Triadic Oral History Archive: Digital Archiving and Applied Practice of the "Workshop–Business–Kinship" Ecosystem in Hongdian Street, Jingdezhen

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Abstract: As a typical community of traditional ceramic handicraft industry, Hongdian Street in Jingdezhen is facing the dual crises of intergenerational fault and lack of digitalization in its cultural memory of the trinity of "Workshop–Business–Kinship". Most of the existing studies focus on the single dimension of ceramic skills, lacking the construction of comprehensive oral history archives of the social and economic network and family inheritance of the craftsman community. This study uses oral history research methods, combined with digital humanities technology (audio and video recording, database construction, virtual reality display, etc.), to conduct systematic in-depth interviews with craftsmen, merchants, and family members in Hongdian Street, and to construct a three-dimensional oral history archive of "Workshop–Business–Kinship".

Keywords: Digital Humanities; Oral History Archives; Jingdezhen Hongdian Street; Workshop–Business–Kinship; Digitalization of Cultural Heritage

1. Introduction

1.1 Research Background

As a millennium porcelain capital, Jingdezhen's ceramic cultural heritage is not only embodied in utensils and skills, but also in the life world and collective memory of the craftsman community. Located in the core area of the old city of Jingdezhen, Hongdian Street is a typical block inhabited by ceramic craftsmen, merchants, and families since the Ming and Qing dynasties, which embodies the traditional handicraft industry mode of "front shop, back factory, family management". However, with the acceleration of urbanization and the death of the older generation of craftsmen, the living memory of Hongdian Street is rapidly disappearing. According to the preliminary investigation of the research group in 2025, the proportion of old craftsmen over 70 years old in Hongdian Street is more than 40%, and it decreases by about 5% every year. This irreversible loss of memory will lead to the permanent rupture of local knowledge, family management wisdom, and social networks, and its cultural loss is incalculable. Therefore, it is of urgent practical significance to systematically rescue the oral history resources of Hongdian Street and construct digital archives[1-2].

1.2 Research Problem

Under the above background, the core problem to be solved in this study is: how to systematically construct the three-dimensional oral history archives of Hongdian Street "Workshop–Business–Kinship," and realize its long-term preservation, knowledge organization, and activation and dissemination through digital humanities methods? Specifically, it includes three sub-questions: (1) What are the key cultural elements in the oral memory of craftsmen, merchants, and families in Hongdian Street? (2) What is the interaction mechanism and evolution logic among "Workshop", "Business", and "Kinship"? (3) How to use digital technology to transform fragmented oral materials into structured, visual, and shareable cultural archives? This study will solve the existing practical problems in the following aspects: first, to complete the basic work of Hongdianjiekou's historical archives; second, to provide first-hand data for the construction of the Jingdezhen National Ceramic Cultural Inheritance and Innovation Experimental Zone; third, to provide academic support for Jingdezhen's application for world cultural heritage in 2026.

1.3 Research Status

Domestic academic circles have achieved fruitful results in the study of Jingdezhen ceramic cultural heritage. In terms of the history of ceramics and the inheritance of skills, Jingdezhen Ceramic Historical Materials (Jingdezhen Ceramic Historical Materials Editorial Committee, 2019), Fang Lili's Notes on Field Investigation of Jingdezhen's Emerging Folk Kiln Industry (2000), and Li Wenyue's Research on the Inheritance and Innovation of Jingdezhen's Traditional Handmade Porcelain Skills (2017) have systematically recorded the groups of craftsmen and the inheritance of skills. In terms of the application of oral history methods, Chen Ning (2019) discussed the current situation of oral history research on ceramic intangible cultural heritage. In terms of digital protection[3], Yang Xiangyin et al. (2023) combed the multidisciplinary application of contemporary Chinese oral history, and Li Xiangping and Wei Yangbo (2010) systematically introduced the research methods of oral history. In terms of foreign research, Hobson (2021) analyzed the production and trade of Jingdezhen porcelain, Yadav (2022) conducted an interview study on the social and economic conditions of Indian craftsmen, and the digital protection model of the Japanese "Xinle firing" also provided a reference.

