

Formation Mechanism and Educational Path of Cultural Representation of Chinese Wuxia Animation Characters

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ABSTRACT

Wuxia culture has deep historical roots in traditional Chinese culture and is an important manifestation of the national spirit and social values. This study explores the cultural representation mechanism of Wuxia animation characters and analyzes their educational functions and communication paths. Current research on Wuxia animation is fragmented and lacks a systematic theoretical model, especially in terms of educational value and cultural heritage. To fill this gap, this study adopts a grounded theory approach and combines online comment and in-depth interview data to construct a model of the formation mechanism of the cultural representation of Wuxia animation characters. The research results show that the cultural kernel, symbolic translation, and audience feedback jointly affect the formation of cultural representation, and that its dissemination and educational functions are enhanced through market regulation and technical support. This study not only provides new perspectives for animation research, semiotics, and cross-cultural communication research, but also provides theoretical support and practical reference for animation creation, cultural education, and cultural industry development.

Key words: Chinese Wuxia, Animated Characters, Cultural Representations, Formation Mechanisms, Educational Paths

INTRODUCTION

Traditional Chinese Wuxia culture is rooted in classical heroism, with its spiritual core colored by free will and a spirit of resistance, emphasizing the combination of benevolence, righteousness and courage. Confucius's interpretation of "courage" "The brave do not necessarily have benevolence, and the benevolent will certainly be courageous" laid the foundation of moral rationality in the Wuxia spirit (Li, 2016), so that the tradition of valuing Wuxia has always been reconciled with the ethics of benevolence and righteousness, avoiding extreme tendencies towards violence. This spirit has been passed down from generation to generation through literature, opera, film and television, and other media, and has become an important symbol of Chinese culture. With the development of digital technology, the forms of Wuxia culture have become increasingly diverse. Among these, Wuxia animation, as a medium that combines entertainment and cultural dissemination, has gradually become an important topic of cultural research.

Although Wuxia culture has important social value and cultural significance, how its cultural core can be effectively translated through different media in the process of Wuxia culture dissemination is still an issue worthy of

in-depth discussion. Wuxia animation is an important way for contemporary young audiences to encounter Wuxia culture. The animation characters have become an important vehicle for cultural representation, and their representation directly affects the audience's understanding and identification with the Wuxia spirit (Cui & Kamal, 2024). However, there is currently limited research on the cultural inheritance and value shaping of Wuxia animation characters, especially in terms of their educational function and cross-cultural communication. A systematic theoretical framework is lacking. Therefore, this study focuses on the cultural representation mechanism of Wuxia animation characters, exploring how they shape characters, convey cultural values, and play an educational role.

The historical evolution of Wuxia animation character design is closely intertwined with technological innovation. In the 1960s, although "Havoc in Heaven" was not strictly a Wuxia theme, its theatrical facial makeup and weapon designs already contained the genetic code of Wuxia aesthetics. At the beginning of the 21st century, "Rainbow Cat and Blue Rabbit: The Seven Heroes" was the first attempt to use 3D technology to present Wuxia characters, but due to technical limitations and a disconnect from cultural expression,

the characters mostly became a collection of symbols. After 2010, works such as “The Legend of Qin” and “Fog Hill of Five Elements” have promoted the transformation of character design towards “technology-culture” collaboration through the integration of 3D engines and ink rendering techniques. Some studies have pointed out that Wuxia animation strengthens the Wuxia temperament through cultural symbols such as costumes, weapons, and Wuxia symbols in the visual design of characters, while also constructing cultural fields with the help of the “Jianghu world view” at the narrative level (Lu, 2022). However, most studies fail to analyze in depth how these cultural symbols affect the audience’s perception and cultural identity, nor do they systematically explore the role of Wuxia animation in cultural communication and education.

Although there have been sufficient explanations of the historical origins of the Wuxia spirit and intensive discussions on the application of 3D technology in Wuxia animation, there have been relatively few studies on the mechanism of how Wuxia animation characters are culturally represented, and there is a lack of solid theoretical support. In particular, research has paid relatively little attention to the role of Wuxia animation characters in the cultural identity and education of the audience. In addition, the research perspective lacks cultural subjectivity, and some studies apply the Western heroic narrative framework to deconstruct Wuxia characters, ignoring the Chinese moral tension behind the concept of “a knight errant who uses his martial arts to break the law”. This study attempts to fill these gaps and provide a systematic analytical framework for the cultural representation mechanism of Wuxia animation characters.

Objective

This study aims:

- To construct a model of the formation mechanism of the cultural representation of Wuxia animation characters and explore its role in cultural communication and education.

