

# Research on Digital Innovation in the Inheritance of Wuhan Acrobatics from the Cross-cultural Perspective

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## ABSTRACT

This paper focuses on the innovative exploration through digital technologies of Wuhan Acrobatics--the intangible cultural heritage from the cross-cultural perspective, including the acculturation theory and cultural identity theory. Through evaluating the pressure of cultural adaption faced by Wuhan Acrobatics, this paper explores how it utilizes digital technologies to better integrate into modern cultural environments. Besides, by strengthening its cultural identity, this paper discusses the role of digital technologies in emphasizing the cultural characteristics and recognition of Wuhan Acrobatics. The study offers theoretical support and practical guidance for the innovation of Wuhan Acrobatics, and holds profound significance for promoting the global development of Chinese traditional cultural arts.

**Keywords:** Digital innovation, Wuhan Acrobatics, Cross-cultural perspective.

## 1. INTRODUCTION

With the continuous progress of globalization, cultural communication among countries has grown increasingly frequent, and cultural diversity and disparity have become more pronounced. In this context, the significance of the cross-cultural perspective has become more prominent. The cross-cultural perspective can not only enhance the understanding and respect among different cultures, alleviate and even bridge cultural differences [1], but also offer novel ideas and approaches for the inheritance and development of traditional culture, enabling it to adapt more flexibly to the rapid changes of modern society while adhering to its core values.

As an integral part of Chinese acrobatics, Wuhan Acrobatics boasts a long history and exquisite skills. With its unique performance style and rich cultural connotations, Wuhan Acrobatics has been enlisted as national intangible cultural heritage. Nevertheless, it now primarily faces the challenge of insufficient public attention and awareness. This phenomenon is largely attributed to the lack of publicity and the limitations of communication channels. Meanwhile, issues such

as the increasingly fierce market competition, the audience's aesthetic shift and taste alteration also pose more stringent requirements for its development. To address these problems, Wuhan Acrobatics needs to explore new paths for inheritance and development.

In the information age, the rapid development of digital technology has not only brought about profound changes to all domains of society, but also presented new opportunities for the inheritance and innovation of traditional culture. Digital technology can facilitate the more extensive and efficient dissemination of traditional art, attract more audience attention, also enrich and innovate art performance forms, enhancing the audience's sense of experience. Therefore, digitalization, as an emerging technical means, holds great application potential for the development of Wuhan Acrobatics.

Based on the cross-cultural perspective, this paper explores the inheritance and innovation of Wuhan Acrobatics in the digital context, aiming to provide theoretical support and practical guidance for the future development of Wuhan acrobatics and even Chinese traditional acrobatic art. Through the research, it is hoped that Wuhan Acrobatics can

leverage the power of digitalization to radiate new vitality and achieve the harmonious integration of tradition and modernity, thereby better inheriting and developing in the backdrop of globalization.

## 2. EXPERIMENTAL DESIGN

To collect the cognition and attitudes of different groups (such as college students, acrobatic performers, theatre staff, audiences) towards Wuhan Acrobatics, as well as the opinions and suggestions on the future development of Wuhan Acrobatics, this survey adopts the questionnaire and the interview.

### 2.1 Electronic Questionnaire Design

The research team makes electronic questionnaires through the "WJX" applet and distributes questionnaires to the survey subjects with the help of the WeChat platform. From November 3, 2024 to November 14, 2024, the

research team collected a total of 356 questionnaires, including 356 valid questionnaires and 0 invalid questionnaires.

The design principles of this questionnaire are as follows: this questionnaire is designed according to the characteristics of the target audience; this questionnaire provides clear instructions; this questionnaire adopts a combination of closed and open questions; the questions of this questionnaire are designed in order from simple to complex, from general to specific; this questionnaire has been pre-tested.