1.4 Deficiencies

Although the existing studies have accumulated an important foundation, there are still obvious shortcomings: (1) Single dimension: most studies focus on the inheritance of ceramic skills, ignoring the synergy of business networks and family inheritance, and have not yet formed a comprehensive analysis framework of "Workshop–Business–Kinship". (2) Absence of space: The systematic oral history study of Hongdian Street, a micro-community, is almost blank, and there is a lack of in-depth cultural excavation of specific blocks. (3) Digitalization lag: The digitalization degree of the existing oral history materials is low, and most of them are scattered audio texts, lacking a structured database and visual presentation. As a result of these deficiencies, the cultural memory of Hongdian Street is facing the embarrassing situation of "knowing its existence and not knowing its details," which cannot provide accurate data support for the protection of cultural heritage and the integration of culture and tourism, and may even cause irreparable information loss due to the death of the elderly.

1.5 Research Objectives

This study constructs a digital oral history archive of Hongdian Street's core 300-meter area, interviewing 30 participants. The objective of this study is to use Hongdian Street as the fieldwork site, collect the three-dimensional memories of "Workshop–Business–Kinship" through the oral history method, construct a digital oral history archive, and analyze the interaction mechanism among the three. The research scope is limited to the core area of Hongdian Street, a historical block about 300 meters long, extending from Lianshe North Road in the east to Zhongshan North Road in the west. The interviewees include 10 old craftsmen, 10 descendants of merchants, and 10 family inheritors, for a total of 30 samples.

Comparative analysis with other blocks and ceramic material science. This study does not involve comparative research on other blocks in Jingdezhen, nor does it analyze the physical and chemical properties of ceramic technology.

2. Literature Review

Studies of Jingdezhen's ceramic heritage have certainly moved forward—contributions such as Fang Lili's (2008) and Li Wenyue's (2017) craft histories, together with advances in oral history methodology [1-3], attest to a growing body of work in this domain. Yet the field remains noticeably fragmented. Some investigations confine themselves to technical skill sets alone, paying little attention to the parallel dynamics of business and kinship. Others bypass the micro-community dimension entirely, leaving historic enclaves like Hongdian Street without systematic oral documentation. A further cluster depends on audio-only records that, while valuable, lack the structural coherence and visual traceability of formal digital archives (Yang Xiangyin et al., 2023). Underlying these disconnects is a more fundamental observation within traditional ceramic handicraft communities: skill transmission, market integration, and intergenerational continuity do not operate in isolation. Rather, they coalesce into what is described here as a "Workshop–Business–Kinship" triad—an intimately interdependent socio-technical system . Motivated by these lacunae, the present study brings oral history into deliberate dialogue with three digital humanities tools—Omeka S,

TimelineJS, and Gephi—constructing a tri-dimensional archive anchored in situated practice [4].

3. Methodology

3.1 Oral History Collection Methods

We conducted semi-structured in-depth interviews, each lasting between 30 and 60 minutes. The interview outline—organized into three modules, "Workshop," "Business," and "Kinship"—contained 5–8 core questions per module [5].

The "Workshop" module focused on the apprenticeship experience, technological processes, changes in tools, and the relationship between masters and apprentices. The "Business" module focused on customer sources, sales channels, peer competition, and market changes. The "Kinship" module focused on family division of labor, skill inheritance, the willingness of children, and family memories. For each interview, we made simultaneous audio and video recordings that captured the interviewees' expressions, gestures, and environmental details. Before all interviews, an informed consent form was signed after getting the interviewees' consent, and it was promised to anonymize sensitive information. Interview locations were preferably chosen as places familiar to the interviewees, such as old houses and workshops, to stimulate their memories and narratives [4-5].

