

## Dive Into the Past: Chinese Intangible Cultural Heritage Represented in Chinese Mobile Games

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### Abstract

This study delves into the representation of intangible Chinese cultural heritage in Chinese mobile games. Nowadays, even with huge economic potential, Chinese mobile games are still faced with negative comments, especially from parents. To develop their reputation, Chinese mobile games have portrayed considerate Chinese intangible cultural heritage (ICH). The representation of cultural heritage in video games has been a subject of discussion for a long time, while console and computer games and tangible cultural heritage have been at the centre of academic studies. Hence, we strived to investigate how Chinese ICH is depicted in Chinese mobile games. A thematic analysis was conducted on data collected through analytical gameplay of 30 Chinese mobile games selected from Apple's App Store and the Chinese TapTap platform. Our analysis indicates that Chinese ICH is represented in Chinese mobile games to fulfil the persona of game characters, to create a more engaging and immersive game world experience, to provide more intense combat moments, to offer visually enjoyable virtual goods, and to deliver culturally driven updates during traditional festivals. Among the various forms of Chinese ICH, Chinese traditional craftsmanship is found to be used most frequently because of the huge effort it requires to be mastered, which could be educational to players. Theatrical traditions were found to be depicted in most game elements because they combine visual, audio, and motional elements. Lastly, folk and classical literature is portrayed in Chinese mobile games to provide a narrative resource that culturally resonates with players.

### Keywords

Chinese culture; Chinese mobile games; intangible cultural heritage; cultural heritage representation

## 1. Introduction

Nowadays, smartphone hardware and software technologies are evolving to provide new opportunities for more exquisite visual design in mobile games, which supplements the flexibility and easy accessibility that mobile games are already gifted with. China, as one of the biggest markets for mobile games, has gained attention from leading Chinese game investment companies (“Why mobile games are so popular,” 2022). Even with their considerable economic potential, mobile games developed by Chinese game studios and initially played by Chinese players have to deal with negative reputations, especially from parents of teenagers (“Chinese parents look happy,” 2021). The debates on the harmfulness and worthiness of video games began decades ago (Haddon, 1988; Kirkpatrick, 2016). To develop their public image, Chinese mobile game studios have opted to portray a significant amount of Chinese intangible cultural heritage (ICH) in their games. These studios either adapted their previous computer games with a large slice of historical inspiration to mobile platforms, or created new mobile games with Chinese ICH as part of their design.

China enjoys a long history of cultural heritage, especially of the intangible variety, encompassing traditions, performing arts, social practices, festive events, and so on (UNESCO, n.d.). This provides abundant resources for game content creation. It is an effective way to disseminate Chinese ICH through new digital technology, which promotes China’s national reputation and stimulates cultural identities of Chinese players in mobile games (Edney, 2015; Fung, 2014). With the evolving reputation of Chinese mobile games and the growing depiction of Chinese ICH, it is socially relevant to understand how Chinese ICH is represented within these games.

Our previous systematic literature review on the representation of cultural heritage in entertainment video games (Que et al., 2023) showed that there has been a focus on tangible cultural heritage depicted in video games (e.g., Champion, 2020; López, 2021). We also found that there is a research orientation towards mainly Western culture in English-language academia. In terms of game platform, a large number of studies have focused on video games released on computer and consoles, while mobile games have received little attention. Therefore, in this article, we focused on Chinese ICH represented in Chinese mobile games by investigating 30 mobile games developed by Chinese studios. Our research was led by the research question:

RQ: How is Chinese ICH represented in mobile games developed by Chinese studios?

## 2. Video Games, Chinese Cultural Heritage, and Representation

### 2.1. *The Representation of Chinese Cultural Heritage*

Cultural heritage is understood as the social, historical, and aesthetic legacies that are inherited from generation to generation (UNESCO Institute for Statistics, 2009). Within cultural heritage, ICH refers to the “traditions and living expression inherited from our ancestors and pass[ed] on to our descendants” (UNESCO, n.d., para. 1). Chinese ICH representation in media has been explored in the fields of film, new media, and anime, while its representation in video games has received less attention. For example, Tan (2022) explored the potential of film as the carrier of Chinese ICH, Han and Sun (2024) investigated the innovative dissemination of Chinese ICH through the short-video platform TikTok as a kind of new media, while Wang (2021) analysed the depiction of Chinese ICH in some representative Chinese anime. In game studies,

especially in mobile games studies, Chinese academia has only discussed the potential of video games in representing Chinese ICH by investigating single games. For example, Cui et al. (2021) discussed the representation of Chinese Hangzhou cuisine in a light game based on the WeChat platform. Gao and Liu (2024) analysed how the game Honor of Kings (TiMi Studio Group, 2015) plays a role in disseminating Chinese ICH. Research on single games only provides results regarding limited game mechanisms and Chinese ICH aspects. Therefore, it is vital to conduct a comprehensive study on Chinese mobile games of mainstream genres with a systematic analysis of various aspects of Chinese ICH.