There are a total of 11 questions in this questionnaire. The first to fourth questions are single-choice questions, the fifth to tenth questions are multiple-choice questions, and the eleventh questions are fill-in-the-blank questions. The specific contents are as "Table 1":

Table 1. Questionnaire on Wuhan Acrobatics

Item	Question
1	What is your gender?
2	How old are you?
3	Which city do you live in?
4	How much do you know about Wuhan Acrobatics?
5	What do you think is the most attractive feature of Wuhan Acrobatics?
6	What is your understanding of the cultural value of Wuhan Acrobatics?
7	What do you think is the international popularity of Wuhan Acrobatics?
8	What do you think are the challenges facing Wuhan Acrobatics in the process of communication?
9	What factors do you think are conducive to promoting the international spread of Wuhan Acrobatics?
10	From the perspective of cross-cultural communication, how do you think digital technology can better serve the inheritance and innovation of Wuhan Acrobatics?
11	What suggestions do you have for the future development of Wuhan Acrobatics?

### 2.2 Offline Interview Design

The research team interviewed 7 interviewees from different backgrounds at the Wuhan Acrobatic Theatre on October 29, 2024 and recorded them by recording.

This interview is a non-structured interview, and the interview questions change according to the characteristics of the interviewee.

The specific questions of the interview include but are not limited to the "Table 2":

Table 2. Interview on Wuhan Acrobatics

Item	Question
1	How old are you?
2	What is your occupation?
3	How long have you been practicing?
4	What is the reason for watching the acrobatics performance?
5	How often do you watch the Wuhan Acrobatic performance?
6	What suggestions do you have for the innovation of Wuhan Acrobatic performance?
7	What do you think are the possible problems in the development of Wuhan Acrobatics?
8	What are your expectations for the future development of Wuhan Acrobatics?
9	Do you have confidence in Wuhan Acrobatics going abroad?

### 3. DATA ANALYSIS

#### 3.1 The Analysis of Questionnaire

This section primarily analyses the data from the questionnaire survey, providing an overall

summary of the subjects' awareness and approval of Wuhan Acrobatics, in order to derive the objective situation of Wuhan Acrobatics in its development process and people's subjective opinions. ("Figure 1")

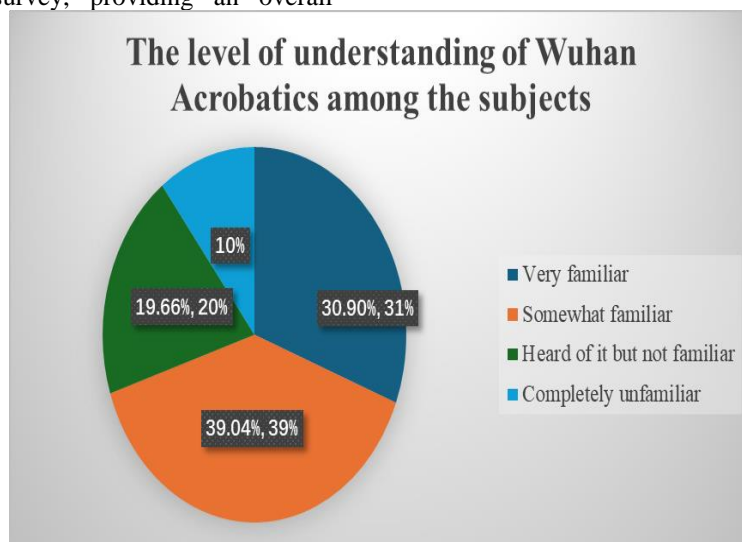


Figure 1 The level of understanding of Wuhan Acrobatics among the subjects.

In the survey, a total of 356 valid questionnaires were collected. From the analysis of these responses, the following results can be drawn:

Firstly, the majority of subjects are somewhat familiar with it but most of them have a low level of understanding about Wuhan Acrobatics.

Secondly, most people believe that Wuhan Acrobatics is very important and it is a part of Chinese culture. The skills, unique performance forms, and long history are considered the attractive features.

Thirdly, the majority think that Wuhan Acrobatics has a moderately high international recognition. They believe that the main challenge includes a shrinking audience.

Fourthly, they suggest that using social media and internet platforms for promotion, improving program quality and increasing cultural outreach to overseas audiences are important factors in enhancing Wuhan Acrobatics international communication. Breaking geographical boundaries and using digital platforms such as online museums to facilitate global dissemination, as well as virtual reality (VR) and augmented reality (AR) to provide

immersive experiences, can better serve the inheritance and innovation of Wuhan Acrobatics.

