

# Innovative Visual and Auditory Design for Revitalizing Cantonese Nursery Rhymes: A Cultural Heritage Perspective

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**Abstract.** Cantonese nursery rhymes, vital to Lingnan's cultural heritage, thrive through oral transmission in the region's streets and alleys. They embody accessibility, vitality, and cultural relevance, reflecting Guangdong's traditional ethos. Beyond local customs, they encapsulate unique incantations and collective memories. However, modernization threatens their dissemination due to dialect decline and outdated communication methods. This study focuses on Cantonese nursery rhymes in Guangdong, delving into their linguistic and cultural nuances through literature and case analyses. Representative rhymes are selected for visual design research, exploring innovative methods for their dissemination in the era of integrated media. Through a case study, the article demonstrates a digital approach that combines AR illustrations, NFC interaction, and historical context, offering a model for safeguarding and transmitting dialect nursery rhymes.

**Keywords.** Cantonese Nursery Rhymes, Cultural Heritage, Augmented Reality, Lingnan Region

## 1. Introduction

Dialects, local linguistic variants shaped by geographical, social, historical, and demographic factors, have thrived within China's expansive territory and rich historical context. This study focuses on Cantonese, one of the top ten major Chinese dialects, which has played a pivotal role in the evolution of the Chinese language. Cantonese nursery rhymes, integral to the cultural fabric of the Lingnan region, encapsulate a wealth of regional and dialectal heritage, rendering them of significant research interest.

This article specifically delves into the Cantonese nursery rhymes prevalent in the Pearl River Delta, centralizing around Guangzhou. While these rhymes hold a prominent position in Guangdong's local culture, serving as a vital link for Lingnan residents, they face an existential threat in the wake of diminishing comprehension and usage of Cantonese vernacular and colloquialisms among younger generations.

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This decline is attributable to two main factors. Firstly, language policies and educational directives have restricted dialect use, emphasizing Mandarin in public media and schools. This has curtailed environments conducive to dialect learning, culminating in a significant loss of linguistic specificity. Secondly, contemporary shifts in social dynamics and communication modalities have strained the dissemination and reception of Cantonese nursery rhymes. Evolving pronunciations and waning cultural distinctiveness have resulted in hurdles to comprehension, while antiquated content and delivery methods hinder acceptance.

This study underscores the pressing need for comprehensive strategies and policy measures to safeguard dialect nursery rhymes. Cantonese nursery rhymes, encapsulating invaluable historical and cultural vestiges, stand at the precipice of marginalization amidst encroaching global influences. Consequently, concerted governmental and societal efforts are imperative to their preservation and promotion, offering an invaluable repository of cultural insight and linguistic heritage for generations to come.

## 2. Literature Review

### 2.1. Development of Cantonese Nursery Rhymes

Cantonese nursery rhymes, also referred to as "Cantonese ditties," manifest a profound regional essence, encapsulating the distinctive allure of the Lingnan area [1]. Rooted in the Guangfu region, they constitute a folkloric oral tradition, perpetuated through generations in the rustic environs of riverbanks and meandering pathways. As an integral facet of the Cantonese vernacular, these rhymes offer a comprehensive portrayal of the livelihoods of Lingnan's children, particularly within Cantonese-speaking enclaves. Their straightforward yet engaging lyrics and melodious refrains serve as a mirror reflecting the cultural milieu and idiosyncrasies of Lingnan's populace.

The 2019 "Survey Report on the Current Situation of Inheritance and Protection of Cantonese" underscores the global prevalence of Cantonese, with nearly 120 million speakers worldwide, and a substantial 67 million within Guangdong Province alone. This demographic breadth underscores the foundation of both linguistic currency and widespread acceptance for Cantonese nursery rhymes. Nevertheless, they grapple with a dual challenge of acceptance and dissemination, particularly within Cantonese-speaking domains. This dilemma emanates from three key factors: the ebbing vitality of the Cantonese language, shifts in vocal articulation, and the waning evocation of cultural landscapes. In summation, the era characterized by ubiquitous nursery rhymes has waned in contemporary society. The ubiquity of the internet, coupled with a wealth of entertainment options, provides children with accelerated access to a vast repository of information, thereby diminishing the pedagogical and entertainment value traditionally attributed to nursery rhymes.