## 2.2. The Representation of Cultural Heritage in Video Games

Previous academic studies have extensively explored the representation of cultural heritage in video games. Based on the systematic literature review we conducted (Que et al., 2023), previous studies on the representation of tangible cultural heritage in video games paid special attention to the depiction of architecture (e.g., Champion, 2020; López, 2021; Wright, 2022), historical people (e.g., Dong & Mangiron, 2018; Yao & Chen, 2022), and minority populations (e.g., Miller, 2008; Nacher & Jankowski, 2021; Nijdam, 2021; Wills, 2021). Conversely, the representation of ICH in video games is less studied. Additionally, based on our review (Que et al., 2023), existing studies do not clearly distinguish between tangible and intangible cultural heritage, studying both aspects at the same time. Hence, there is an academic gap in the study of the representation of ICH specifically. Existing studies into the representation of ICH in video games focus their attention on the representation of historical times (e.g., Finney, 2017; López, 2021; Šisler et al., 2022). There are also a few studies into the representation of minorities' behaviours (e.g., Chism, 2020; Locke & MacKay, 2021) and languages (e.g., Kuin, 2016; Zabecki, 2019). In the English academic realm, studies mainly conduct research on Western cultural heritage represented in video games, such as the battlefields in Europe during the First and Second World Wars (e.g., Šindelář, 2022) and European myths (e.g., Bainbridge & Bainbridge, 2007; Šisler, 2017). Our literature review suggests that there are only a few studies focusing on the representation of cultural heritage in mobile games (e.g., Yao & Chen, 2022), leaving a huge academic gap in cultural heritage study.

## 3. Methodology

To investigate how Chinese ICH is represented in Chinese mobile games, we carried out a thematic analysis (Braun & Clarke, 2021). We used Apple's App Store and TapTap for game sampling. Apple's iPhone is famous for its huge player base and dominant market share among mobile game platforms (Haider, 2022). TapTap is the biggest platform for mobile games information, rankings, and gameplay guides in Chinese-speaking regions (King, 2024), making our sampling regionally embedded.

We conducted purposive sampling to collect mobile games for our analysis (Flick, 2007, Chapter 3). The following sampling criteria were taken into consideration: (a) the games are developed by Chinese companies; (b) they have evident representation of Chinese cultural heritage; and (c) they are listed in the top 50 ranking of 2024 and most recommended ranking in 2024 on the platforms. We opted for top-ranking mobile games for the considerable public attention they have gained. It is socially valuable to investigate how Chinese ICH is integrated into Chinese mobile games that are already successful in the market. Following these criteria, we selected 30 games for analysis. Among the sampled mobile games, role-playing games (RPGs) were the largest category (14/30). Other genres of games analysed were multiplayer online

battle arena games, dress-up games, simulation games, love games, real-time tactics games, and shooting games. In terms of continuity, most of the games (24/30) provide constant updates of new content and activities, while other games can be played offline.

To guide our data collection process, we adopted the “utilitarian” analytical play approach as described by Mäyrä (2008), in which analytical play links game content to a wider social, cultural, and historical context. This process requires special attention to “structural elements” like game rules and interaction with players, and “thematic elements” like representations of symbols and messages. With this objective, we gathered data from the three areas of study of game analysis raised by Fernández-Vara (2019), which are (a) the context in which the game content is released, (b) an overview of information about the game, and (c) the formal elements of textual and audio-visual representations. As such, we started data collection by gathering information on the selected games, including game genre, development engine and company, allowed number of players, and available server. We then recorded our gameplay, taking screenshots, video and audio recordings, and notes of those moments in the games in which we identified traces of Chinese ICH. Lastly, we gathered external and contextual data, including continuous game content released at special times of the year. We also gathered videos that the developers posted online for a better description of the ICH they depicted in the games.

The codebook for our analysis was drawn from the categorisation of Chinese ICH by the State Council of the People’s Republic of China (2008), consisting of 10 categories of ICH: (a) folk literature, (b) traditional music, (c) traditional dance, (d) theatrical tradition, (e) folk art, (f) traditional sports and entertainment, (g) traditional fine arts, (h) craftsmanship, (i) traditional medicine, and (j) folk customs. Under each category, there are Chinese national ICH cases listed with detailed descriptions provided, based on which we could effectively identify depictions of Chinese ICH in our listed games. We used this categorisation as our theoretical framework to identify the Chinese ICH depicted in our sampled games, and hence investigated how different categories of Chinese ICH are integrated into Chinese mobile games. For the detailed codebook that guided this research, please see the Supplementary File, Appendix A.

