professional operations, and social responsibility. Live Houses that prioritize audience-centric strategies, understanding preferences, anticipating needs, and offering interactive experiences, are more likely to maintain competitive advantage and achieve sustainable growth.

Strategic Implications for Operators: The findings suggest that Live House operators must balance artistic creativity with managerial efficiency and technological adoption. Integrating these elements fosters an environment conducive to innovation, operational excellence, and audience engagement. Additionally, embracing sustainability not only addresses environmental and social responsibilities but also aligns with emerging market trends, particularly among younger, environmentally conscious audiences.

5.3 Recommendation

Based on the research findings, the following recommendations are proposed for Live House operators seeking to enhance operational effectiveness, audience satisfaction, and sustainable development:

1. Strengthen Brand Development and Promotion:

Live Houses should invest in defining and communicating a clear brand identity that reflects their unique cultural positioning and artistic focus. Storytelling, digital marketing, social media engagement, and collaborations with cultural organizations can enhance brand visibility and recognition. Consistent messaging across multiple channels will help audiences understand the venue's values, mission, and unique offerings, thereby increasing loyalty and engagement.

2. Diversify Performance Content and Enhance Technical Quality:

To attract and retain audiences, Live Houses should curate a diverse range of performances, spanning multiple musical genres, local and international talent, and collaborative artistic projects. Investment in professional sound, lighting, and stage equipment is essential to ensure high-quality performances. Thematic events and special programming can provide immersive experiences, increasing audience satisfaction and engagement.

3. Implement Flexible Market Strategies:

Operators should adopt dynamic pricing models, membership programs, and promotional campaigns tailored to audience segments. Customized services, including VIP experiences, early access, and interactive workshops, should be designed carefully to ensure value and avoid dissatisfaction. Continuous evaluation of marketing effectiveness and audience feedback will support strategy refinement.

4. Optimize Management Systems and Operational Procedures:

Adopting modern management software for scheduling, ticketing, and resource allocation can improve operational efficiency. Regular maintenance of technical equipment, staff training, and clear operational protocols will reduce disruptions, improve service quality, and enhance audience perceptions of professionalism.

5. Promote Environmental Responsibility and Technological Innovation:

Live Houses should implement eco-friendly initiatives, such as energy-efficient lighting, waste reduction, and partnerships with local cultural industries. Technological innovations, including

VR/AR experiences, digital engagement platforms, and data-driven audience analytics, can enhance interaction and create additional revenue streams. Integrating sustainability and technology will reinforce social responsibility and audience appeal while supporting long-term competitiveness.

6. Encourage Community Engagement and Cultural Contribution:

Finally, Live Houses should actively engage with local communities, support emerging artists, and contribute to cultural development. Hosting workshops, collaborative events, and community outreach programs will strengthen social ties, enhance brand reputation, and create a supportive ecosystem for artistic innovation.

In summary, this study demonstrates that a holistic approach combining brand development, performance innovation, market flexibility, management optimization, sustainability, and technological integration is essential for the long-term success and cultural impact of Live Houses. Implementing these recommendations will enable operators to achieve operational excellence, maximize audience satisfaction, and ensure sustainable growth in a competitive and evolving entertainment landscape.

References

- Chen, A. (2022). Returning to the body: The construction of communication space of Live House in the era of new media. *Audiovisual*, (02), 142–144.
- Chen, M. (2022). Analysis of landscape design ideas and strategies for urban riverside parks based on ecosystem service theory. *Modern Horticulture*, 45(24), 103–105.
- Chen, M., & Wang, S. (2019). Analysis using the Osterwalder Business Model Canvas: The business model of Apple Inc. *Jiangsu Business Review*, (08), 10–15.
- Cheng, L. (2021). Research on the innovation of operation model of X Live House [Doctoral dissertation, Soochow University].
- Cui, Y. (2024). Case study on the evolution of Haier Group's business model from the perspective of open innovation. *Enterprise Reform and Management*, (09), 63–65.
- Deng, W. (2017). Consumption and identity of youth subcultural groups in Japanese Live House music performances. *Music Communication*, (02), 93–96.
- Fang, X., & Zhou, Z. (2018). The secret of innovation in emerging industries: Technological innovation + business model innovation. *Petroleum Science and Technology Forum*, 37(1), 60–63.
- Gan, L. (2020). Exploration of the operation and management of "Black Iron Live House" in Jiangxi [Doctoral dissertation, Jiangxi University of Finance and Economics].
- Ge, Y. (2013). Analysis and development research of domestic Live Houses [Doctoral dissertation, Nanjing University of the Arts].
- Guo, Y. (2022). Research on "new tribes" in the dissemination of Chinese independent music [Doctoral dissertation, Jinan University].