### 2.2. Characteristics of Cantonese Nursery Rhymes

Cantonese nursery rhymes exhibit distinctive linguistic traits, an outgrowth of the idiosyncrasies inherent to their oral rendition. The employed Cantonese dialect retains vestiges of ancient Chinese lexicon and Baiyue language elements. Moreover, the pronounced nine-tone and six-tone tonalities render Cantonese nursery rhymes

linguistically singular. This section delineates these characteristics across four dimensions: accessibility, engagement, imagery, and musicality.

- **Accessibility.** As nursery rhymes primarily target young children, the content and linguistic structure are deliberately simplified for comprehension. Reflecting the limited experiential scope of their audience, nursery rhymes offer accessible depictions of life phenomena, conveying meaning or truths in clear and concise terms. This approach accommodates the cognitive development trajectory of young learners, featuring concise, easily memorizable syntax that facilitates learning and recitation.
- **Engagement.** Given that nursery rhymes are primarily a vehicle for immediate experiential pleasure for children, their appeal lies in their intrinsic entertainment value, with "meaninglessness" being of paramount importance. Consequently, Cantonese nursery rhymes foreground amusement and resonate with the world of children. Employing overlapping words, double tones, and onomatopoeic elements, these rhymes align with children's linguistic habits and facilitate memorization through repetition. Such repetitive structures enhance the auditory aesthetic of the language.
- **Imagery.** As concrete imagery constitutes the primary mode of thought for children, nursery rhymes emphasize vivid and tangible linguistic representations. Leveraging rhetorical techniques such as ascent, personification, parallelism, and exaggeration, Cantonese nursery rhymes foster imaginative realms, rendering them more vibrant and engaging. While the linguistic lexicon remains uncomplicated, it encompasses a diverse range of characters, animals, plants, natural elements, and daily life scenarios accessible to young children.
- **Musicality.** Musicality remains a hallmark of nursery rhymes, with Cantonese nursery rhymes characterized by alternating smooth and tonal fluctuations. Rhythmic integrity and precise pronunciation, aligned with the Cantonese dialect, sustain the rhymes' melodic quality. By adhering to the classical pentatonic scale and employing a concise tonal palette, these rhymes evoke a distinctly regional and culturally resonant auditory experience, exemplified by the quintessential "The Rain is Falling Heavy."

In essence, the linguistic nuances of Cantonese nursery rhymes, underscored by their accessibility, engagement, vivid imagery, and musicality, coalesce to craft a culturally evocative and pedagogically effective form of oral literature and art.

### 3. Research Approach and Methodology

The questionnaire garnered a total of 756 valid responses, exclusively from participants in Guangdong. Among these, 678 individuals, or roughly 90%, either currently reside or have resided for an extended period in the Cantonese-speaking region, notably the Pearl River Delta and western Guangdong. The remaining respondents were dispersed across Hakka-speaking and Min-speaking areas. Demographically, approximately 70% of respondents identified as female, while the remaining 30% identified as male. Age-wise, the 31-40 age bracket constituted the largest segment at approximately 30%. The study predominantly focused on adults and middle-aged participants. Specifically, 4.37% were under 18 years old, 9.26% were aged 18-25, 12.04% were aged 26-30,

28.31% were aged 31-40, 13.89% were aged 41-50, 19.44% were aged 51-60, and 12.7% were aged over 60.

In terms of occupation, about 40% of respondents were affiliated with the education and music industries, with students forming the second largest group. The majority of respondents either resided or worked on educational campuses, affording them substantial interaction with teenagers and children in Guangdong. Consequently, this segment of respondents possessed a more practical grasp of both the vitality of Cantonese and the current state of Cantonese nursery rhyme dissemination, which significantly bolstered the research endeavor.