The research adopts the analytical method of grounded theory, and combines online comment and interview data to summarize the cultural representation of Wuxia animation characters and propose an educational path that incorporates cultural representation mechanisms. The scope of the research focuses mainly on representative Wuxia animation works in recent years. By analyzing characterization, symbolic systems and audience feedback, the role of Wuxia animation in cultural communication, shaping values and educational functions is explored. This research not only enriches the theoretical perspective of animation culture research, but also provides practical guidance for animation creation, cultural industry development and educational applications.

LITERATURE REVIEW

Wuxia culture, as an important part of traditional Chinese culture, contains profound national spirit and social values.

With the development of digital media, Wuxia animation has become an important carrier of cultural inheritance and cross-cultural communication. Studying the cultural representation of Wuxia animation characters not only helps to understand how animation carries and disseminates cultural values, but also provides theoretical support for animation character creation, cultural education and cross-cultural communication. However, existing research mostly focuses on Wuxia literature or film, and there is still insufficient research on the cultural inheritance, educational value and symbolic translation of Wuxia animation characters.

Academic research on Chinese Wuxia culture, as shown in the annual report compiled by Zhang (2022), has formed a relatively complete theoretical framework, but it still focuses on the research of Wuxia novels, Wuxia films and television dramas, and the historical form of chivalrous culture. Qiu and Liu (2019) even proposed that future research on Chinese chivalrous culture should start from three aspects: a new standpoint, technological background, and research system, based on the statistical analysis of CSSCI journal papers. These studies provide a theoretical basis for the connotation of Wuxia culture and its communication mechanism.

In recent years, with the development of digital media technology, Wuxia themes have gradually entered the field of animation, and many researchers have begun to pay attention to the cultural communication strategies in this process. For example, Lü (2021) discusses the reproduction of Wuxia culture in Chinese animation from a comparative perspective between China and the West, arguing that animation, as a modern communication medium, needs to find a way to combine traditional culture with current popular language in the expression of Wuxia spirit. Other studies, such as Zhang (2018), analyze the Chinese Wuxia artistic characteristics and behavior patterns of the characters in Wuxia animation, and point out the key role of traditional cultural symbols in shaping character personality and strengthening narrative function.

Stuart Hall’s cultural representation theory has been a focus of recent research, which focuses on how symbols carry and transmit cultural meaning, and in particular how specific cultural perceptions are constructed through media such as language, images and narratives. Hall’s proposed construction of symbolic meaning has been widely used in character design analysis, and research shows that animation as a medium has a unique symbolic expression. Individual differences, cultural background and media-specific factors have a significant impact on the use of cultural symbols (Li & Zheng, 2024).

Cultural Transmission Theory emphasizes the inter-generational transmission and learning of cultural values. Education is not just about the transmission of knowledge, but also about the inheritance and transmission of social and cultural norms and values. This cultural learning can be understood using cultural transmission theory. This theory effectively explains the potential for culture to change, evolve and innovate through reinterpretation and modification. In the study of the cultural representation of Wuxia animation characters, this theory helps to understand how

animation influences young audiences' identification with and internalization of chivalrous spirit and traditional values through character portrayal (Nautiyal & Albrecht, 2024).

Grounded Theory provides a systematic analytical methodology for this study, emphasizing data-driven theory construction. It has been widely used in social science and cultural studies and is suitable for this study's exploration of the mechanism of cultural representation of Wuxia animation characters. In addition, Tie et al. (2019) provide a contemporary research framework suitable for guiding grounded theory research. It illustrates the interplay between the basic grounded theory methods and the iterative and comparative operations involved. In this study, grounded theory provides theoretical support for analyzing the cultural representation of Wuxia animation, and key patterns of cultural representation are inductively derived from the data through a systematic process of open coding, axial coding and selective coding.

Overall, existing research provides a wealth of theoretical support for this study, but there are still many gaps in the cultural representation, symbolic translation, and educational functions of Wuxia animation. Drawing on Grounded Theory and Cultural Transmission Theory, this study will build a model of the formation mechanism of cultural representations of Wuxia animation characters based on the results of relevant literature, in order to fill the gaps in this research area and provide a reference for animation creation, cultural communication and educational applications.

MATERIALS AND METHODS

Research Methods and Processes

Grounded Theory research method was first proposed by Barney Glaser, a sociologist at the University of Chicago, and Anselm Strauss, a sociologist at Columbia University, in 1967, and it is one of the more scientific methods of qualitative research. The research methodology of rooted theory is an exploratory process that begins with and returns to human experience, and is rooted in systematic collection techniques and analysis of information. Researchers often face challenges in applying Grounded Theory, such as maintaining reflexivity and theoretical sensitivity. Cathy Urquhart emphasizes the importance of these aspects and suggests a participant-centered approach to address these challenges effectively (Atmawijaya, 2024). The researcher begins with practical observation, collects data and information through in-depth situational research, conducts abstraction and conceptualization thinking and analysis through constant comparison among data, and summarizes and extracts concepts and categories from the data and information, that is to say, he or she searches for core concepts reflecting the social phenomenon on the basis of systematically collected information. Considering that this study takes Wuxia animation character design as the research content, which is characterized by inter-temporal contextual reproduction and cultural symbols translation, Rootedness Theory, with its bottom-up research path and profound insight into complex social phenomena, is suitable for a more in-depth and detailed

interpretation of the cultural representation of Chinese Wuxia in animation character design and practical guidance for enhancing the effectiveness of the animation character's chivalrous cultural perception.