- Gupta, B., Mittal, P., & Mufti, T. (2021). A review on Amazon Web Service (AWS), Microsoft Azure & Google Cloud Platform (GCP) services. In *Proceedings of the 2nd International Conference on ICT for Digital, Smart, and Sustainable Development, ICIDSSD 2020*, 27–28 February 2020, Jamia Hamdard, New Delhi, India.
- He, L. (2024). Research on the sharing economy model and its strategies based on cultural industry management. *Public Relations World*, (01), 88–90.
- Hu, X. (2023). Research on strategies for improving enterprise innovation performance in an international context: Based on the theory of dynamic capabilities. *Business Exhibition Economics*, (13), 138–141.
- Doe, J. (2022). The role of Live Houses in the independent music scene. *Journal of Music Studies*, 23(2), 45–67.
- Kirchherr, J., Reike, D., & Hekkert, M. (2020). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation & Recycling*, 127, 221–232.
- Lan, S., & Hu, H. (2024). The impact of dual innovation dynamic balance on enterprises' sustainable competitive advantage. *Statistics and Decision*, 40(05), 166–171.
- Li, C. (2023). On the current development status of the LIVEHOUSE industry in China's new first-tier cities, Taking Dahua•1935 and Oula Art Space as examples. *Cultural Industry*, (01), 147–149.
- Li, J. (2024). Analysis of the impact of green finance reform and innovation on enterprise costs. *Jiangsu Business Review*, (05), 89–93.
- Liao, G. (2020). Research on the impact of corporate environmental responsibility on corporate sustainable development [Doctoral dissertation, Hunan University].
- Lin, F., & Zong, Z. (2024). The reform and framework of business ecosystem governance of performing arts enterprises in the digital age. *Journal of Shandong University (Philosophy and Social Science Edition)*, (02), 36–44.
- Liu, X., Qie, Y., & Hu, W. (2023). The conceptual transformation and boundary expansion of disruptive innovation. *Shanghai Quality*, (05), 14–16.
- Liu, Z. (2022). Research on the SVOD business model of the American company Netflix [Doctoral dissertation, Jiangxi University of Finance and Economics].
- Pan, Z. (2021). Construction and practice of the operation model for Tianjin 派 Live House [Doctoral dissertation, Tianjin Conservatory of Music].
- Porter, M. E., & Kramer, M. R. (2019). Creating shared value. *Harvard Business Review*, 89(1/2), 62–77.
- Qin, R. (2022). Research on the mechanism of value creation process based on service-dominant logic [Doctoral dissertation, South China University of Technology].

- Tang, S. (2012). Competitive strategy for cloud service development: A simulation of Apple iCloud strategy [Doctoral dissertation, National Taiwan University].
- Wang, H., & Cheng, S. (2017). Natural capital and natural value. Shanxi Economic Publishing House.
- Xie, Y. (2023). Research on the operation and management of domestic chain Live House Wasi [Doctoral dissertation, Jiangxi University of Finance and Economics].
- Yang, D. (2016). Research on the innovative development of the "Internet +" folk culture industry based on Blue Ocean strategy. *Reform and Strategy*, 32(08), 109–112.
- Yang, H. (2019). Research on the acoustic environment of new performance spaces Live House [Doctoral dissertation, South China University of Technology].
- Yang, X. (2023). Research on the evaluation of Miao Ke Lan Duo's business model innovation based on value creation theory [Doctoral dissertation, Qingdao University].
- Zhang, J. (2020). Research on the innovation of the business model of Moon Key Livehouse [Doctoral dissertation, Northwest University].
- Zhao, M. (2021). The development and dissemination strategies of niche music from the perspective of arts management, Taking live house music venues as examples.
- Zhong, Z. (2022). The construction, production and interconstruction of urban subcultural spaces, Taking Live House as an example. *Social Science Dynamics*, (11), 24–33.
- Zhou, P. (2017). Research on ecological design theory and practice. *Chinese Artists*, (09), 133.
- Zhou, R. (2023). Research on green supply chain management based on sustainable development of enterprises, Review of "Green Supply Chain Management." *Business Economic Research*, (23), 2.
- Zhou, W. (2023). Research on the influencing factors of audience experience in domestic Live House from the perspective of flow theory [Doctoral dissertation, Shandong University].