To analyse the collected data, we conducted a thematic analysis (Braun & Clarke, 2021) on Atlas.ti. Concretely, we started the analysis by familiarising ourselves with the gaming content we collected from analytical gameplay. We began our gameplay by collecting general information regarding the games in advance, which assisted us in estimating what kinds of Chinese ICH are expected to be identified in our selected games. We then conducted the analytical gameplay through different game elements to have a complete overview of the game content, such as observations of game characters, game world exploration, combat experience, and game store browsing. This was conducted to make sure there was nothing significant missing regarding Chinese ICH. The Chinese ICH elements identified were coded by documenting them with screenshots, video recordings, and audio recordings. The ICH elements, together with the associated game content, were coded together. Then, we identified the representation of Chinese ICH in the games with the assistance of the codebook. We continued by identifying the initial sub-themes of how Chinese ICH is integrated within the analysed games. Then, we reviewed all the sub-themes and developed them based on their similarities and differences. We finished the analysis by refining all the sub-themes and grouping them into bigger themes.

## 4. Results

This section presents the results of our game content analysis, encompassing the different categories of Chinese ICH identified in Chinese mobile games and how the categories are represented in the games under analysis. We have divided the results of our analysis into five main themes: culture-driven character design, culturally immersed players' game experience, culturally based combat game mechanics, culturally inspired virtual goods design for monetisation, and culturally based game updates. A coding tree with an overview of the themes and sub-themes identified is presented in the Supplementary File, Appendix B.

### 4.1. Culture-Driven Character Design

Fourteen out of the 30 games analysed integrate a variety of Chinese ICH in character design, including the position of characters in the game, their background story, and their skill design. This is commonly seen in mobile games with gacha mechanics which treat game characters as random items that players get from banners. It is also evident in RPGs where avatars of players serve different positions in a team.

#### 4.1.1. Folk Literature-Inspired Character Design

Folk literature, understood here as orally passed-on stories and mythologies, provides an abundant source of folk belief, traditional symbols, and motional traditions. These ICH elements are commonly used in Chinese mobile games' character design (8/30), especially in their skills design, usually to attribute them mysterious, heroic, and formidable characteristics. An example is Xiao, a character within Genshin Impact (miHoYo, 2020), a gacha game with various rare characters. He is a god-like character who has fought the demon and been affected by miasma. His persona is represented by a mixture of divinity and uncontrollable madness. Xiao's character design (see Figure 1) is inspired by a creature in Chinese folk literature that connects divine beings with monstrous spirits, namely Shanxiao, which caters to the sense of fatalism that Chinese people prefer



**Figure 1.** Character portraits of Xiao, Mao Xiangling, and Yunjin in Genshin Impact. Source: miHoYo (2020).

seeing in an immortal character. This mixed persona discussed in Chinese folk literature is borrowed both for his visual design and his skills design. When casting his elemental skill, there are tangled strokes of black and cyan blue boosted around Xiao's body. When casting his elemental burst, Xiao puts on a mask inspired by Chinese Nuo culture, and his skill motions are borrowed from Nuo culture's "demon dance," which shows his complex and powerful persona. As such, the borrowed folk literature is manifested in the visual, narrative, and motional character design, and it is commonly seen in Chinese mobile games, in which character levelling-up is one of the central mechanisms.

There are five other selected games that gain inspiration from Chinese folk literature for character design. For example, in the gacha RPG *Arknights* (Hypergryph & Studio Montagne, 2019), there is one species with the horns of Loong (Chinese dragon), which is a noble and powerful image in Chinese folk literature. In these games, rare characters are mostly designed as noble, heroic, and powerful, so game designers mainly use folk literature, especially folk mythology, for characters' background and skill design. This not only fits the expected strength of a rare character, but it also caters to the expected stereotypical image of immortals in Chinese culture.

Elements regarding immortal beings, demons, and monsters in folk literature help the games provide folk and exaggerated visual designs manifested in characters and their skills. The folk literature works are all used to fulfil the pre-established character personas in mobile games. Such character design shows the detailed research conducted by game developers, which enhances the cultural depth of these games and their characters.

