



## RESEARCH ARTICLE

# Conserving and Advancing the Cultural Transmission of Gong Ensembles in Sabah, Malaysia via Digital Technology

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ARTICLE INFO	ABSTRACT
Received: Nov 22, 2024 Accepted: Jan 7, 2025	This research was conducted to comprehend the music culture and the art of the Gong ensemble in Sabah, Malaysia, which is transferred and acquired throughout generations through informal or non-formal learning methods. This research examined both the technical and artistic dimensions of the Gong ensemble for teaching and learning in formal educational institutions utilizing digital technologies. This research employed both qualitative and quantitative methods, utilizing questionnaires and semi-structured interviews for data collection, which were analyzed using a descriptive-analytic methodology. The data has been organized into an interactive multimedia courseware and evaluated by an expert. The results indicated that the created materials exhibit great usability and appropriateness for usage in formal educational institutions.
<b>Keywords</b> Cultural Transmission Gong Ensemble Education Interactive Multimedia Digital Technology	
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## 1. INTRODUCTION

Art and culture underscore the fundamental relationship between human identity, expression, and community. This link is essential for comprehending the essence of humanity. Culture functions as a repository of communal memory and tradition that shapes society values and conventions. Hall (1997) contends that culture comprises the collective meanings derived from human social practices, including artistic expressions, which function both as reflections and as affirmations of cultural identity throughout generations. Research has shown that people from many cultures can appropriately discern emotions in music from new traditions. This indicates that emotional expression in music possesses both cultural specificity and universal characteristics (Laukka, et al., 2013).

The culture of Sabah, Malaysia is a rich amalgamation of the unique traditions of its numerous ethnic groups. The Kadazan Dusun people of Sabah are distinguished by their rich folk music traditions, which serve as both an artistic treasure and a vital means of conserving and increasing cultural literacy. The gong music ensemble, frequently showcased during festivals and ceremonies, embodies a distinct cultural identity and historical tales, rendering it an essential component of Sabah's intangible cultural heritage.

## 2.0 Research Background

Cultural legacy is a dynamic and complex concept that encompasses the beliefs, customs, knowledge, and artistic representations of a group. In Malaysia, especially in Sabah, the abundant ethnic diversity

and cultural practices are essential for identity creation and social cohesiveness. The Gong music ensemble is a vital component of the musical tradition of indigenous tribes, transmitted through generations. Cultural heritage transmission denotes the mechanisms and procedures via which cultural practices, traditions, and values are conveyed from one generation to the next. The transmission of cultural legacy is an essential process that ensures the persistence of cultural identities, practices, beliefs, and values through generations. This transmission transpires through diverse modalities, encompassing oral traditions, rituals, educational frameworks, artistic representations, and community involvement. This process is crucial; it significantly influences both individual and group identities and promotes social cohesion. This performance showcased the region's cultural richness, captivating global audiences and emphasizing the necessity of maintaining and supporting ethnic cultures (Rees, 2010; Yuxin & Hirunrux, 2022; Jirajarupat & Yinghua, 2023).



**Figure 1: Gong music ensemble of Sabah, Malaysia**

Education is essential for the transmission of cultural heritage. Formal educational institutions can either facilitate or obstruct this process based on their integration of local history and traditions into curricula (Baker & Markowitz-Kinsey 2023). When educational frameworks incorporate culturally relevant topics alongside conventional courses such as science or mathematics, they enhance students' appreciation of their own cultures while promoting respect for variety among classmates. Integrating culturally relevant topics with mainstream educational frameworks, such as those in science or technology, assists students in valuing their own histories while fostering respect for the different heritages of their peers. Technology has presented both challenges and opportunities for the transfer of cultural heritage today. Interactive multimedia platforms facilitate the engagement of younger generations with traditional practices via digital storytelling or virtual involvement in community activities, effectively merging ancient traditions with modern manifestations (Sullivan & Chalabi 2022).

The objective of the research was to record and promote the Gong music ensemble as a co-curricular activity in Malaysian secondary schools. To preserve national cultural heritage, one strategy is to ensure that all citizens, particularly the youth, comprehend and value the culture of ethnic groups (Nasrifan & Saidon, 2019). This research documents the historical context and function, musical analysis, as well as the technical and aesthetic aspects of the Gong music ensemble. The gathered data was organized as a resource for instructing and learning Gong in co-curricular activities inside Malaysian secondary schools. The precise research issues addressed in this study encompass different factors, including cultural, historical, and social dimensions that are intricately linked to the community's socio-economic conditions. The National resources Act 2005 (NHA 2005) was enacted under the Ninth Malaysian Plan to safeguard and maintain diverse tangible and intangible cultural resources. This research's findings can significantly enhance the continuity and comprehension of Malaysian local culture as an appealing tourism asset globally.