Factors Influencing Satisfaction with Electronic Payment (E-Payment) Systems among Chinese Tourists in Phuket

by

Zhou Kaibin¹ and Sirawit Sirirak²

Faculty of Management Science

Phuket Rajabhat University, Thailand

E-mail: S6680141102@pkru.ac.th¹,

sirawit.s@pkru.ac.th², topsirawit@hotmail.com²

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Abstract

The rapid adoption of electronic payment (E-Payment) systems worldwide has transformed financial transactions, offering enhanced convenience, efficiency, and security for users. Despite this global trend, cash remains prevalent in many countries, including Thailand, where the use of mobile payment systems by international tourists, particularly Chinese visitors, is growing yet underexplored. Phuket, as a prominent international tourist destination, has experienced increased demand for E-Payment services due to its accessibility and popularity among Chinese tourists. This study investigates the factors influencing Chinese tourists' satisfaction with E-Payment systems in Phuket, focusing on the roles of the digital marketing mix and technology acceptance factors. Using a quantitative approach, data were collected from 400 Chinese tourists through structured questionnaires. Analyses included frequency, percentage, mean, standard deviation, and multiple regression to examine relationships between variables. Findings indicate that overall perceptions of digital marketing mix components, product and service, price, distribution channels, promotional activities, personnel services, and privacy protection, are at the highest level, with personnel services exerting the greatest influence on satisfaction, followed by privacy protection, pricing, distribution channels, product and service quality, and promotional activities. Technology acceptance factors, including perceived usefulness, perceived ease of use, and user attitudes, also demonstrated a statistically significant positive impact on satisfaction, with perceived usefulness being the most influential. The study highlights that integrating effective digital marketing strategies with user-friendly, secure, and technologically efficient payment systems enhances tourist satisfaction and encourages repeated use. Recommendations for practitioners include prioritizing personnel service training, promoting privacy protection measures, optimizing payment interfaces, and designing strategies that increase perceived usefulness and ease of use. For future research, qualitative studies are suggested to explore trust in technology, deeper aspects of user attitudes, and potential enhancements to E-Payment systems to better align with the evolving needs of international tourists.

Keywords: Electronic Payment, Chinese Tourists, Digital Marketing Mix, Technology Acceptance, Tourist Satisfaction

1. Introduction

1.1 Background and Importance of the Problem

Over the past decade, countries around the world have increasingly encouraged the adoption of electronic payments (E-Payments) across all sectors. This global shift is driven by the potential of E-Payments to enhance transaction efficiency, reduce costs, and improve access to financial services. Despite the exponential rise in E-Payment usage, cash remains a dominant payment method in many countries, including Thailand (Thailand Development Research Institute, 2023). The rapid advancement of technology has profoundly influenced daily life and altered social behavior, particularly in the way people make payments. Businesses and retailers have integrated E-Payment systems into their operations to improve customer convenience and broaden service access. In China, widely recognized as a cashless society, popular payment applications like Alipay and WeChat Pay have become deeply embedded in everyday life (Bank of Thailand, 2023).

E-Payments have also addressed key challenges for international travelers, such as currency confusion, risks of theft, and loss of cash. Chinese tourists, in particular, are accustomed to mobile payments, benefiting from user-friendly interfaces and platform-specific promotions while abroad (Department of International Trade Promotion, 2024). The trend toward a cashless society, defined as a shift from physical cash to electronic wallets, has been widely embraced in China due to benefits such as convenience, elimination of change-making issues, and security against counterfeit money (Rakkanka, 2023). Most mobile payment platforms offer promotional discounts, making products more affordable and further driving user interest. In China, popular applications such as Taobao (for online shopping) and WeChat (for messaging) have integrated payment systems. Taobao is connected to Alipay for seamless transactions, while WeChat has developed WeChat Pay for instant money transfers between users. These features have made E-Payments accessible to users of all ages, including children and the elderly, due to their ease of use and security (BrandAge Online, 2017).