3.2 Digital Processing and Database Methods

Building the digital processing of oral history materials included three levels (see Figure 1):

(1) Basic level: Convert audio to text (use tools like iFlytek Tingjian for auxiliary initial conversion, and conduct manual sentence-by-sentence proofreading with an accuracy requirement of over 95%), edit videos, and extract key frames.

(2) Knowledge level: Adopt the theme-labeling method to construct a three-level label system of "Workshop - Business Network - Family Heritage" (3 first-level labels, 6 second-level labels, and 12 third-level labels), manually code the text, and establish a retrievable metadata structure. Examples of the label system: Workshop → Shaping → Pottery wheel; Business Network → Sales → Lower Yangtze River customers; Family Heritage → Inheritance → Intergenerational conflicts.

(3) Presentation level: Build an oral history archive website using an open-source platform (Omeka S), embed a timeline (Timeline JS) and an interactive map (Leaflet) to realize the spatial and temporal display of oral contents. Edit typical interview segments into theme short videos lasting 3–5 minutes.

A multi-level digital processing approach responds to the digital lag identified in existing research, where fragmented audio recordings lack structured databases [6].

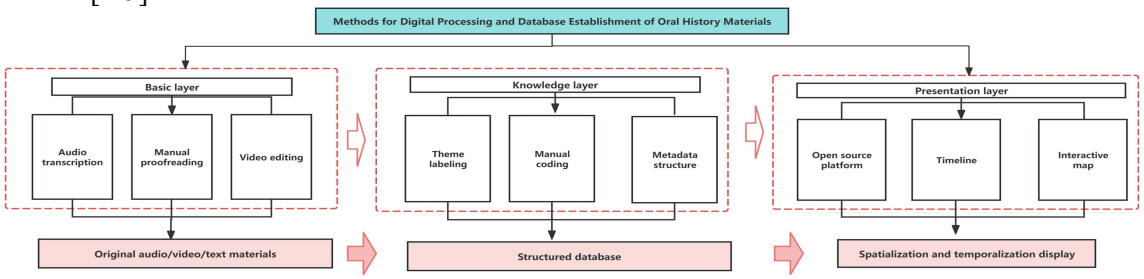

Figure 1. Three Levels of Digital Processing of Oral History Materials

3.3 Data Analysis Methods

Thematic analysis was used to code the interview text and extract the core themes and their interrelationships of "Workshop," "Business," and "Kinship." The specific steps included familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing reports. Meanwhile, Narrative Analysis was used to identify the key turning points in Kinship (such as the public-private partnership, the reform and opening-up, the market-oriented transformation, etc.). For the business network, the Gephi software was used to draw a social relationship diagram. Nodes represented craftsmen, commercial firms, and families, and connections represented transactions, marriages, and master-apprentice relationships, presenting the connection strength between core figures and commercial firms.

4. Data

The data sources used in this study include three

categories:

(1) interview First data oral: hand From March 2025 to March 2026, the research group conducted in-depth interviews with 30 respondents in Hongdian Street and its surrounding areas, resulting in approximately 30 hours of audio recordings, 30 hours of video recordings, and about 150,000 words of transcribed text. Composition of the respondents: 10 old craftsmen (aged 65–92, with an average age of 74.3), 10 descendants of merchants (aged 55–80), and 10 family inheritors (aged 40–70). All respondents have lived or operated a business in Hongdian Street for more than 30 years.

(2) Document and archive data: The research group collected paper-based documents such as local chronicles of Jingdezhen (Qing Dynasty, Republic of China, and contemporary versions), industrial archives of Jingdezhen ceramics (1950–1990), partial registration records of shops in Hongdian Street, and 8 copies of family account books and genealogies, totaling about 200 items, which have been digitally scanned.

(3) Field observation and physical object data: This includes photos of existing old buildings in Hongdian Street (about 300), photos of traditional tools and utensils (about 200), and block surveying and mapping data (scale 1:500)."All visual materials were curated to support narrative presentation in the digital archive (see §3.2)."