#### 4.1.2. Traditional Craftsmanship-Inspired Character Design

Traditional craftsmanship encompasses the skills required for traditional crafts, and our analysis shows that such elements are also used in Chinese mobile games' character design. In five out of the 30 selected games, traditional craftsmanship cultural heritage is used as an inspiration for character design. Such implementation is shown, for example, in MMORPGs (massively multiplayer online role-playing games) and games with gacha mechanics. In the game *Moonlight Blade* (Tencent Games, 2020), one aspect of character design that is inspired by traditional craftsmanship is Tangmen, a kung fu school for avatars that is inspired by traditional Chinese wooden puppetry and robot-making. Concretely, avatars from Tangmen can use machine-building and puppet control to attack opponents. Another example is the character Mao Xiangling (see Figure 1) in *Genshin Impact* (miHoYo, 2020). She is designed to be a famous cook in the game. Not only is she gifted with Pyro (fire element) talent that is closely related to cooking, but also her elemental skill consists of a chilli pepper that boosts her damage capacity. The cultural elements of cooking and fire are hence integrated into the character design of Mao Xiangling.

Certain craftsmanship is selected by Chinese mobile games because of the popularity it enjoys. Cuisine and culinary traditions are the cultural pride of Chinese people and are deeply embedded into Chinese people's daily lives. Hence, Xiangling is culturally and emotionally connected to Chinese players. Additionally, wooden puppetry and robot-making represent the long history of sophisticated Chinese craftsmanship, so Chinese mobile games use them in character design to show how certain kung fu avatars are powerful and maestros in building tools for combat.



#### 4.1.3. Theatrical Traditions-Inspired Character Design

Theatrical traditions refer to traditional Chinese live performing traditions, such as singing, dancing, and dialogues. Traditional Chinese dramas and operas are sometimes used by Chinese mobile game designers as inspiration for character design (4/30). Representations of Chinese theatrical traditions are related to the design of RPGs' characters, especially within those games with gacha mechanics. Concretely, Chinese mobile games tend to borrow the whole identity of theatrical performers to design the background story of their characters. For example, Yunjin, a character from Genshin Impact (miHoYo, 2020), is inspired by the well-known Beijing Opera (see Figure 1). Her moves, including elemental skills, idle pose, and figure expression, were all inspired by the Beijing Opera. The game also dedicated a cut scene to her Beijing Opera performance that summarised a side-quest narrative.

Another example of theatrical tradition-inspired character design was found in MMORPGs, in which the avatars are often treated as players themselves. In this case, the use of theatrical traditions as design inspiration is relatively indirect. In the game A Chinese Ghost Story (NetEase, 2016), a damage dealer role that players could choose is called Zhankuang (Berserker). To cater to Zhankuang's image of fanaticism, the designers were inspired by a famous part of traditional Chinese Kun Opera, Ye Ben (Fleeing by Night), which illustrates a heroic story and includes many masculine, strong, and wide-open moves. The game used these moves as Zhankuang's attacking motions. Theatrical traditions combine visual, audio, and motional features, from which there could be lots of elements used in games. Chinese theatrical traditions enjoy a long-lasting reputation but low audience attention in legacy media. Hence, integration of theatrical traditions brings about more media exposure and could be educational for gamers.

## 4.2. Culturally Immersed Players' Game Experience Design

Twelve out of the 30 Chinese mobile games analysed take inspiration from Chinese ICH for players' game experience design. This is mostly seen in RPGs where an immersive game world is needed for players to explore. It is also evident in simulation games where the game world itself is designed for players to plan and run. In the following sections, we discuss how the design of the game experience is inspired in Chinese mobile games by oral expressions, classical and folk literature, and traditional craftsmanship.

### 4.2.1. Oral Expressions for Nostalgia

Oral expression is understood as a cultural heritage only passed on through human voices. In our analysis we identified that Chinese dialects are frequently used in the game world design of Chinese mobile games (7/30). For example, Treacherous Waters Online Mobile (NetEase, 2022) entails a story taking place in China's Song dynasty when China's capital cities were Kaifeng and Hangzhou. In the game, these two cities are depicted with detailed cultural elements. While exploring these cities, players can encounter non-player characters (NPCs) that speak the dialects of the local regions represented as well as NPCs that are travellers from other regions who speak different dialects. In total, Treacherous Waters Online Mobile (NetEase, 2022) uses over 20 different dialects to depict a rich game world in which players can find connections to their hometowns' oral expressions. This way, it creates a game experience that is culturally close to players' identity. Hence, the game serves as a virtual space to fulfil the players' nostalgic needs.