Phuket province has been designated as an international tourist city with strong competitive potential in the global tourism market. Its proximity to China and accessible travel time make it a favored destination for Chinese tourists. The increasing number of direct flights from various Chinese cities to Phuket further supports the continued growth of the Chinese tourism market. This growth has resulted in more widespread use of E-Payment systems by Chinese tourists in the area (Thairath, Money, 2024). However, research on the use of E-Payment systems by Chinese tourists in Phuket and the broader Andaman cluster remains limited. A major obstacle is the limited number of local businesses that accept mobile payments. In Thailand, Alipay and WeChat Pay have gained some traction in key tourist areas such as Bangkok, Chiang Mai, and Phuket (Namkaeng, 2021). Although national adoption is not yet widespread, growth has been promising. These payment systems are now available across various service sectors, including accommodations, duty-free stores, convenience stores, and coffee shops. For businesses targeting Chinese consumers, supporting Alipay and WeChat Pay presents a significant opportunity to expand their customer base (Krutsong & Sirirak, 2024). Therefore, this study seeks to investigate the factors influencing the satisfaction of Chinese tourists with E-Payment systems in Phuket. The findings aim to address an academic gap and contribute to strategic planning for attracting and accommodating Chinese tourists more effectively in the digital age.

1.2 Research Question

- 1) What are the levels of digital marketing mix factors, technology acceptance factors, and satisfaction with the use of electronic payment systems among Chinese tourists in Phuket?
- 2) What is the relationship between the digital marketing mix factors and technology acceptance factors with the satisfaction of using electronic payment systems among Chinese tourists in Phuket?

1.3 Research Objective

The objectives of this study are as follows:

- 1) To assess the levels of digital marketing mix factors, technology acceptance factors, and satisfaction regarding the use of electronic payment systems among Chinese tourists in Phuket.
- 2) To examine the relationships between digital marketing mix factors, technology acceptance factors, and tourist satisfaction in using electronic payment systems.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Electronic Payment Systems (E-Payment)

The Bank of Thailand (2023) defines an electronic payment system (E-Payment) as a system that facilitates financial transactions through standardized and secure electronic channels. The government promotes the use of such systems to enhance economic efficiency, reduce transaction costs, and support the country's transition to a digital economy. Promoting the E-Payment system also helps reduce cash usage, decrease fraud, and increase transparency in government spending (BrandAge Online, 2017).

In the tourism sector, Chinese mobile payment systems such as Alipay and WeChat Pay have been available in Thailand since 2016. These systems aim to facilitate Chinese tourists in paying for goods and services without carrying cash or exchanging currencies. This shift has allowed Thai entrepreneurs to increase sales and adapt to the behaviors of international tourists (Lu et al., 2021; Xia & Gan, 2020).

2.1.2 Technology Acceptance

Technology acceptance refers to the process by which individuals decide to adopt new technology, usually beginning with awareness, learning, and behavioral change toward accepting and using the technology (Venkatesh & Davis, 2000). The Technology Acceptance Model (TAM) is a commonly used framework for explaining user behavior. It suggests that external factors influence attitudes and intentions to use technology, especially two key factors: perceived usefulness and perceived ease of use (Davis, 1989; Venkatesh & Bala, 2008).

This study adopts the concept of technology acceptance across four dimensions: perceived usefulness, ease of use and user attitudes. These dimensions serve as criteria to evaluate the level of E-Payment system adoption among tourists (Shin, 2009; Oliveira et al., 2016).

2.1.3 Digital Marketing Mix

The Electronic Commerce Office, Department of Business Development (2023), identifies six key elements of the digital marketing mix: Product, Price, Place, Promotion, People, and Privacy. These elements play a critical role in building long-term customer relationships (Laudon & Traver, 2020; Chaffey & Ellis-Chadwick, 2019).

Effective digital marketing strategy development requires behavioral data analysis of consumers through online platforms, digital communication, and personalized responses to customer needs (Kotler et al., 2021; Tiago & Veríssimo, 2014). These concepts are applied in this research to analyze the strategies of tourism operators who use E-Payment systems to effectively reach tourists.