Overall, most participants have a high level of interest and recognition in Wuhan Acrobatics, but they have a low level of understanding about it and they are also aware of some challenges it faces in its dissemination and development. They support the use of digital technology and cross-cultural communication methods; the influence and inheritance of Wuhan Acrobatics can be effectively enhanced.

### 3.2 Interview Content Analysis

This section primarily focuses on elaborating and analyzing the perspectives of seven interviewees regarding Wuhan Acrobatics. By examining the understanding of Wuhan Acrobatics among individuals of different professions and ages, the aim is to further analyze the reasons behind these perceptions using cross-cultural theories. (“Table 3”)

Table 3. The analysis of seven interviewees

No.	Category	Personal Information	Keywords
1	Young Woman	Female, 25 years old, Art Professional	Art, Profession
2	Acrobat's Family Member	Female, Wife of a retired acrobat	Stage Play, Storytelling, Hardship
3	Acrobatic Hall Security	Male, over 60 years old	Individual Performance, Directness
4	Acrobatic Behind-the-Scenes Personnel	Male, Retired Acrobat	Promotion, Talent Cultivation
5	Acrobatic Performer	Male, 23 years old, 12 years in the industry	Foreign Performers, Stage Collaboration
6	College Student	Female, 18 years old	Chinese Culture, Interest
7	Public Servant	Male, 23 years old	Entertainment, Appreciation

The first interviewee is a young woman. She is a freelancer. She has been studying art for several years. She came across it on a public account and is interested in acrobatics. It relates to the art and she wants to draw inspiration from it. The second interviewee is a wife of an acrobat who had to retire due to severe injuries. She thinks in recent years, acrobatic stage plays have strong storytelling elements and are more focused on inspiration, such as the closing ceremony *The Tale of Phoenix*. Acrobats are particularly resilient, enduring many injuries during training, so persistence is a valuable quality. The third interviewee is a security in the acrobatic hall. He is over 60 years old and has been working as a security guard at the Wuhan Acrobatic Hall for more than 5 years. He thinks there are few individual performances, like *Bowl Balancing*, and too many group performances. The legacy of Acrobatic Master-Xia Juhua has not been passed down. Children and the elderly mainly watch on weekends, and there are few foreigners watching on weekdays. The fourth interviewee is a Behind-the-Scenes staff member of Acrobatics. He started acrobatics at the age of six and retired after the golden age. He thinks acrobatics, like gymnastics, has an age limit for retirement. There are regional differences compared to Shanghai, so the

development of Wuhan Acrobatics is not very good, but it also plays a role in the development of the Yangtze River basin and Jingchu culture. The advantage is that it is more intuitive than other art forms, so it has a larger audience. Everyone who has seen it has a good response. For example, unlike Yang Liping's *Peacock Dance*, the audience for acrobatics does not need any artistic theory. There are two aspects of drawbacks. The first is the lack of publicity, which requires government cooperation. The second is the shortage of talent. Children are unwilling to endure hardship and parents are unwilling to send their children to learn acrobatics. Moreover, the salary of acrobatic personnel is not ideal and the government cultural tourism bureau should invest more to expand the outreach. The fifth interviewee is an acrobatic performer. He is a 24-year-old male performer and has been engaged in acrobatic for 12 years. He started learning acrobatic as a child because his parents liked it. He thinks there has been some success in the innovation of acrobatic props and programs, with new talents being introduced every year. However, there has been no collaboration with foreigners, only limited to joint competitions. The sixth interviewee is a college student. She is an 18-year-old female. She thinks acrobatics is a part

of our Chinese culture and is something passed down by our ancestors. As young college students, she should set an example and promote intangible cultural heritage. The last interviewee is a civil servant. He is 23 years old. He watches the performance for the first time and just want to kill time. He thinks acrobatics is highly ornamental and suitable for relaxation while feeling the charm of culture.