In terms of the research process, this study uses online evaluations and semi-structured interviews as a source of data collection, and completes the processes of coding and analysis, saturation testing, and generating theories on the collected primary data. Among them, data collection and analysis is a cyclic process until the theory reaches saturation. The analysis process of Grounded Theory is shown in Figure 1.

Sample Selection and Data Collection

Sample selection followed the theoretical sampling principle to ensure the derived iterative and dynamic adjustment of the data collection process, i.e., as data analysis progressed, new concepts emerged to guide subsequent interviews and data collection. Five representative cases of Wuxia animation were selected for this study as samples of online reviews on relevant online platforms. These works all meet the following criteria: (1) The works need to fit with the purpose of the study, with chivalry, Wuxia culture or mythological themes as the core theme. (2) Cultural symbolism is prominent in the character design, reflecting elements of traditional Chinese Wuxia culture. (3) The selection of cases considers their potential to generate cultural discussion and academic research among the audience. (4) Time frame: animation works from 2000 to the present are selected, focusing on analyzing the development and change of cultural representations in the contemporary context. In order to ensure the diversity of data sources and fully explore information from different perspectives, five key informed people were added as interview subjects, including animation creators with at least five years of experience in the field who have worked on Wuxia animation projects, scholars of wuxia culture focusing on Chinese chivalry culture and traditional aesthetics, as well as senior animation enthusiasts covering the age range of 18 to 45.

In terms of data acquisition, this study adopts two ways, online related comments combined with offline in-depth

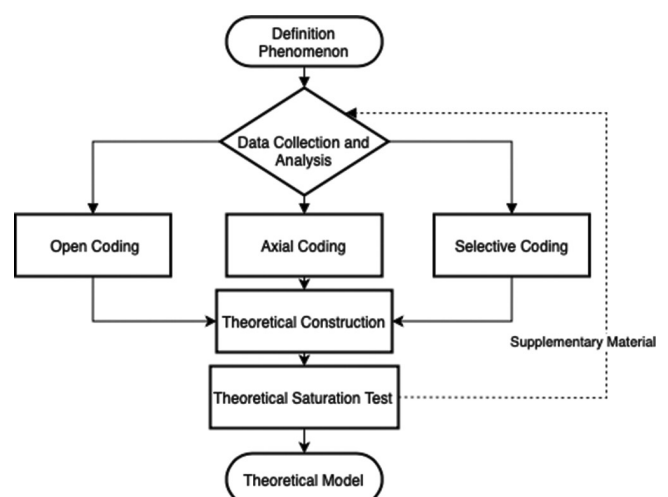


Figure 1. Grounded theory research process

interviews, to collect network data and interview information: firstly, using Python crawler to collect user comments and discussion posts about the case of Wuxia animation, a total of the original 800 comments were obtained, and the interfering comments were eliminated and used for the analysis; secondly, semi-structured interviews were carried out on the interviewees, who were informed of the purpose of the study before the interview and the principle of confidentiality. Each interview lasted about 30 min, and the audio recordings of the interviews were transcribed verbatim into text. NVivo12.0 software was used to code and analyze the collected data, including the steps of determining the themes of the analysis of the influencing factors of the cultural representation of Chinese Wuxia animation character design, marking the data, categorizing the data according to the marking, as well as summarizing the data, etc. The method can be used to summarize the formation mechanism of cultural representations of Wuxia animation characters from the complicated comments and interview data, laying the foundation for the construction of the theoretical model.

Coding and Model Building

Open coding

Open Coding is the process of “crumbling” and “breaking up” collected data, assigning conceptual labels, and then reassembling them in new ways to define concepts and discover categories.

In the coding process, in order to avoid the influence of personal subjective bias on the coding results, to ensure the accuracy and credibility of the coding, the author invited a graduate student majoring in animation design to organize and analyze the raw materials together, and the graduate student mastered the use of coding tool Nvivo12.0, and has some experience in rooting theoretical research. Each of them read, analyzed, and coded the source material independently, and at the end of the open coding, the two discussed the coding results together, re-determined the differences in coding, retained the coding results that were agreed upon, and deleted the coding that was not agreed upon and the concepts that appeared only once in terms of frequency. Coding comparisons were also conducted in NVivo12.0, with Kappa coefficients below 0.4 indicating poor agreement, above 0.4 and below 0.75 indicating good agreement, and above 0.75 indicating excellent agreement. Through the coding comparison query, the Kappa coefficients were all above 0.5, therefore, the coding consistency in this study was good.