2.1.4 Customer Satisfaction

Tourist experiences vary depending on individual objectives and expectations. Satisfaction arises from the comparison between expectations and the actual experiences received. When experiences meet or exceed expectations, satisfaction results, which may lead to repeat visits or positive word-of-mouth (Oliver, 1997; Zeithaml et al., 2009).

In this study, tourist satisfaction is evaluated based on experiences related to the use of E-Payment systems, such as convenience, security, speed, and broad acceptance. Satisfied tourists are more likely to reuse the service and recommend it to others (Cronin & Taylor, 1992; Yoon & Uysal, 2005).

2.2 Conceptual Framework

This study examines the factors influencing Chinese tourists' satisfaction with electronic payment systems in Phuket. The framework is based on two independent variables, Digital Marketing Mix (DMM) and Technology Acceptance (TA), and one dependent variable, Satisfaction with Electronic Payment Systems (SEPS).

Digital Marketing Mix (DMM): Refers to the strategies implemented through product offerings, promotion, place/distribution, and pricing that influence tourists' perceptions and experiences when using electronic payment systems.

Technology Acceptance (TA): Refers to the degree to which Chinese tourists perceive E-Payment systems as useful, easy to use, and compatible with their needs, influencing their adoption and satisfaction.

Satisfaction with Electronic Payment Systems (SEPS): Represents the level of contentment or positive experience experienced by Chinese tourists when using E-Payment platforms such as Alipay and WeChat Pay in Phuket.

2.3 Research Hypothesis

From the research conceptual framework, the hypothesis of the research can be established as follows:

H1: Digital marketing mix is significantly related to the satisfaction of Chinese tourists using electronic payment systems in Phuket.

H2: Technology acceptance is significantly related to the satisfaction of Chinese tourists using electronic payment systems in Phuket.

3. Research Methodology

3.1 Research Design

This research is a quantitative study. The research instrument used is a questionnaire developed by the researcher, based on a review of relevant literature and research. The researcher studied theories, principles, and concepts from documents, textbooks, books, online media, and research studies related to the topic to guide the development of the questionnaire for evaluating the behaviour and satisfaction of tourists with Phuket. The questionnaire is divided into six sections as follows:

Section 1: Screening questions about prior visits to Phuket and the use of electronic payment (E-Payment) systems.

Section 2: Questions on personal demographic factors and behavior in using electronic payment systems. These include nominal and ordinal scale questions, with only one answer selectable per question.

Section 3: Questions related to the digital marketing mix, using interval scale measurements.

Section 4: Questions related to technology acceptance, using interval scale measurements.

Section 5: Questions related to satisfaction with the use of electronic payment systems, using interval scale measurements.

Section 6: Suggestions and recommendations.

Validation and reliability test of the Research Instrument

1) The initial questionnaire draft was submitted to the thesis advisor for verification of content accuracy and language. Suggestions and revisions were made to ensure clarity and alignment with the research objectives.

2) The revised questionnaire was evaluated by experts for content validity using the Index of Item-Objective Congruence (IOC). An acceptable IOC value is greater than 0.5. Based on evaluations from three experts, the IOC values ranged between 0.66 and 1.00, indicating all items were valid.

3) The questionnaire was pilot-tested with 30 individuals. Cronbach's Alpha Coefficient was used to assess reliability. Items with low congruence were revised for consistency with indicators and research variables. A Cronbach's Alpha above 0.7 was considered acceptable. Results showed reliability scores ranging from 0.706 to 0.886, indicating satisfactory reliability. The questionnaire was finalized and prepared for actual data collection based on the reliability test results.

3.2 Population and Sample

The population for this study comprises Chinese tourists who visited Phuket in 2024, totaling 6,733,162 individuals (Ministry of Tourism and Sports, 2024). The sample group for this study consists of Chinese tourists who traveled to Phuket. The sample size was determined using Yamane's (1967) simplified formula, with a 95% confidence level and a 5% margin of error, resulting in a required sample of 400 respondents. A purposive sampling method was used, selecting only Chinese tourists who had visited Phuket and used electronic payment systems during their trip. Descriptive analysis of sample basic information is shown in Table 1.