### **3.0 Research Objectives**

The primary objective of this work is to develop a model for cultural preservation utilizing digital technology in the instruction of Gong music ensembles within formal educational settings. This study has four primary objectives:

- i.To gather and chronicle the traditional musical traditions of the Gong ensemble among the populace of Sabah.
- ii.To examine the technical and aesthetic dimensions of the Gong ensemble for integration into co-curricular teaching and learning activities.
- iii.To create digital interactive multimedia courseware for teaching and learning the Gong ensemble in Malaysian secondary schools.
- iv.To get input from students and teachers regarding the usability of an interactive digital tool designed for learning Gong ensembles in formal educational settings.

#### 4.0 RESEARCH METHODOLOGY

This research was executed in two phases. In the initial phase, ethnomusicological research methods were utilized to elicit the musical content and context from the informants (Schmidt & Krüger, 2023). The research method encompasses ethnographic fieldwork techniques, including individual open and organized interviews, audio and video recordings, and field notes, which been documented with the informants and subsequently transcribed. The content analysis was chosen for elucidation by musicological analysis (Barz & Cooley 2022). The obtained data was subsequently transcribed and processed using musicological methods. The field recordings were professionally re-recorded in a studio. The data analysis also encompassed the examination of technical aspects, aesthetics, sourcing, transcribing, and producing the Gong music to be incorporated into the forthcoming co-curriculum design.

In the second phase, the research fieldwork findings were organized into an interactive multimedia courseware for teaching and learning Gong in a co-curricular context within formal educational institutions, utilizing digital technology. Technology-driven educational platforms and experiential learning opportunities can augment students' involvement with cultural music (Belcher, 2009). Through multidisciplinary collaborations and innovative pedagogical approaches, educators can successfully include cultural music into many educational settings. A digital interactive multimedia courseware for teaching and learning the Gong ensemble in Malaysian secondary schools was developed. Subsequently, a qualitative methodology was employed in which the researchers assessed the efficacy of teaching and learning within the Gong ensemble as a co-curricular activity and implemented requisite modifications prior to finalizing the research report. The techniques for this study were separated into six parts, each meticulously designed to address the research issues.

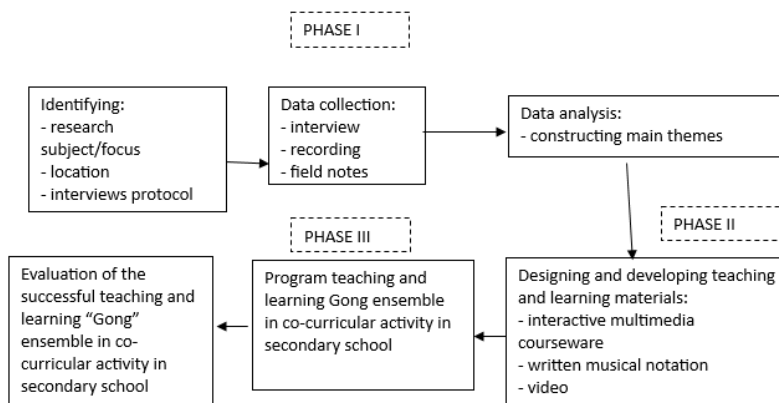


Figure 2: Methodological Procedures

#### 5.0 RESULTS

The primary objective of this study is to analyze the elements pertinent to the informal teaching and learning process of Gong music ensembles, which will then be organized into teaching materials for use in formal educational institutions.