Among those residing in Guangdong, over half asserted proficiency in Cantonese, with 24.87% indicating proficiency in listening and speaking, while a nominal 3.44% claimed no familiarity with the dialect. Notably, 57.8% of respondents reported frequent use of Cantonese in daily life. Nearly 90% of participants reported exposure to Cantonese nursery rhymes, with 53.04% recalling more than five songs, indicative of the profound impact of these rhymes on this cohort. Impressively, 85.45% of respondents expressed a fondness for Cantonese nursery rhymes, while 11.64% remained indifferent, and a mere 2.91% harbored dislike. These findings underscore a predominantly positive sentiment towards Cantonese nursery rhymes, auguring well for their safeguarding and continuation within the realm of dialect nursery rhymes.

In response to the questionnaire, a significant 78.84% of respondents affirmed their intent to proactively teach their children Cantonese nursery rhymes, while 20% expressed uncertainty. Notably, 90% of respondents deemed the act of singing Cantonese nursery rhymes as still meaningful. With regards to methods for safeguarding and preserving these rhymes, the majority advocated for the establishment of an audio database coupled with specialized artistic presentations.

A segment of respondents engaged in brief interviews offered valuable insights. Notably, a considerable number were affiliated with the education and music sectors, displaying a commendable propensity for providing information and spontaneous dissemination. This underscores the profound attachment and loyalty of Cantonese speakers towards their native dialect.

Observations from education practitioners revealed a disconcerting trend - a growing number of children in Guangzhou seem to struggle with Cantonese, with local children and their peers displaying a noticeable preference for alternative languages. This phenomenon reflects a broader challenge in preserving linguistic distinctiveness in the face of widespread linguistic standardization efforts. Additionally, some interviewees noted that rehearsing Cantonese nursery rhymes proved more challenging than English songs, shedding light on the difficulties faced in propagating these rhymes.

Many respondents expressed apprehension about the fading prominence of Cantonese nursery rhymes, reflecting concerns about their potential obsolescence. Their prevailing sentiment emphasized the need for reinvigorating and modernizing these rhymes, adapting them to contemporary social dynamics, and ensuring their enduring transmission across generations.

In summary, while the current state of Cantonese nursery rhymes in Guangfu faces challenges, including a discernible loss of local specificity, there exists a robust foundation and heightened awareness surrounding this research domain. The author aspires to employ specialized knowledge to visually rejuvenate Cantonese nursery rhymes, rekindling their resonance with the younger generation and evoking shared memories among adults. This endeavor represents a modest yet significant contribution

to the preservation and advancement of Cantonese nursery rhymes and analogous dialect nursery rhymes.

4. Design for Revitalizing Cantonese Nursery

4.1. Design Theme Selection

Cantonese nursery rhymes represent a distinctive facet of the Cantonese dialect, embodying regional nuances. In the realm of art, interconnections and mutual influence among various forms are evident, with music demonstrating a proclivity for symbiosis with other art forms. The most intimate amalgamation exists between auditory and visual art, prompting our inquiry into the optimal visual representation of Cantonese nursery rhymes.

In "Guangzhou Folk Songs," the author meticulously curated 15 nursery rhymes, each emblematic of natural landscapes, quotidian experiences, and folk traditions. These selections were organized into tables, and an online survey was conducted across Guangdong, soliciting respondents to assess their familiarity (i.e., recall proficiency). Subsequently, the nursery rhymes exhibiting the highest recall rates were designated as focal points for visual design.

A total of 756 valid responses were collated during the survey. An analysis of the questionnaire outcomes delineates the ten most renowned songs. Notably, "Moonlight" (89.95%), "The Rain" (83.6%), "Sitting in Rows" (76.19%), "Taipan and Taipa" (71.22%), "Chicken Doll" (71.68%), "He Family Rooster He Family Guess" (68.52%), "Dian Chong Chong" (54.37%), "It's a Small World" (54.37%), "Open the Mosquito Net" (46.69%), and "Big Stupid Elephant" (45.37%) emerged as the preeminent selections.