After several collations and analyses, in this study, the initial concepts of Wuxia cultural cognition, cultural symbols and character recognition were finally obtained from the collected primary data. The initial concepts are low-level and have some intersecting relationships, so it is necessary to realize the conceptual categorization. In the process of categorization, this study retained the primary concepts that occurred three or more times, and formed 18 categories (Table 1).

Axial coding

The main task of Axial coding is to develop and establish various connections between individual categories, to explore the potential logical relationships between categories, and to develop main and sub-categories. Through the analysis, it is found that the different categories obtained in Open coding are indeed intrinsically linked at the conceptual level.

In the Axial Coding stage, the initial scope formed by Open Coding were categorized. Through semantic relatedness analysis and concept clustering, a coding system containing 5 main categories was finally formed (Table 2), with a total of 717 coding reference points and a coding confidence coefficient of Kappa = 0.91, which meets the high consistency criterion.

A chi-square test ($\chi^2 = 42.36$, $p < 0.01$) revealed significant differences among the influences (main categories). Integration of the cultural core (32.1%) and high perceived efficacy (25.4%) constituted the core dimensions, with an interaction effect explaining 57.5% of the variance ($F = 10.12$, $p < 0.001$). It is worth noting that the effect of symbol translation validity (19.3%) was significantly higher than that of creative technique and style (7.8%), suggesting the key role of Wuxia cultural symbols in character design (Table 3).

Selective coding

Selective Coding is another integration and refinement of the content formed by Axial Coding, i.e., to excavate the “core category” that can unify other categories from the main category, to clarify many conceptual categories and their intrinsic connections, and the analysis was continuously focused on those codes related to the core categories. Through in-depth analysis of the five main categories of Wuxia culture kernel presentation, Character Symbol Translation Effect, Audience Perceived Effectiveness Feedback, Creative techniques and style, Market and Industrial Environment, the core category of “cultural representations of Wuxia animation characters” is finally extracted. And on this basis, a model of cultural representation formation mechanism of Wuxia animation characters was constructed (Figure 2). The “story line” around the core category can be summarized as follows: Wuxia animation constructs a character image rich in cultural symbols through the inheritance of cultural kernel and symbolic translation. Under the dual role of market demand and technical support, the character symbols are constantly adjusted to meet the audience’s emotional resonance and cross-cultural communication needs, and ultimately realize the effective dissemination and export of Wuxia culture.

Theoretical saturation test

By supplementing the interviews with 8 animation industry insiders and 8 martial arts culture enthusiasts, newly acquired concepts such as “degree of integration of oriental ink wash aesthetics” and “infectious power of martial arts music” can be incorporated into the existing coding system. No new categories have emerged, confirming that the model has reached theoretical saturation.

Table 1. Open coding (selected examples)