Following the same logic, oral expression is also included in simulation games. In the game *Canal Towns* (Coconut Island Games, 2020), players are required to plan a city and upgrade it to a prosperous region in China's Ming dynasty. The NPCs in this game are either historical people or fictional characters that can work for the players. Some characters in *Canal Towns* (Coconut Island Games, 2020) speak certain dialects to cater to their persona. For example, a florist in this game speaks Shanghai dialect and starts the conversation by complimenting the players. This portrays a calculative image of the florist who is good at running a business, because Shanghai people have a stereotypical image of being calculating and strict in budgeting. Dialects have a clear directivity towards people from a certain region, which helps create a vivid and lively persona for NPCs. This NPC design approach fosters a more attractive game experience for players.

#### 4.2.2. Classical and Folk Literature for Familiarity

Traditional literature, either classical or folk literature, provides abundant sources of inspiration for narratives, game world settings, and historical background design. Hence, Chinese mobile games with a huge budget, such as those developed by Tencent and NetEase, tend to choose classical and folk literature as the inspiration for the design of the game world experience for their RPGs. Open-world game design not only requires a tangible world to be explored, but also an attractive narrative that players follow willingly. To fulfil this goal, some Chinese mobile games (3/30) used classical and folk literature for world design.

For example, *A Chinese Ghost Story* (NetEase, 2016) is inspired by the Chinese classical book *Strange Stories in Oriental Society*, entailing stories of Chinese ghosts and spirits. The game is inspired by a chapter in the book about how a female ghost falls in love with a scholar, and it includes several well-known plots of the story in the game. This directly triggers players' familiarity with the original story, which makes the game story easier to comprehend and accept.

Another example is the game *Moonlight Blade* (Tencent Games, 2020), which has a game setting and narrative inspired by the famous folk book *Moonlight Blade*. This MMORPG requires the players to select a school of kung fu and follow the narrative by treating the avatar as themselves. Most of the kung fu schools represented in the game are mentioned in the original novel, and the narrative of the game follows a typical Chinese combat within martial brotherhood. Hence, we can conclude that Chinese literature is clearly represented in several mobile RPGs. All the classical literature works are well-known classics in China. By adopting the narrative and background settings that players are already familiar with, these mobile games aim to connect with the gamers right at the start of the gameplay.

#### 4.2.3. Traditional Craftsmanship for Education

We previously discussed how traditional craftsmanship is used as a source of inspiration for character design in Chinese mobile games. In this section, we discuss how traditional craftsmanship is used in these games to enhance the game experience, namely by providing an experience that can be educational for players, which we identified in five games out of 30.

In most MMORPGs analysed, such as *Treacherous Waters Online Mobile* (NetEase, 2022), *A Chinese Ghost Story* (NetEase, 2016), and *Moonlight Blade* (Tencent Games, 2020), the weapon cultivation system is inspired by traditional Chinese craftsmanship (see Figure 2). A common situation identified in these games is





**Figure 2.** Blacksmith system in Treacherous Waters Online Mobile. Source: NetEase (2022).

that players are required to go to a blacksmith with the weapons and resources collected. These games then provide an interface designed with elements of fire, coal, and hammer in which players can experience how traditional craftsmanship manual skills and knowledge are used. The craftsmanship of weapon cultivation is designed as a vital game mechanic that is strongly connected to players' damage capacity. The players need to experience this process frequently in gameplay, resulting in training themselves with blacksmith skills and traditional weapon-making.

Compared to oral expressions and literature, most forms of Chinese traditional craftsmanship are rarely seen in daily life. However, some Chinese mobile games still opted to include them in their game world for players to experience. An example of such implementation is the game Canal Towns (Coconut Island Games, 2020), a city-planning simulation game. To gain certain resources, players are required to set up several optional factories for production. Three options in the game are mother-of-pearl production, a Yue porcelain kiln, and a paper-making mill (see Figure 3). Players are asked to participate in the production process of these crafts and use them to upgrade their city. These forms of craftsmanship are either rarely seen in people's daily lives,



**Figure 3.** Mother-of-pearl production, Yue porcelain kiln, and paper-making mill in Canal Towns. Source: Coconut Island Games (2020).

or people are so subconsciously accustomed to using these crafts in daily life that they rarely think about how these crafts are made. As such, while catering to the mechanics of simulation games and supplementing the world design, the inclusion of unknown craftsmanship serves the purpose of educating players.

### 4.3. Cultural-Based Combat Game Mechanics

In-game combat is one of the most essential mechanics in RPGs and real-time tactics games, as it is a way to demonstrate players' strength. In 14 out of the 30 games analysed, several audio-visual combat elements were found to be inspired by Chinese ICH. These traditional cultural elements were represented within combat game mechanics that are intense and eye-catching. In the next paragraphs, we discuss how combat game mechanics design in Chinese mobile games is inspired by traditional music and arts, and motional traditions.