All audio recordings were captured at 44.1 kHz/16-bit using Zoom H6 recorders; video at 1080p/30fps with Sony PXW-Z90 cameras. Transcription followed the Linguistic Data Consortium (LDC) Guidelines: verbatim orthographic transcription excluding false starts and repetitions; Jiangxi dialect terms annotated with IPA and glosses. Accuracy was calculated as (1 − character error rate), validated by double-blind coding of 10% random samples (Cohen's $\kappa = 0.92$).

The data quality control measures include: conducting triangular verification by interviewing at least three different respondents for the same event; comparing key time nodes with local chronicles; and having the respondents check and confirm the verbatim transcribed interview recordings.

5. Results

5.1 Craftsman Workshop Dimension

Three characteristics emerged: (1) dense intergenerational transmission (70% reported paternal/grandpaternal practitioners; mean 2.7 generations); (2) technological evolution (foot-kicked wheels → 1950s pressing machines → 1980s roller-forming), with practitioners noting efficiency gains alongside tactile loss. (3) Spatial embodiment (sensory memories of kiln rooms and drying racks).

5.2 Business Network Dimension

Key features include: (1) geo-professional networks (40% Duchang, 20% Fuzhou/Nanchang origin; guild-regulated procurement/pricing); (2) “front-shop, back-factory” spatial integration enabling customer-producer interaction. (3) Extensive trade networks (Yangtze River basin, international exports), with 1930s-50s peak activity (~100 firms, >30% of Jingdezhen's ceramic export volume).

5.3 Kinship Dimension

Findings indicate: (1) material memory carriers (Republican-era account books/genealogies documenting relationships and transactions); (2) underestimated female roles (wives/daughters managing preparation, painting, and accounting); (3) intergenerational rupture (>70% of <60-year-old inheritors report children's disinterest in ceramic careers).

5.4 Interaction Mechanism

Based on the three dimensions of oral data, the study finds that the cultural ecology of Hongdian Street presents a nested cycle structure: the workshop is the cultural origin (skill generation and product production), the business is the diffusion power (market feedback drives skill improvement and product iteration), and the kinship is the stable mechanism (the overlap of blood and industry reduces transaction costs and guarantees skill inheritance). The relationship between the three is not linear but mutually causal—a successful family often runs both artisans and shops, and transforms business partners into kinship networks through marriage.[7-10] For example, three generations of the “Zhang's Porcelain Shop” family interviewed are not only masters of porcelain making, but also business talents, and have formed close alliances with two other big families through marriage. This trinity model of “technology-business-pro” endows Hongdian

Street with strong community resilience and cultural reproduction capacity. Quantitative statistics show that in the 30 cases interviewed, the family with the three elements of "Workshop–Business–Kinship" has an average duration of 2.3 times longer than the family with a single element.

6. Discussion

6.1 Comparison with Existing Research

The results of this study echo the view of "local modernization" put forward by Fang Lili (2008), that is, Hongdian Street craftsmen do not passively accept modernization, but actively adapt to the market by adjusting the relationship between "craftsmen and merchants". However, this study further reveals that the family (family inheritance) is the key mediating variable in this adaptation process: those who can successfully continue tend to have clear intergenerational succession planning and family capital accumulation, while those who rely solely on skills or business are more likely to decline. This finding supplements the lack of attention to the "family" factor in the existing research and also confirms Chen Ning's (2019) appeal that "the oral history of the inheritors should pay attention to the life world of the inheritors."

6.2 Analysis of the Causes of Differences

Compared with the digital protection mode of Japan's "Shinraku", the oral history of Hongdian Street shows a stronger feature of individual life history embedded in social change. Japanese cases focus on the standardization of technological records and the digitization of technological processes, while Hongdian Street craftsmen are always naturally associated with macro-events such as "land reform", "public-private partnership" and "reform and opening-up". The reason for this difference is that the social transformation in modern China is more intense, from the Republic of China to the new China, from the planned economy to the market economy, the personal fate of craftsmen is deeply bound to national policy. Therefore, the oral history of Hongdian Street cannot adopt the pure technical record of "de-contextualization," but must adopt the perspective of "social life history" to understand the inheritance of skills in the context of social change. The three-dimensional framework of this study is a methodological response to this difference.