Noteworthy entries include "Moonlight" (79.76%), "Raining Heavy" (74.21%), "Taipan Transfer" (59.52%), "Chicken Doll" (57.14%), "Sitting in Rows" (48.15%), "Who's Rooster and Who's Guess" (47.49%), "Insects" (33.47%), "The World Is Really Small" (31.61%), "Open the Mosquito Net" (25.79%), and "Dragon Boat" (28.42%). In light of these findings and considering the taxonomy of nursery rhymes, five selections were identified for focused visual design endeavors (Table 1). These choices were made with the aim of encapsulating the quintessence of Cantonese nursery rhymes.

Table 1. Five selections of Cantonese nursery rhymes.

Natural scenery	<div>1. "Sitting in rows and rows": Sitting in rows and eating powdered fruits. Pigs pull firewood, dogs light the fire, cats carry loads auntie sits on the stool. It's not up to me to sit in a shit hole, it's up to my second uncle to climb over the fence.</div> <div>2. "Who's Rooster and Who's Guessing": It's so weird and interesting. You look around the park. There are four hundred cocks clucking. I don't know if they belong to the He family. He's cock, He's guessing, He's chicken, He's guessing, He's rooster, He's guessing, He's hen is clucking. The monkey brother, Mr. Bear, the squirrel sister, Uncle Cow, the yellow dog, the father and the sheep, come and guess.</div>
Daily life	<div>3. "Heavy Rain": It rained heavily and the streets were flooded. My elder brother went to the street to sell firewood, and my sister-in-law went out to the street wearing flower</div>

shoes, flower shoes, flower socks and flower belt, and pearls and butterflies lined up on both sides; there were twelve in each row. The grains are smooth and flawless.

**Folk Culture**

4. "Moonlight": Moonlight. Zhao Di Tang. Shrimp boy, get off the bed obediently. I heard that grandma was about to plant rice seedlings, and grandpa watched the cattle canal go up the hill. Shrimp boy, you are going to grow up soon. Help grandpa go see the cattle and sheep. The moonlight shines on the underworld, little shrimp, you fall into bed obediently. I heard that my father is going to catch shrimps, and grandma is weaving nets until daylight. Come on, shrimp boy. As you grow up, you will be better at rowing and casting nets.
5. "Dang dang zhuan": Dang dang zhuan, chrysanthemum garden, fried rice cakes, glutinous rice balls. My grandma asked me to watch the dragon boat, but I didn't want to watch it. I watched the chickens. The chickens were big, so I took them to sell. How much did it cost? It cost three cents and sixty-five cents.

4.2. Exploration of Visual Design Themes

The allure of nursery rhymes transcends their melodic quality, encompassing the vivid scenarios and imagery they portray. In the pursuit of visualizing Cantonese nursery rhymes, the author embarked on a process of distilling the distinct visual motifs evoked by the songs, associating them with their respective narratives, and translating them into illustrative representations. These visuals were complemented by lyrical content, enriched by contextual details such as historical backgrounds.



**Figure 1.** Five selections of Cantonese nursery rhymes.

Upon gaining a preliminary grasp of the narrative trajectory, a deeper level of contemplation was initiated to delineate the unique elements of each nursery rhyme and formulate their fundamental visual constituents. For instance, in the composition of "Moonlight," the ideogram connotes the moon, while "Light" signifies radiance. Collectively, they conjure an imagery of a moonlit night, portraying a heartwarming tableau of a mother soothing her child to sleep after a strenuous day's toil. The lyrics eloquently portray the day's labor across three generations - transplanting rice seedlings, tending to cattle and sheep, repairing fishing gear, and crafting fishing nets. This encapsulates the reality of Lingnan's sultry and damp climate, where crops thrive year-round, rendering "idle land a scarcity in southern Guangdong." The art of net weaving and the pursuit of fishing and shrimping represent the distinctive occupations of communities that dwell on the water. The antecedent of "Moonlight Light" lies in the "Salt Water Song" of waterside inhabitants, underscoring the inseparable connection between water and the moon.



Figure 2. Five selections of Cantonese nursery rhymes.