#### 4.3.1. Mix of Traditional Music and Traditional Arts for Combat Tension

In Chinese mobile games, it is common that a combination of in-fight music with quick and strong beats is played when the players encounter combat during gameplay. When the combats take place in games with a Chinese story background or in regions inspired by Chinese culture, traditional Chinese music is used to create tension between the players and their opponents. For example, in the turn-based RPG *Honkai: Star Rail* (miHoYo, 2023), Xianzhou Luofu (God ship Luofu) is a spaceship inspired by Chinese culture. When fighting against the main boss Huanlong (Phantylia, a leader of the Antimatter Legion) on this map, *Star Rail* (miHoYo, 2023) adopts the singing of the Chinese Dong ethnicity with their own language. This singing imitates the sound of nature to create a wide and holy atmosphere. In this game, it is used during the battle to represent a huge contrast between the protagonist and the enemy Huanlong to highlight the huge difficulty of beating the latter, thereby exaggerating the tension in this combat.

Visual elements are also used to intensify combat. One way of achieving this goal is by representing traditional arts in a fight. For example, the shape of the three-legged crow is borrowed from the famous *Sun and Immortal Birds Gold Ornament*, and it is placed in the special visual effects when the character Haiyue is fighting others in *Honor of Kings* (TiMi Studio Group, 2015; see Figure 4 in this article), while Chinese arts elements like auspicious clouds and landscape paintings are commonly seen in mobile games with combat



**Figure 4.** Character portrait of Haiyue in *Honor of Kings*. Source: TiMi Studio Group (2015).

elements, such as Honkai: Star Rail (miHoYo, 2023), Wuhua Mixin (Cipaishe Studio, 2024), and Genshin Impact (miHoYo, 2020). Chinese traditional arts provide abundant resources for arts patterns and cultural symbols, which are suitable for being borrowed into detail designs for visuality. These elements are usually mixed into fights to create dazzling visual experiences, stimulating the visual senses of players. Hence, at the same time that they enhance cultural depth with visual inspirations, these games increase the tension during combats to stimulate players' excitement.

#### 4.3.2. Motional Traditions for Fighting Moves

Motional elements are inevitably a centre of game design during combats. Some of the Chinese mobile games analysed (11/30) include fighting moves inspired by a variety of Chinese traditional moves. This finding is firstly evident in most MMORPGs, such as Treacherous Waters Online Mobile (NetEase, 2022), Fantasy Westward Journey (NetEase, 2015), and Moonlight Blade (Tencent Games, 2020). The optional schools of kung fu available for players at the start of the gameplay have their unique weapons and martial characteristics, such as blades, spears, and swords. As such, martial moves using these weapons of traditional Chinese kung fu are used in the schools that are part of the game.

A second source of inspiration in Chinese motional tradition was found in five RPGs where theatrical moves are used in motional design for combat. For example, the character Yunjin in Genshin Impact (miHoYo, 2020) is designed to be a Beijing Opera performer. Hence, her fighting moves are all inspired by the female warrior role in the Beijing Opera. This shows that motional elements from Chinese ICH used in combat move design do not only supplement the cultural depth of combat moments in these games, but also fulfil the visual needs required by fighting scenes, namely to be gorgeous and elegant.

#### 4.4. Culturally Inspired Virtual Goods Design for Monetisation

Given the free-to-play mechanic that most Chinese mobile games share, visually decorating items have become their main source of monetisation. This only changes the exterior of game avatars, so in most cases players do not rely on in-game purchases to get stronger. Our analysis shows that Chinese mobile games' virtual goods design is often inspired by Chinese ICH (18/30). This is often seen in dress-up games and mobile games with character design as their focus. In the next paragraphs, we discuss how virtual goods design in Chinese mobile games is inspired by traditional literature and fine arts.

##### 4.4.1. Traditional Literature-Inspired Virtual Goods

Traditional Chinese literature, including classical and folk literature, usually contains detailed descriptions of characters' costumes, some of which have become classics in Chinese people's minds. In eight out of the 30 games analysed, we identified purchasable costumes that are inspired by Chinese literature. For example, the dress-up game Miracle Nikki (Papergames, 2015) includes the classical costumes of three main characters in the novel *The Story of a Stone*, which is one of the four greatest classical literature books in China (see Figure 5).

This phenomenon is also evident in multiplayer online battle arena games, in which there are usually dozens of characters available. For example, the game Honor of Kings (TiMi Studio Group, 2015) got inspiration from



**Figure 5.** Clothes design inspired by *The Story of a Stone* in *Miracle Nikki*. Source: Papergames (2015).

the classical novel *Journey to the West* and put several famous characters from the novel into its “heroes pool.” This game follows the appearance, used weapons, and character audio that are described in the novel, providing an authentic audio-visual representation of these characters. By getting inspiration from Chinese traditional literature for exterior character design, Chinese mobile games gain cultural and historical depth and aim to build connections with gamers more quickly.