Table 1 Basic Information of the Questionnaire (N=400)

Basic Information	Item	Number	%
Gender	Male	161	40.25
	Female	239	59.75
Age	20-30 year	191	25.25
	31-40 year	204	51.00
	41-50 year	61	15.25
	51-60 year	34	8.50
Occupation	Housewife	2	0.50
	Government	10	2.50
	Employee	231	57.75
	Business owner	15	39.25
Status	Single	109	27.25
	Married	291	72.75
Monthly Income	25,001-35,000 baht	76	19.00
	35,001-45,000 baht	148	37.00
	More than 45,001 baht	176	44.00

3.3 Data Collection

Data collection was conducted between September and November 2024. The questionnaire was translated into Chinese and converted into an online survey using the WeChat application. The survey link was distributed via WeChat to Chinese tourists who had previously visited Phuket.

3.4 Statistics Used for Data Analysis

In this research study, there are two types of statistics used for data analysis:

1) Descriptive Data Analysis

Analysis of data related to demographic characteristics and behaviors of Chinese tourists visiting Phuket Province, as well as other related variables. The statistics used in the analysis include frequency, percentage, mean, and standard deviation. The interpretation was then performed using the interpretation criteria using the mean of the question points. The interpretation criteria have been set for 5 levels as follows:

Score 4.21 – 5.00 is the highest level.

Score 3.41 – 4.20 is high level.

Score 1.81 - 2.60 is low.

Score 2.61 - 3.40 is moderate.

Score 1.00 – 1.80 is the lowest level.

2) Inferential Data Analysis

Hypothesis testing was conducted using multiple regression analysis to examine the relationship between independent variables and the dependent variable.

4. Data Analysis and Findings

4.1 Descriptive Statistics

Perceived levels of the digital marketing mix, technology acceptance and customer satisfaction were shown in Table 2.

Table 2 Levels of the Digital Marketing Mix, Technology Acceptance and Customer Satisfaction

Factors	Mean	S.D.	Level
Digital Marketing Mix	4.55	0.49	Highest
Product	4.64	0.49	Highest
Price	4.58	0.48	Highest
Place	4.56	0.50	Highest
Promotion	4.52	0.50	Highest
Personnel	4.51	0.49	Highest
Privacy	4.48	0.50	Highest
Technology Acceptance	4.56	0.48	Highest
Perceived Usefulness	4.59	0.48	Highest
Perceived Ease of Use	4.52	0.49	Highest
Attitudes	4.53	0.49	Highest
Customer Satisfaction	4.52	0.25	Highest

From table 2, the overall level of opinions on the digital marketing mix was at the highest level, with an average score of 4.55. When considering each aspect individually, it was found that the highest

average score was for products and services, with a mean of 4.64, followed by pricing (4.58), place (4.56), promotion (4.52), personalized service (4.51), and privacy protection (4.48), respectively. The overall level of opinions on technology acceptance factors was also at the highest level, with an average score of 4.55. When examined by category, the highest average was for perceived usefulness at 4.59, followed by attitude toward usage at 4.53, and perceived ease of use at 4.52, respectively. The level of satisfaction with electronic payment (E-Payment) systems among Chinese tourists visiting Phuket was found to be at the highest level overall, with an average score of 4.52. The relationship between the digital marketing mix factors and the satisfaction of using electronic payment systems among Chinese tourists in Phuket is shown in Table 3.

Table 3 Relationship between the Digital Marketing Mix Factors and the Satisfaction of Using Electronic Payment Systems among Chinese Tourists in Phuket

Model	Purchase Decision				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.397	0.291		4.796	0.000
Product	0.104	0.041	0.120	2.557	0.011*
Price	0.117	0.043	0.132	2.719	0.007**
Place	0.109	0.042	0.123	2.570	0.011*
Promotion	0.084	0.039	0.100	2.163	0.031*
Personnel	0.144	0.033	0.196	4.301	0.000**
Privacy	0.133	0.034	0.182	3.924	0.000**
R	R ²	Adjust R ²	SE(est.)	F	Sig.
0.486	0.236	0.225	0.155	20.276	0.000**

From Table 3, when considering the overall results, it was found that the digital marketing mix factors have a statistically significant relationship with satisfaction (p-value = 0.00). The digital marketing mix factors could explain 22.5% of the variation in satisfaction (Adjusted R² = 0.225). When examining each component, it was found that all aspects of the digital marketing mix had a positive relationship with satisfaction at a 95% confidence level (p-value < 0.05). Among these, the "personnel service" aspect had the highest standardized coefficient (Beta) in relation to satisfaction, followed by privacy, price, distribution channels, product and service, and promotion, respectively. Therefore, based on the findings, Hypothesis 1 is accepted, and it can be concluded that digital marketing mix factors have a statistically significant relationship with satisfaction in using electronic payment systems among Chinese tourists in Phuket. The relationship between the technology acceptance factors and the satisfaction of using electronic payment systems among Chinese tourists in Phuket is shown in Table 4.