No	Generalization	Initial concepts	Example of a typical presentation
BB01	Wuxia Values Transmission	Chivalrous behavioral norms, value conflict management, animated narrative perception, and educational value perception	"The martial arts warrior acts with chivalry and righteousness without seeking rewards"; "He chooses morality and righteousness in the face of the temptation of profit"; "In the animation, Rainbow Cat and the others talk about honesty and loyalty, which is in line with the values of traditional Chinese Wuxia"; "Wuxia animation can guide children to establish correct moral concepts and distinguish between good and evil".
BB02	Chivalry Interpretation	Sacrificial Spiritual Manifestations, Revenge and Forgiveness, Traditional Chivalry, Innovations in Chivalry	"He was willing to sacrifice himself for his friends"; "He eventually chose to let go of his hatred"; "I think the spirit of martial arts is about justice, chivalry, and taking responsibility to punish evil and promote goodness"; "I like the kind of characters that have both traditional chivalry and modernity Their choices are more in line with the values of people nowadays".
BB03	Jianghu world building	Jianghu Ethics and Rules, Regional Cultural Influences, Jianghu Legends and Stories, Martial Arts Cultural Perceptions	"The Jianghu world in the animation is very attractive with the atmosphere of ancient martial arts"; "The style of the Western martial artist is more radical"; "Legends about him are circulating in the Jianghu"; "This Wuxia animation makes me understand what is the Jianghu what is morality and perseverance".
BB04	Integration of historical and cultural heritage	Cultural symbols and symbols, historical background integration, allusion to historical events, dynastic cultural symbols, symbols of historical sites	"I know that there are schools of martial arts, such as Shaolin and Wudang, and they each have their own stunts"; "I learned that the culture of Wuxia has different characteristics and manifestations in different historical periods"; "The battles in the animation remind me of a certain war in history "; "The costumes of the characters remind me of the Tang Dynasty style"; "The ancient city walls remind me of the past glory".
BB05	Characterization	Multi-faceted character presentation, character growth arcs	"This martial artist is cold on the surface, but actually very kind on the inside, with a very three-dimensional character"; "The character's transformation from cowardice to bravery makes it feel very real".
BB06	Symbolization of appearance	Appearance features and cultural symbols, appearance design styles, bucket symbols and symbols, hairstyle and personality relationship	"The appearance of characters in Wuxia anime often symbolizes identity and cultural background"; "I like the kind of Wuxia characters who have long hair and are valiant"; "Wuxia characters wear bucket hats to hide their identity "; "Characters with long hair look more spontaneous".
BB07	Costume props design	Costume symbolism, prop symbolism	"This ancient costume and of 's character cape Jing Tianming is very Wuxia style, which gives people a sense of immersion at a glance"; "I pay close attention to the costumes and props of Wuxia characters, like swords and masks, which have a very distinctive style."
BB08	Color Matching Ideas	Primary colors convey emotion, color symbolism and psychological cues	"The use of red to show the fervor and passion of is appropriate "the warrior; "The contrasting black and white color scheme highlights the character's inner world of good versus evil".
BB09	Symbols of movement and gesture	Symbolic expression of movement, kung fu stances featured, light kung fu symbolizes freedom, swordplay symbolizes determination, boxing symbolizes power	"His unique posture of drawing and striking the sword is so wuxia"; "I think the unique expression of kung fu stances is the highlight of Wuxia animation, such as the 18 th Palm of the Descending Dragon"; "The lightness of stepping on the snow without a trace makes me think of freedom "; "The moment he draws his sword makes me feel decisive"; "The character's punching technique strikes me with shock".
BB10	Depth of emotional resonance	Character temperament infection, plot and character suitability, family and national sentiment touch, character fate sympathy	"The cool temperament makes me feel his loneliness and sadness"; "The plot in the story fits the identity and character of this Wuxia character"; "The family and country sentiment shown touches me and gives me a deep sense of realization "; "I sympathize with the rough fate of certain characters and will grieve along with them".

The table shows only a representative selection of codes; the full code tree contains 18 categories and 56 initial concepts).

Table 2. Axial coding system

Serial number	Main category	Subcategory	Reference points	Example of a typical presentation
CC01	Wuxia Culture Kernel Presentation	BB01 Conveyance of Wuxia Values	68	"The concept of punishing evil and promoting good in the animation makes me feel the justice of Wuxia."
		BB02 Inherit the spirit of "Xia"	50	"The protagonist sticks up for his friends, that's "Xia"."
		BB03 Jianghu World Building	64	"That mysterious Jianghu sect setting is so intriguing."
		BB04 Integration of historical and cultural heritage	48	"The costumes and etiquette of the characters gave me a strong sense of history and culture."
CC02	Character Symbol Translation Effect	BB05 Characterization	27	"I was moved by the protagonist's growth from cowardice to determination."
		BB06 Symbolization of Appearance Styling	36	"The protagonist's swords and eyes look like a warrior at first glance."
		BB07 Costume Props Design	28	"The warrior's cape flutters in the wind in a very Wuxia manner."
		BB08 Color Matching Ideas	23	"The use of cooler tones to show the sinister nature of the villainous characters works well."
		BB09 Movement Posture Symbol	24	"His sword moves are clean and enjoyable to watch."
CC03	Audience Perceived Effectiveness Feedback	BB10 Level of emotional resonance	86	"It was heartbreaking to see the protagonist's despondent look."
		BB11 Role Identity	54	"Seeing the protagonist do his duty, I identify with his values."
		BB12 Cross-cultural discount rate	42	"Foreign friends also like to watch these Wuxia animations, they find it very refreshing."
CC04	Creative Techniques and Styles	BB13 Animation Production Process	30	"Smooth fight sequences, very well made"
CC05	Market and Industrial Environment	BB14 Art Style Positioning	26	"Realistic style scenes feel more real to me."
		BB15 Audience Needs Preferences	30	"I just love the traditional Wuxia style of animation."
		BB16 Communicating Impact	24	"When I saw the clips in the short video, I immediately wanted to watch the main movie."
		BB17 Industry Competitive Landscape	35	"The this production characters in than are more distinctive other Wuxia anime."
		BB18 Policy-led support	22	"The country's support for traditional cultural animation makes me look forward to future works."

RESULTS

Core Elements of the Mechanism of Cultural Representation Formation

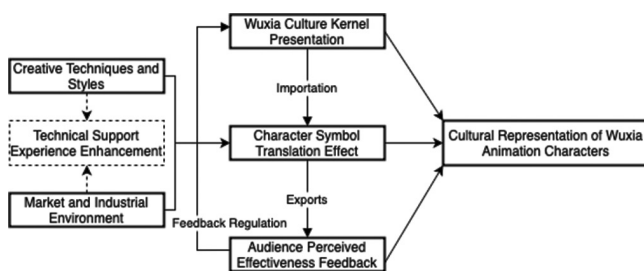
A three-level coding analysis grounded in grounded theory was conducted to construct a model of the mechanism for the formation of the cultural representation of Wuxia animation characters. This model encompasses five core elements and 18 specific factors. The following detailed analysis provides a comprehensive examination of the structure and salient points of the mechanism for the cultural representation of Wuxia animation characters.