6.3 Generalizability of the Results

Transferable to other handicraft communities through adaptation of its production and trade dimensions while retaining the kinship component, the framework is complemented by digital methods that function as generalizable tools: three-tier labeling, Omeka S, and spatiotemporal visualization. Critical insight: Digitization should prioritize narrative presentation over mere storage to enhance public engagement.

7. Conclusion

7.1 Main Contributions

The main contributions of this study include:

(1) Theoretical level: A three-dimensional analysis framework of "Workshop - Business - Kinship" is proposed, which reveals the nested cycle mechanism of cultural reproduction in traditional handicraft communities (the workshop is the origin, the business network is the driving force, and Kinship is the stabilizer), making up for the deficiency of existing research in paying insufficient attention to the dimensions of business network and Kinship.

(2) Methodological level: A set of digital workflow suitable for neighborhood-level oral history archives is constructed, including the operation chain of "semi-structured interviews - three-level label coding - Omeka S database construction - time axis and map embedding," which can provide a methodological reference for similar projects .

(3) Practical level: The formed digital archive (including 150,000-word text, 30-hour audio-video, and 300 architectural photos) can directly serve the construction of the National Ceramic Culture Inheritance and Innovation Experimental Zone in Jingdezhen and the "application for World Heritage" work in 2026, providing an academic basis for government decision-making and cultural communication. In particular, the data on the trade network in the "business network" dimension can provide historical support for the planning of commercial routes in the integration of culture and tourism.

7.2 Implications

The conclusions of this study have the following implications for cultural heritage protection and digital humanities research:

First, the dimensions of "business" and "family" cannot be ignored in the protection of intangible cultural heritage. Current intangible cultural heritage protection mostly focuses on the skills themselves, but this study shows that the vitality of skills depends on the market feedback of the business network and the intergenerational incentives within the family. Policy makers should pay attention to both the cultivation of craftsmen's business capabilities and the support for kinship.

Second, digitization is not just "archiving," but also "narrative." The case of Hongdian Street proves that simply converting oral recordings into text and building a database leads to low user participation; while the narrative presentation combined with the time axis and map can significantly enhance the public's understanding and interest in cultural heritage.

Third, the collection of oral history should focus on the perspective of "social life history," combining personal fates with national and social changes, rather than recording craft details in isolation, which can greatly enhance the historical depth and research value of the archives.

7.3 Research Limitations

This study has the following limitations:

(1) The sample size is limited (30 respondents), failing to cover all historical participants of Hongdian Street. In particular, it is difficult to comprehensively trace the early memories of the Republic of China period due to the age limit of the respondents (the oldest is 92 years old, and their memories may be blurred).

(2) The time span mainly focuses on the 1930s–1990s. Oral memories of earlier periods (such as the late Qing Dynasty and the early Republic of China) cannot be obtained due to the lack of living witnesses.

7.4 Future Outlook

The follow-up research can be deepened in three directions: firstly, expanding the scope of the field, including the pork tripe stuffed with meat, Garden Lane, and other craftsman communities around Hongdian Street, to test the universality of the "Workshop–Business–Kinship" framework; secondly, introducing artificial intelligence-assisted oral text analysis to improve the coding efficiency and the depth of massive text mining; thirdly, introducing artificial intelligence-assisted oral text analysis to improve the coding efficiency and the depth of massive text mining; The third is to explore the "digital twin" technology, which integrates oral history archives with three-dimensional street scene modeling and constructs an immersive Hongdian Street memory display system, so that users can "enter" the virtual space of historical blocks and listen to the stories of craftsmen in different locations. In addition, follow-up studies should strengthen cooperation with the Jingdezhen Municipal Bureau of Culture and Tourism and the Heritage Application Office to promote the practical application of archival achievements in heritage application texts and cultural and tourism guides.

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