Table 4 Relationship between the Technology Acceptance Factors and the Satisfaction of Using Electronic Payment Systems among Chinese Tourists in Phuket

Model	Purchase Decision				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.781	0.247		7.197	0.000
Perceived usefulness	0.299	0.041	0.327	7.362	0.000**
Perceived ease of use	0.167	0.034	0.220	4.967	0.000**
Attitudes	0.139	0.031	0.198	4.463	0.000**
R	R ²	Adjust R ²	SE(est.)	F	Sig.
0.488	0.239	0.233	0.154	41.353	0.000**

From Table 4, when considering the overall results, it was found that technology acceptance factors have a statistically significant relationship with satisfaction (p -value = 0.00). The technology acceptance factors could explain 23.3% of the variation in satisfaction (Adjusted R^2 = 0.233). When examining each component, it was found that all aspects of technology acceptance had a positive relationship with satisfaction at a 95% confidence level (p -value < 0.05). Among these, perceived usefulness had the highest standardized coefficient (Beta) in relation to satisfaction, followed by perceived ease of use and attitude toward use, respectively. Therefore, based on the findings, hypothesis 2 is accepted, and it can be concluded that technology acceptance factors have a statistically significant relationship with satisfaction in using electronic payment systems among Chinese tourists in Phuket.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study aims to examine the factors influencing satisfaction with electronic payment (E-Payment) systems among Chinese tourists in Phuket. The study has two primary objectives: (1) to assess the level of technology acceptance factors, digital marketing mix factors, and satisfaction with E-Payment systems among Chinese tourists in Phuket, and (2) to analyze the relationship between technology acceptance factors, digital marketing mix factors, and satisfaction with E-Payment systems among Chinese tourists in Phuket. A questionnaire was used as the data collection instrument, and the sample consisted of 400 Chinese tourists visiting Phuket. Statistical methods used for data analysis included frequency, percentage, mean, standard deviation, and multiple regression analysis.

The findings reveal that the majority of respondents were female, aged between 31 and 40 years, employed in private companies, and married, with a monthly income of over 45,001 THB. Moreover, the study found that overall perceptions of digital marketing mix factors, technology acceptance factors, and satisfaction with E-Payment systems were at the highest level. Hypothesis testing indicated that digital marketing mix factors had a statistically significant positive relationship with satisfaction with E-Payment systems among Chinese tourists in Phuket. Among these factors, service personnel had the

greatest influence on satisfaction, followed by privacy protection, pricing, distribution channels, product and service offerings, and promotional activities. Additionally, technology acceptance factors were also found to have a statistically significant positive relationship with satisfaction with E-Payment systems. Among these factors, perceived usefulness had the highest influence on satisfaction, followed by perceived ease of use and attitude toward usage, respectively.

5.2 Discussion

The digital marketing mix has a statistically significant relationship with the satisfaction of Chinese tourists in Phuket regarding the use of electronic payment systems. This is due to the integration of all six aspects of the digital marketing mix, which creates a positive impression and involves the use of modern technologies in electronic payment systems, resulting in convenience, speed, and security. This finding aligns with the research by Na Ruiting (2022), who studied the factors influencing Chinese tourists' decision-making when traveling in Thailand. The study found that all seven aspects of the marketing mix significantly influenced Chinese tourists' decisions to visit Thailand. These aspects include product, price, place, promotion, people, physical evidence and presentation, and process, all of which have a statistically significant positive correlation with tourists' decisions at the 0.01 level.