Integration of the Wuxia Cultural Core

The Wuxia cultural core is instrumental in shaping the character's moral values and cultural identity through the transmission of chivalrous spirit, moral codes of the rivers and lakes, and historical and cultural symbols. A prime example of this is the character's choice between loyalty and sacrifice in a pivotal plot. This choice not only exemplifies the traditional chivalrous spirit but also subtly influences the audience's understanding of justice and morality. Data analysis demonstrates a significant positive correlation between the transmission of the chivalrous spirit and the audience's sense

Table 3. Distribution of data on key factors

Main category	Frequency of high-frequency words (times)	Percentage (%)	SD	Typical association path
Wuxia culture kernel presentation	230	32.1	4.5	Wuxia morality→Transfer of cultural symbols→Internalization of values
Audience Perceived Effectiveness Feedback	182	25.4	3.9	Emotional resonance mechanisms→Paths of Cultural identity→Communication influence
Character Symbol Translation Effect	138	19.3	3.1	Character symbols→Appearance symbolization→Cultural symbol understanding
Market and Industrial Environment	110	15.4	2.0	Market demand preferences→Communication strategy effectiveness→Industry synergies
Creative techniques and style	56	7.8	2.5	Technological Innovation Path → Style Symbolization → Cultural Communication

**Figure 2.** A Model of formation mechanism of cultural representations of Wuxia anime characters

of identity with the character ($r=0.68$). Furthermore, the strengthening of the chivalrous spirit has been shown to effectively enhance the audience's identification with the character. Concurrently, the extent of integration of historical and cultural heritage is found to be significantly associated with the degree of emotional resonance ($\beta=0.71$, $p<0.01$). A profound historical and cultural heritage has been demonstrated to effectively enhance the audience's emotional resonance. The transmission of this cultural core has been shown to elevate Wuxia animation beyond its entertainment function, thereby possessing the potential to contribute to educational value.

Role Symbol Translation Effect

The effect of character symbol translation is primarily reflected in the cultural symbolic function of symbols such as appearance, clothing, and actions. For instance, the symbolic clothing of a character often directly points to their identity and cultural background, and swordsmanship and weapons symbolize different cultural values and codes of conduct. This symbolic translation not only helps to intuitively convey cultural symbols, but also implicitly strengthens a sense of cultural identity. The study found a positive correlation between the accuracy of appearance symbolization and communication influence, suggesting that accurate appearance symbols can effectively enhance the communication effect of the animation. Furthermore, the level of world-building in the Wuxia world is positively correlated with the sense of character identity ($OR=2.87$), indicating that a rich and detailed Wuxia world can increase the audience's love and identification with the characters.

Audience Perceived Efficacy Feedback

This efficacy is primarily manifested through emotional resonance and cultural identity. When an audience aligns with the chivalrous spirit of a character, it frequently fosters a heightened sense of cultural identity. For instance, a narrative where the protagonist selflessly sacrifices himself to uphold justice often elicits a profound emotional response in the audience, thereby promoting the acceptance and dissemination of cultural symbols. Research findings indicate a positive correlation between audience emotional resonance and market audience demand preferences ($r=0.56$). Animations that elicit emotional resonance are more aligned with market demands. Furthermore, character identification exhibits a negative correlation with industry competition, suggesting that enhancing character identification can contribute to enhancing the competitiveness of the work within the industry.

Creation Techniques and Styles

Creation techniques and styles play a pivotal role in the cultural representation of characters. For instance, the employment of realistic styles renders historical and cultural symbols more realistic and believable, while abstract styles and symbolic techniques grant cultural symbols greater interpretive potential. Moreover, the utilization of technical means, such as motion capture and special effects rendering, not only augments the efficacy of symbol translation but also enhances the appeal of cultural communication. Research has identified a negative correlation between the complexity of animation production processes and the simplicity preferred by market audiences ($r=-0.45$), thereby reflecting the "complex process - simple demand" paradox.

Market and Industrial Environment

The market and industrial environment is a determining factor in the acceptability and communication effect of cultural symbols in commercial communication. For instance, a symbol simplification strategy targeting the international market has enhanced the cross-cultural communication power of Wuxia culture by reducing the cultural discount

rate. Concurrently, the support of industry policies and the guidance of market demand have inadvertently shaped the cultural representation path of Wuxia animation, promoting its gradual extension to a wider audience while maintaining the core of traditional culture. The research also found that there is a U-shaped relationship between the degree of embodiment of the traditional chivalrous spirit in the cultural core of Wuxia and the influence of animation communication. When the expression of the chivalrous spirit is both moderately strengthened and innovative, the influence of communication reaches a peak ($M=3.92$, $SD=0.58$).