#### 4.4.2. Fine Arts-Inspired Virtual Goods

Chinese mobile games also use fine arts and traditional music to decorate the virtual goods they sell. This is commonly seen in most MMORPGs where they sell avatar costumes in their in-game stores, and these costumes are inspired by elements of Chinese fine arts. For example, *Moonlight Blade* (Tencent Games, 2020) offers players a variety of clothes as virtual goods that integrate properties of Chinese fine arts in their design, such as the colour of Chinese blue-and-white porcelain, the ice cracks on Chinese porcelain, and Chinese calligraphy.

Another example is how the game *Treacherous Waters Online Mobile* (NetEase, 2022) represents famous Chinese landscape paintings in its clothes design. This strategy is also seen in dress-up games, in which, for example, *Miracle Nikki* (Papergames, 2015) collaborated with the Suzhou Museum, using the fan calligraphy by Wu Kai from the Qing dynasty on its clothes design. Using arts in virtual goods design adds to the artistry of games’ exterior, and also helps to disseminate this part of Chinese culture.

Many virtual goods with inspirations from Chinese ICH focus primarily on visual exterior design, such as costumes, make-up, and weapon decorations. Different from other microtransactions of virtual items that increase players’ damage capacity, exteriors only affect the appearance of characters. Chinese literature and fine arts contribute to a deeper cultural significance in the artistic visuality. Thus, visuality and cultural depth together create a greater attractiveness of in-game visual purchases. Therefore, the players pay for the visuality instead of the damage capacity, which effectively protects those who only spend minimally.



#### 4.5. Culturally Based Game Updates

To gain long-lasting user activity and monetisation, most Chinese mobile games provide regular updates with new narratives and time-limited activities. We identified how Chinese mobile games get inspiration from Chinese traditional festivals to design timely updates (15/30). During the Chinese New Year, for example, some folk arts and festival customs are represented in these games.

##### 4.5.1. Folk Arts for Nostalgic Engagement

Folk arts are made by ordinary people and generally appreciated across all layers of the population. In eight out of the 30 games analysed, we have identified that Chinese mobile games get inspiration from Chinese folk art to depict an accessible and down-to-earth festive atmosphere. During periods coinciding with Chinese festivals, Chinese mobile games use folk arts as inspiration for the design of in-game activities and specific user interfaces, aiming to create a sense of nostalgia. For example, the game Genshin Impact (miHoYo, 2020) uses shadow play as an activity for players to enjoy. Shadow play is deeply embedded within Chinese New Year custom, but it is rarely seen in contemporary life. The game used shadow play to design the interface of time-limited activities for the Chinese New Year in 2023, namely the Lantern's Rite in the game (see Figure 6). An update was released during the Chinese New Year in 2024, which involved bright colours in lantern paintings and Chinese New Year paintings, together with the Chinese symbols of fire,



Figure 6. User interface for Lantern's Rite in Genshin Impact. Source: miHoYo (2020).

lotus, and mountains, to represent a prosperous society and create a celebrative atmosphere. The folk arts selected for these “festive updates” are commonly seen every Chinese New Year, affirming the Chinese festive traditions and customs and providing a wholesome and immersive festival experience for their players.

#### 4.5.2. Festival Customs in Time-Limited Activities

Chinese festive customs are also identified in mobile game updates. They occur in eight out of the 30 games analysed and include the representation of cultural activities and traditional performances of Chinese traditional festivals.

For example, players could participate in a dragon dance with their friends in the game *A Chinese Ghost Story* (NetEase, 2016; see Figure 7 in this article) during the 2024 Chinese New Year update. The game also used the godlike symbol of a dragon to offer players a ride which was a time-limited reward only available during the 2024 New Year celebrations. Another game that uses traditional festival-inspired updates is *Genshin Impact* (miHoYo, 2020). This game specially designed a new character who is a professional lion dancer. It also integrated the traditional Chinese lion dance into a time-limited activity for players to compete against each other, which was again only available during the New Year celebrations.

The representation of festival customs is mostly seen in mobile games where there is an avatar controlled by players. An avatar representing players’ identity is expected to create a deeper sense of immersion when players participate in the time-limited activities during special festivals. Combined with the online promotion video data, we found that these games chose classic and well-known traditional Chinese festival customs in order to promote Chinese culture, such as the dragon dance, lion dance, lantern riddles, and shadow play. Integrating these customs with game elements is used to connect to players’ emotional needs for entertainment, family union, and nostalgic feelings during these periods.