Technology acceptance factors also have a statistically significant relationship with the satisfaction of Chinese tourists in Phuket when using electronic payment systems. This is due to perceived usefulness, perceived ease of use, and attitudes toward usage. These findings are consistent with the study by Wanatsanan Phongphaew (2021), who examined the factors influencing the acceptance of E-Payment technology among users in Chiang Mai. The study found that both perceived ease of use and perceived usefulness significantly influenced the acceptance of E-Payment technology at the 0.05 level.

5.3 Recommendation

Based on the research findings, several recommendations are proposed to enhance the use of electronic payment systems among Chinese tourists in Phuket. First, greater emphasis should be placed on the components of the digital marketing mix, including product and service, price, distribution channels, promotional activities, personnel services, and privacy protection. The study found that all six components have a statistically significant positive correlation with tourist satisfaction, with priority given to enhancing personnel services, followed by privacy protection, pricing, distribution channels, product and service quality, and promotional activities. In addition, attention should be directed toward the factors of perceived usefulness, perceived ease of use, and user attitudes, as these also demonstrate a significant relationship with satisfaction. Among these, improving perceived usefulness should be prioritized, followed by perceived ease of use and the development of positive user attitudes. For future research, it is recommended that qualitative approaches be employed to explore deeper aspects such as trust in technology and the understanding of perceived ease of use, given their growing importance in the digital economy and the pervasive role of information systems in daily life. Further studies should also investigate user attitudes and potential toward E-Payment services to inform the development and enhancement of future technologies, ensuring that systems are user-friendly, secure, and aligned with the evolving expectations of international tourists.

References

- Bank of Thailand. (2023). *Tourism and payment trends in Thailand*. BOT Press.
- BrandAge Online. (2017). *The rise of Alipay and WeChat Pay in China*. <https://www.brandage.com>
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing* (7th ed.). Pearson Education.
- Cronin, J. J., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56(3), 55–68.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Department of International Trade Promotion. (2024). *Chinese outbound tourism behavior*. Ministry of Commerce.
- Krutsong, K., & Sirirak, S. (2019). E-payment adoption among Chinese tourists in Andaman provinces. *Journal of Tourism Studies*, 12(3), 45–59.
- Laudon, K. C., & Traver, C. G. (2020). *E-commerce 2020–2021: Business, technology, and society* (16th ed.). Pearson Education.
- Lu, Y., Wang, L., & Zhang, H. (2021). A study on mobile payment adoption of tourists based on the UTAUT2 model. *Sustainability*, 13(5), 2734.
- Na, R. (2022). *Factors influencing Chinese tourists' decisions to travel to Thailand* [Master's thesis, Dhurakij Pundit University]. (in Thai)
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.
- Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior*, 61, 404–414.
- Phuket as a top destination for Chinese tourists. (2024). *Thairath Money*. <https://www.thairath.co.th/money>
- Rattanaporn, R. (2023). Cashless society is coming true (to) world. *TAT Review Magazine*. Retrieved April 28, 2024, from <https://tatreviewmagazine.com/article/cashless-society-is-coming-true-to-world/>
- Siriwit, S., & Krutsong, K. (2024). Guidelines for promoting electronic payment via mobile devices among consumers in Phuket Province. *Journal of Development Administration Research*, 14(4), 1577–1591. (in Thai)

- Thailand Development Research Institute. (2023). *Cash vs. digital: Payment preferences in Thailand*. TDRI.
- Tourism Authority of Thailand. (2023). *Statistics on Chinese tourists visiting Thailand*. (in Thai)
- Tiago, M. T. P. M. B., & Veríssimo, J. M. C. (2014). Digital marketing and social media: Why bother? *Business Horizons*, 57(6), 703–708.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273–315.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Vanida, K. (2019). *Adoption of electronic financial transaction technology among exporters and importers in Bangkok* [Master's thesis, Dhurakij Pundit University]. (in Thai)
- Vipavane, N. (2021). Merchants' attitudes toward accepting Alipay payment from Chinese customers at Chatuchak Market. In *Rangsit University National Conference 2021* (April 30, 2021). (in Thai)
- Xia, Y., & Gan, C. (2020). Mobile payment adoption in the tourism industry in China. *Journal of Hospitality and Tourism Technology*, 11(3), 313–332.
- Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. *Tourism Management*, 26(1), 45–56.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2009). *Services marketing: Integrating customer focus across the firm* (5th ed.). McGraw-Hill Education.

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