In summary, the subjects and interviewees have different views or experiences. Some interviewees mentioned the differences between acrobatics and other art forms, which also makes acrobatics unique and more conducive to long-term inheritance and development. In addition, by organizing and analyzing the views of the interviewees and referring to academic literature on Wuhan Acrobatics, it is widely believed that Wuhan acrobatics have high aesthetic value and cultural charm, but there are also problems, such as the talent shortage, the difficulty in innovation and the insufficient publicity. Here is the specific analysis.

The first point is about the talent. Mei Yuezhou, vice of the China Acrobatics Association and Head of the Wuhan Acrobatic Troupe, stated that the cultivation of acrobatic talent is a tough process. In addition to emotional retention and career retention, realistic treatment retention is more practical. The development of art must be based on economic benefits, and those active on stage now are contract actors, provided with salaries by the acrobatic troupe. Moreover, there is a shortage of acrobatic talent. Paradoxically, the threshold for talent introduction is high, so this contradictory issue also urgently needs to be resolved.

The second point is about the difficulty in innovation. Individual and group projects cannot be balanced. The elderly prefer acrobatic programs like those of Xia Juhua, and individual performances should be passed down while young people may focus more on keeping pace with the times and consider it irrelevant. There is also no cooperation with foreign actors, only limited to joint competitions, without further exchange.

The third point is about the publicity. The digital space serves as a conduit for enhancing the visibility of Wuhan Acrobatics. However, the impact of its communication efforts leaves something to be desired. This is apparent in the insufficient continuity of its communication methods. The promotional approach may initially draw interest, but given the swift pace of internet

evolution, such interest is fleeting and does not lead to a lasting communication impact.

## 4. DISCUSSION

Building upon the comprehensive analysis of data collected through our survey questionnaires and interviews, the research subsequently adopts a cross-cultural perspective, utilizing theories of acculturation and cultural identity to interpret the experimental outcomes in detail. On this basis, the research proposes tailored digital innovation strategies in response to the identified issues.

### 4.1 Acculturation Theory

"Acculturation" refers to the social psychological phenomenon in which members of society from diverse cultural backgrounds bring changes in cultural patterns to one or both of them through interaction[2]. This interactive process of cross-cultural adaptation can be regarded as a boundary game[3], where individuals face the pressures of acculturation while striving to achieve a balance between cultural maintenance and change.

As a traditional local art form, Wuhan Acrobatics is encountering significant challenges related to cultural adaptation. Driven by the wave of globalization, various cultural forms are widely spread around the world, among which popular culture often occupies the dominant position in the public view. Meanwhile, the abundant modern entertainment — such as films, electronic games, and online videos—has provided the public with diversified choices, thus intensifying the competition in the cultural market. Unfortunately, in this fiercely competitive environment, it may be difficult for Wuhan Acrobatics to formulate and implement effective publicity strategies to enhance its market influence due to its limited resources and unfamiliarity with marketing techniques. Furthermore, economic development and societal shifts have led young people to favor careers that promise higher rewards over pursuing traditional acrobatic arts—a trend exacerbated by the demanding training required for acrobats. Collectively, these factors contribute to multiple stresses faced by Wuhan Acrobatics in adapting to today's cultural landscape. These include disparities in values between Wuhan Acrobatics and contemporary aesthetic preferences, as well as entertainment needs, obstacles in information dissemination, and an identity crisis among practitioners—all culminating in experimental

results indicating relatively low public awareness of Wuhan Acrobatics, insufficient publicity, and the scarcity of talent.

In response, the research analyzes how to use digital technology to promote the adaptation process of Wuhan Acrobatics from the perspective of acculturation theory. First, adapt to the changes in audience's aesthetic needs. With the passage of time, the audience's aesthetic needs are increasingly diversified and personalized. Given that Wuhan Acrobatic performance has expanded to the national and even international stage, the use of digital technology is particularly important. Thus, we can conduct cultural research and market analysis of target regions — design questionnaires using online survey tools and then release them through social media platforms, collect and analyze big data on the internet, including search trends, and online forum discussions. Based on these, the performance is accurately positioned and adjusted. Second, adapt to the fierce market competition environment. The research can enhance the competitiveness of Wuhan Acrobatics through digital marketing and cross-border cooperation. On the one hand, utilize social media for marketing: produce high-quality short videos and pictures to showcase the wonderful moments and stories of acrobatics behind the scenes, which will increase user engagement and share rate; Cooperate with social media influencers to promote Wuhan Acrobatics through their platforms. On the other hand, collaborate with game companies. As a medium of communication, games not only support interactive and participatory learning, but also deepen the understanding of history, culture, and specific behaviors through character empathy[4]. By leveraging these characteristics of games, the artistic charm of Wuhan Acrobatics can be combined with the interactive nature of games and widely disseminated through gaming platforms, leading to the enhancement of users' awareness and participation in it.