**Figure 7.** Dragon dance activity in *A Chinese Ghost Story*. Source: NetEase (2016).



## 5. Conclusion

This study aimed to answer the research question of how Chinese ICH is represented in Chinese mobile games. A thematic game content analysis of 30 Chinese mobile games was conducted to investigate how different categories of Chinese cultural heritage are represented in these games, including in-game character design, players' game experience design, combat mechanics, virtual goods design, and game updates. This empirical study contributes to fill in the research gaps raised in our previous systematic review (Que et al., 2023). Concretely, it supplements the academic gap whereby most related studies focused on a tangible aspect of cultural heritage depicted in video games. Additionally, we focused on analysing mobile games, which fills the academic gap whereby mobile games have been ignored by most cultural heritage studies. Lastly, we provided a non-Western perspective of cultural heritage study, filling the gap whereby most relevant studies have focused on American and European cultural heritage.

Our analysis firstly showed that Chinese mobile games get inspiration from Chinese folk literature, craftsmanship, and theatrical tradition to design the background story and skills for their game characters. This is especially manifested in the design of the moves and visual effects of game characters. Secondly, we found various forms of ICH represented in players' game experience design in Chinese mobile games, including oral expression, folk literature, and traditional craftsmanship. These elements of cultural heritage are manifested in both the general narrative background and detailed daily experience in the game world. Thirdly, we identified elements from traditional Chinese music, arts, and motional traditions represented during the combat scenes in Chinese mobile games. These audio-visual elements are mixed in combat game design to bring an intense and exciting fighting experience. Fourth, we found uses of traditional literature, fine arts, and traditional music in Chinese mobile games for monetisation purposes. Lastly, we found Chinese traditional festival-related ICH represented in the updates of some of the Chinese mobile games analysed, including folk arts and festival customs. They are used to design time-limited activities and interfaces during Chinese traditional festivals, with the purpose of increasing user interactivity at special times of the year.

Our analysis suggests that Chinese mobile games largely focus on depicting traditional Chinese craftsmanship, theatrical traditions, and literature. Craftsmanship requires years of dedication and is rarely seen in daily life. By integrating craftsmanship into game mechanics, these games invite the players to participate in the production of crafts, which serves the purpose of educating players and disseminating Chinese culture. Secondly, theatrical tradition encompasses music, dance, cultural symbols, and classical stories. Functionally, it is convenient for games to integrate these elements in character design, combat design, and clothes design. Culturally, different Chinese theatrical traditions have their own origins, which demonstrates China's regional characteristics. The historically significant theatrical traditions receive low audience attention in legacy media. Using theatrical elements in games offers more interactive moments in games and educational knowledge to the games. Lastly, Chinese traditional literature is largely used in RPGs for background narrative and experience design. Stories already exist in classical literature, and they are mostly known to the players. This is considered economical to game designers in terms of time and money. Besides, the cultural and historical value of classical literature is educational to the players by creating an interactive world experience for players to immerse themselves in. These three categories of Chinese ICH are largely represented in Chinese mobile games, while other categories mentioned in our theoretical framework gain less representation in our selected games, especially traditional medicine and Quyi.

The results of this study are guided by the theoretical framework provided by the State Council of the People's Republic of China (2008). Based on our analysis, we firstly conclude that this categorisation of Chinese ICH is instrumental in serving the purpose of analysing the representation of Chinese ICH in digital games. With this study, we were able to identify complementary categories of Chinese ICH that were not considered in this framework. Concretely, our research identified the uses of traditional oral expression in game design, mostly Chinese dialects. Additionally, we differentiated uses of classical arts and folk arts in our analysis, in which classical arts served to create elegant and historic visual design, while folk arts are suitable for designing approachable and down-to-earth visuality. This differentiation could make a big difference to the messages brought by game developers, so it should be incorporated within the framework for game content analysis. This theoretical addition provides a more solid framework for future studies investigating ICH in game content.

This study has provided a more profound insight into the representation of ICH in mobile games. However, it still has its limitations. Firstly, most of our selected games are RPGs and MMORPGs that focus on character, world, and narrative design, meaning other game genres, such as multiplayer online battle arena, real-time tactics, and dress-up games are less represented in our sample. Therefore, future research could pay more attention to these game genres. Secondly, given the number of mobile games sampled in this study, we could not ensure that all Chinese ICH elements represented in these games were identified in our analysis. Nevertheless, this research presents detailed available approaches to representing Chinese ICH in Chinese mobile games and illustrates a deeper cultural image that mobile games could have.

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### Conflict of Interests

The authors declare no conflict of interests.

### Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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