Educational Paths Incorporated into the Formation Mechanism of Cultural Representations of Wuxia Animated Characters

Educational transmission of the cultural core

The chivalry and historical and cultural symbols in the Wuxia culture have clear educational functions, such as value transmission and moral education. The molding of Wuxia characters reflects the multiple influences of Confucian ethics, Taoist thought, and Buddhist philosophy under the influence of philosophical thought. Confucian ethics, for instance, underscores concepts of loyalty, righteousness, and benevolence, thus establishing a moral exemplar for Wuxia characters. Similarly, Taoist thought imbues Wuxia characters with a sense of freedom, allowing them to pursue individual values within the Jianghu. Buddhist philosophy, on the other hand, emphasizes transcendence of the self, endowing Wuxia characters with the capacity for self-sacrifice and epiphany. The intertwining of these philosophical tenets collectively shapes the spiritual core of Wuxia culture, which continues to evolve in modern narratives.

The spiritual underpinnings of Wuxia play a pivotal role in shaping contemporary social values. As social concepts evolve, modern Wuxia animation transcends the conventional framework of chivalry, embracing individual consciousness and diversified values. A case in point is Jing Tianming from “Qin Shi Ming Yue,” who undergoes a transformation from a rebellious youth to a man committed to the mission of his family and country. This narrative not only perpetuates the time-honored concept of “cultivating oneself and keeping the family in order, ruling the country and leveling the world,” but also resonates with contemporary society’s acknowledgment of personal challenges and self-actualization. In the process of extracting the cultural connotation of Wuxia, it is possible to select the appropriate kernels, such as benevolence and righteousness, courage and righteousness, and moral tension, in accordance with the context of the times. This facilitates the shaping of clear values and forms a subtle educational effect in the audience.

Educational function of market conditioning and audience feedback

The Wuxia culture kernel realizes the educational transmission of cultural symbols through the words and deeds, clothing, and symbolic representations of the characters.

At the same time, the market environment enhances the acceptance of Wuxia cultural symbols through symbolic simplification strategies and support from industrial policies, thereby promoting the effective play of the educational function. Audience feedback, through emotional resonance and cultural identity, further strengthens the educational role of cultural symbols. For example, there is a positive correlation between the audience’s sense of role identity and market demand, indicating that the realization of the educational function is inseparable from the regulatory role of the market.

When the audience empathizes with the chivalrous spirit shown by the characters, it is often accompanied by an increase in cultural identity. Studies have found that not only does character identification affect the audience’s acceptance of cultural symbols, but it also determines to some extent the communication effect of Wuxia animations.

By statistically analyzing the frequency of cultural elements in the feedback data from the previous review post on outstanding Wuxia animations, the results show that cultural symbols such as costumes, weapons, actions, and sects appear frequently in Wuxia animation reviews, showing a high degree of cultural identity. Figure 3 shows the frequency statistics of these cultural symbols in the feedback data. Audience response actually provides an important reference for creators: through feedback mechanisms such as test screenings and surveys, producers will optimize the plot and characters to make the work more in line with audience expectations. This feedback loop ensures that the cultural core can be presented in a way that is pleasing to the audience and guarantees the effectiveness of educational communication.

Educational potential of technical support and symbol translation

Media plays a supporting role in cultural representation. Through exquisite animation techniques and appropriate symbolic transformations, abstract cultural connotations can be visually and intuitively presented. For example, the classic character Sun Wukong has become a cultural symbol of kindness, bravery, and defiance of authority. Its image has been given the power of communication across languages through animation. The complex cultural concepts in Wuxia

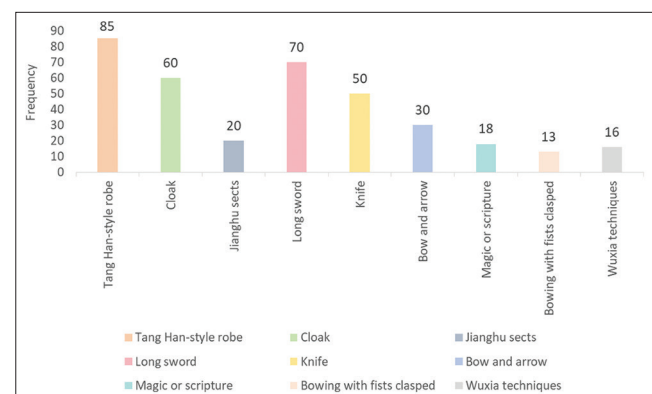


Figure 3. Frequency of occurrence statistics

animation can be more accurately communicated across cultures, reducing the cultural discount, so that the chivalrous spirit and martial arts aesthetics can be better understood by international audiences.