<i>Topic</i>	<i>Sub-topic</i>	<i>Learning outcomes</i>
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Unit 1 : Introduction	<ol style="list-style-type: none"> <li>1. History of the formation of the Gong ensemble</li> <li>2. Purpose and place of the Gong presentation</li> <li>3. Ensemble player</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the history of the formation of the Gong ensemble</li> <li>2. Declare the purpose and place of the Gong presentation</li> <li>3. Identify player and their function in the Gong ensemble music</li> </ol>
Unit 2 : Instrumentations	<ol style="list-style-type: none"> <li>1. Gong Lapos-lapos</li> <li>2. Gong Mongolutan</li> <li>3. Gong Songkoluan</li> <li>4. Gong Dindihon</li> <li>5. Gong Ponohuri</li> <li>6. Gong Kulintangan</li> </ol>	<ol style="list-style-type: none"> <li>1. Name the equipment played in the performance of the Gong ensemble</li> <li>2. Declare the function of instruments in the ensemble</li> </ol>
Unit 3 : Function	<ol style="list-style-type: none"> <li>1. The uses of gongs for society and the community.</li> <li>2. The suitability of this gong ensemble is presented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Explain the uses of gongs for society and the community.</li> <li>2. Describe the suitability of this gong ensemble is presented</li> </ol>
Unit 4 : Gong making	<ol style="list-style-type: none"> <li>1. Types of materials used to make gongs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the types of materials used to make gongs.</li> </ol>
Unit 5 : Playing techniques	<ol style="list-style-type: none"> <li>1. Pukulan Naanahangon</li> <li>2. Pukulan Saasalakan</li> <li>3. Pukulan Hahambatan</li> <li>4. Pukulan Kuukulimpoon</li> <li>5. Pukulan Tootongan</li> <li>6. Pukulan Tatavag</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the playing techniques and rhythms played in the Gong ensemble</li> <li>2. Applying the correct playing techniques</li> </ol>
Unit 6 : Kulintangan	<ol style="list-style-type: none"> <li>1. The characteristics of the kulintangan ensemble</li> <li>2. Playing techniques of kulintangan</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the playing techniques and rhythms played in the kulintangan ensemble</li> <li>2. Applying the correct playing techniques</li> </ol>
Unit 7 : Songs and musical score	<ol style="list-style-type: none"> <li>1. Sudun Hugu Divatto</li> <li>2. Murut Tamigon</li> <li>3. Rentak Gong Daerah Tambunan</li> <li>4. Nogungan Kooduan Pangazau Magagong</li> <li>5. Nogungan Pangazau</li> <li>6. Nogungan Hungab</li> <li>7. Nogungan Kolopis</li> <li>8. (Kalimaran) Paluan Gong</li> <li>9. Kalipasu</li> </ol>	<ol style="list-style-type: none"> <li>1. Identifying songs performed by the Gong ensemble</li> <li>2. Playing songs by the Gong ensemble</li> </ol>
Unit 8 : Info	Get to know the researcher and research details Information related to production	None

According to the specified subjects and learning outcomes, a systematic instructional design is employed to provide interactive multimedia digital learning resources for the Gong music ensemble

within the formal education system. The examples of the formulated instructional design are presented below.



Figures 4: The examples of the digital interactive multimedia courseware

Testing and assessment phases were executed subsequent to the development of the digital interactive multimedia material. A series of questionnaires was developed to evaluate experts' perceptions of the suitability of its application in the learning process, as well as to assess how selected students perceive their experiences with the interactive multimedia courseware for teaching and learning Gong ensembles in a formal institutional co-curricular context. The test was specifically undertaken to ascertain whether the product meets the requisite abilities for a self-learning tool among a cohort of students in a designated secondary school in Sabah. The study's findings, derived from teacher and student comments, indicate a high degree of applicability and appropriateness of the Gong music ensemble resources for educational purposes in Sabah schools.

Table 1: Engaging educational materials for the Gong ensemble

Item	Criteria	Score
1.1	The learning outcomes and objectives are closely tied to the material.	4
1.2	Complete: offering every piece of information or educational opportunity required to meet the goals and learning outcomes	4

1.3	In line with the traits (degree of ability and maturity) as well as the experience of students	5
1.4	Pertinent to the requirements of the group and course target	5
1.5	Divided into steps for learning	4
	Mean =	4.5

The study's findings indicate that the generated teaching and learning materials exhibit a high degree of usefulness and appropriateness for the Gong music ensemble of Sabah within formal educational settings. The alignment of learning objectives with outcomes, along with the suitability of content to students' abilities, maturity, and experience, constitutes the fundamental elements of instructional design content. The Gong music ensemble, as to numerous other musical traditions, functions not just as an artistic expression but also as a conduit for conveying cultural information, values, and history. They are intricately connected to the daily lives, rituals, and social activities of the Kadazan Dusun people, rendering them an essential instrument for cultural literacy. This project contributes to the preservation of Sabah's cultural variety and fosters a deeper awareness of the country's varied legacy by investigating and promoting these traditions using educational digital technologies.

## 6.0 CONCLUSION

In conclusion, education and digital technology serve as essential tools for the preservation of culture and the literacy of Gong ensemble musical traditions. Scholarly, institutional, and governmental endeavours to chronicle, promote, and commemorate these traditions guarantee their persistence in an increasingly globalized environment. Education is essential for safeguarding cultural music legacy through its incorporation into academic courses. Despite the presence of difficulties, several chances for innovation are available. By emphasizing cultural music education, instructors can enhance awareness for diverse musical traditions and promote cultural understanding among students.

## 7.0 Acknowledgement

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