In the creation of "He's Rooster, He's Guess," the author discerned a distinctly childlike linguistic style, evoking imagery of children and anthropomorphized animals frolicking in a verdant, sunlit park. Together, they engage in a playful guessing game concerning the ownership of a multitude of clucking roosters and hens. Endearingly, they address these creatures as uncle, brother, sister, and the like, imbuing the scene with a sense of whimsicality, vivacity, and cheerfulness.

In "Heavy Rain," the evocative description, "It rains heavily and the streets are flooded," vividly captures the iconic sight of inundated streets in the bygone Xiguan neighborhood during the transitional phase from rainy spring to summer. While adults may find such overcast, drizzly days disheartening, for children, it unfolds as an entirely novel spectacle. They intently observe a sister-in-law bedecked in resplendent embroidered shoes, adorned with meticulously arranged pearl butterflies atop her head. This renders the rainy day in the nursery rhyme as anything but dull and dreary. Notably, the objects of the children's keen observation, namely "pearl butterflies" and "flower shoes, flower socks, flower belt," merit enlargement in the visual representation, amplifying their significance. This explorative endeavor underscores the nuanced interplay between auditory and visual elements, enriching the visual tapestry of Cantonese nursery rhymes with cultural and contextual depth.

## **5. Augmented Reality Effect**

In the current era of rapid technological advancement, new media technologies continue to proliferate, reshaping the way we interact with information. Among these, mobile phones have emerged as one of the most pivotal communication mediums. Leveraging the power of mobile devices and harnessing the potential of new media technologies, traditional static two-dimensional images found in picture books can now be transformed into dynamic, multi-sensory experiences that engage both auditory and visual senses. By simply tapping the NFC chip embedded in the picture book with a mobile phone, readers can immerse themselves in the captivating renditions of Cantonese nursery rhymes performed by the local children's choir in Guangzhou, presented in both traditional and innovative forms like a cappella. This innovative approach promises readers a more engaging and enjoyable listening experience.

Furthermore, through the utilization of new media technology, conventional static posters are elevated to a new dimension, offering a dynamic, three-dimensional visual experience. Employing the kiwicube platform, picture books are transformed into recognizable images, which, when scanned via mobile phone QR code, unveil a captivating fusion of augmented reality videos and music. This not only imparts educational value but also ensures entertainment. Augmented reality seamlessly integrates real-world surroundings with virtual information, enabling real-time interactive experiences. By using the mobile phone camera to scan previously static physical paper posters, these visuals spring to life, presenting dynamic effects directly through the mobile phone screen. This breakthrough innovation bridges the divide between the digital and physical realms, delivering an enriched and immersive experience to the audience.



## 6. Conclusion

This comprehensive exploration sheds light on the rich cultural tapestry woven by Cantonese nursery rhymes, underscoring their significance as a cherished aspect of Lingnan heritage. These rhymes serve as invaluable repositories of regional customs, capturing the essence of daily life in the Lingnan region with their vivid imagery and playful narratives. However, the modern era poses challenges to the continued dissemination and appreciation of Cantonese nursery rhymes. The decline in Cantonese proficiency and evolving communication methods necessitate innovative approaches to ensure their enduring legacy. Embracing new media technologies, particularly augmented reality, presents a promising avenue for revitalizing these rhymes, transforming static images into dynamic, multi-sensory experiences. By seamlessly integrating auditory and visual elements, mobile platforms provide an interactive gateway to engage readers with captivating renditions of these cherished rhymes. Moreover, through augmented reality, traditional static posters evolve into immersive, three-dimensional experiences, further enriching the audience's connection to this cultural treasure trove. In this rapidly evolving digital landscape, these advancements in visual and auditory presentation not only breathe new life into Cantonese nursery rhymes but also serve as a testament to the enduring adaptability of cultural heritage. This innovative approach ensures that these rhymes continue to resonate with audiences, fostering a deeper appreciation for the Lingnan region's unique linguistic and cultural legacy. Through the convergence of tradition and technology, we pave the way for the continued celebration and preservation of this invaluable cultural heritage for generations to come.

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