#### **4.1 Cultural Identity Theory**

The cross-cultural communication scholar Mary Fong gave a more specific definition of cultural identity: cultural identity is a social construction, an identification with the linguistic symbol system and non-verbal behavior system with common meaning in the group, that is, a behavior norm and a group belonging that share common culture, history and language[5].

The experimental results show that most people recognize the cultural value and significance of Wuhan Acrobatics, expressing their anticipation for its further development through the integration of digital technology. This phenomenon can be reasonably explained from the perspective of cultural identity theory. Cultural identity emphasizes the role played by clarifying individual identity characteristics[6]. As a form of cultural expression with a long history and unique style, Wuhan Acrobatics not only represents China's excellent traditional skills, but also highlights the unique charm of Jingchu culture, and reflects the wisdom and courage of the Chinese nation, carrying profound historical and cultural connotations. As a result, Wuhan Acrobatics can stimulate the audience's emotional resonance, enhance their sense of belonging and collective identity, and thus contribute to people's appreciation of it.

In response, the research can use digital technology to deeply explore the connotation of Wuhan Acrobatics, so as to further strengthen its cultural identity. The first is to utilize multimedia technology and interactive platforms to transform its historical origins and cultural stories into digital narrative content[7]. For instance, through the production of animated short films, interactive web pages or applications, tell the development and the stories of significant figures; The second is to establish an intangible cultural heritage digital museum to exhibit the historical relics, photos, and documents of Wuhan Acrobatics. By providing services such as resource retrieval, online exhibitions, and interactive experiences, the digital museum can present diversified information about it in a more comprehensive, intuitive, and intelligent manner[8]. Through emphasizing the cultural identity of Wuhan Acrobatics, we can not only better inherit the historical and cultural value of this traditional art form, but also open up a new path for its innovative development.

## **5. CONCLUSION**

Through this research, it can be affirmed that Wuhan Acrobatics has achieved certain results in the process of digitalization. Some data indicates that the majority of people show interest in Wuhan Acrobatics, demonstrating its potential to attract younger generations. They believe that digital technology has expanded the popularity and audience of Wuhan Acrobatics. It is beneficial for the inheritance and innovation of excellent

traditional culture. However, some additional data indicates that Wuhan Acrobatics still faces a series of challenges. It is important to note the shortage of talent cultivation, the insufficient effectiveness of domestic and international cultural arts cooperation in Wuhan Acrobatics. These problems also limit its potential for further development.

Therefore, the research can rely on cross-cultural theory to analyse the phenomenon that despite digitalization, Wuhan Acrobatics still faces some issues. With the integration of the world economy and the continuous development of the Internet, exchanges between countries around the world have become unprecedentedly frequent, and cross-cultural have become the basic context of academic research. In the cross-cultural context, the development of acrobatic art presents a blend and conflict[9]. We believe that through digital innovation from a cross-cultural perspective, the shortcomings of Wuhan Acrobatics can be effectively addressed, and its existing strengths can be further optimized.

In summary, it is essential to view the development prospects of Wuhan Acrobatics through cross-cultural dimension. Only through constant innovation and change can this ancient art form continues to prosper. At the same time, the research should also pay attention to not forgetting to retain its original essence and characteristics in the pursuit of modernization, so as to truly achieve intangible cultural heritage inheritance and innovation under new era cultural exchanges.

## ACKNOWLEDGMENTS

Fund project: Independent Innovation Project of Wuhan University of Technology in 2024 (Project Number: 246818009).

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