In addition to the animation production technology itself, technological innovations in communication channels have also enhanced its educational potential. For example, the rise of online platforms and streaming media has made it easier for Wuxia animations to reach audiences at home and abroad, which is a great help for the dissemination of cultural education. In addition, the application of technologies such as VR and AR allows audiences to experience the world of Wuxia in a more immersive way, which not only enhances the interactivity of cultural symbols, but also improves the fun and engagement of education. For example, through a VR interactive system, the audience can 'enter' the animation scene and experience the logic of the actions and cultural background of the Wuxia characters for themselves, thus deepening their understanding of the chivalrous spirit and traditional values.

DISCUSSION

The core elements of cultural representation are closely connected, constituting a complete closed loop of the "educational path" of the character's cultural representation. First of all, the cultural core is the source, which determines the spiritual connotation carried by the animation character; this connotation needs to be symbolically translated and technologically presented in order to enter the text of the work. In other words, technical support and symbolic translation transform the cultural kernel from abstract ideas into concrete audio-visual language, realizing the process of "coding" and giving the work aesthetic infectious power and cross-cultural communication power. Next, the audience "decodes" these symbols and episodes through watching the animation, and then understands and experiences the values and emotions embedded in the cultural core. In this process, the audience's acceptance and feedback in turn influence the creators to "adjust" and improve the content presentation. For example, the Wuxia animation "Qin Shi Ming Yue" adopts a realistic and aesthetic route closer to adult aesthetics in its modeling style to cater to the tastes of teenagers and adult viewers, which has successfully broadened the audience; its characterization highlights the spirit of chivalry and the depth of human nature, which inspires the audience's empathy and also verifies the effectiveness of the transmission of the cultural core. The audience's favorites and evaluations enable the creators to understand which elements are the most effective in conveying cultural connotations, so that they can strengthen these elements and discard the shortcomings in the sequel. Audience feedback, as discussed in the context of Proxona, influences the evolution of content by enabling creators to transform static comments into interactive, multi-dimensional personas. This allows creators to engage with these personas to gain insights and refine content, as seen in "Qin Shi Ming Yue," where cultural and aesthetic elements are iteratively adjusted to resonate with audience segments (Choi et al., 2024). From this, it can

be seen that the cultural kernel is effectively transmitted to the audience through technical symbolic means, and evaluated and regulated through market feedback, all three of which are interlocked, together describing the educational transmission path of the cultural representations of Wuxia animation characters. In this complete chain, any deviation will affect the overall effect: without a cultural core, education is impossible to talk about; without excellent technology and symbol translation, it is difficult for cultural content to reach the audience vividly; ignoring the market and audience feedback, the transmission effect and continuous creativity cannot be guaranteed. Therefore, these three aspects are mutually supportive and indispensable, and together they contribute to the realization of cultural representation in Wuxia animation.

The educational path of cultural representation in Wuxia animation provides new possibilities for traditional cultural education. Future development needs to further combine technological innovation and educational needs in order to promote the modernization, dissemination and globalization of the influence of Wuxia culture.

CONCLUSION

Wuxia culture, as an important part of traditional Chinese culture, has formed a unique cultural system in many fields such as literature, art, martial arts, history and philosophy after thousands of years of accumulation. The rise of Wuxia animation has not only broadened the expression of Wuxia culture, but also promoted its modernization and international dissemination. Based on the analytical method of Grounded Theory, this study summarizes the mechanism of cultural representation of wuxia animation characters and constructs a model of the mechanism of cultural representation formation through the analysis of online comments and interview data.

The results of the study show that the cultural symbols of Wuxia animation not only influence the characterization, but also reconstruct the spirit of chivalry in the narrative strategy to adapt it to the modern social context. From the theoretical level, this study deepens the cross-study of visual culture and narratology, and provides new perspectives on how the animation medium constructs cultural identity. On the practical level, this study proposes an educational path that incorporates the mechanism of cultural representation, which provides a direction for animation creation, the cultural industry and educational communication.

However, this study still has some limitations. First, the study mainly focuses on Wuxia animation, and the comparison of the cultural representation and educational functions of other types of animation is not yet sufficient. Second, the study mainly relies on text analysis and interview data, and the measurement of audience acceptance still needs to be expanded. In the future, methods such as big data analysis and user behavior research need to be combined to obtain more comprehensive feedback.

In the future, with the development of digital technology, artificial intelligence and cross-media narratives, Wuxia animation will usher in more possibilities in cultural

reproduction and value construction. How to deepen the expression of Wuxia culture in the digital era so that it can continue to exert cultural influence in the global context is an important topic worthy of further exploration. This study not only provides a theoretical foundation, but also lays down an academic framework for subsequent practical exploration.

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