



RESEARCH ARTICLE

Teaching research on h5 application of digital publishing of Dongba culture

Wen Yang^{1*}, Juliana Aida Abu Bakar^{1*}

¹ School of Creative Industry Management and Perform, Universiti Utara Malaysia, 06010 UUM Sintok, Kedah Darul Aman, Malaysia

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***Corresponding Author:**

sunnyshine19881014@163.com

liana@uum.edu.my

ABSTRACT

With the rapid advancement of information technology, digital publications are gaining recognition as valuable and innovative educational resources, offering new possibilities for teaching and learning. Dongba culture, as a distinctive representation of Chinese ethnic minority heritage, holds unique cultural, historical, and academic significance, making it an important subject for preservation and educational integration. This study focuses on the use of H5 digital publications related to Dongba culture in educational settings, examining their practical applications, benefits, and strategies for broader implementation. By exploring the innovative role of digital technology in enhancing cultural education, this research delves into how digital publications can facilitate a deeper understanding of Dongba culture, stimulate interest among students, and promote interactive and immersive learning experiences. Furthermore, the study aims to identify effective methods for utilizing digital tools to support the teaching and transmission of Dongba culture, providing insights that can be applied to other forms of intangible cultural heritage, thereby contributing to cultural preservation efforts and enriching the educational landscape.

INTRODUCTION

Dongba culture is one of the important cultural heritages of China's ethnic minorities, with rich cultural connotations and unique symbol systems. With the development of society and the deepening of cultural exchanges, the inheritance and development of Dongba culture are facing new challenges and opportunities. Digital publications, as a product of the combination of information technology and cultural inheritance, provide a new platform and means for the teaching and dissemination of Dongba culture. In this paper, we will discuss the application of H5 digital publications of Dongba culture in teaching, in order to contribute to the inheritance and development of Dongba culture.

Overview of Dongba Culture Digital Publication

Dongba culture digital publication refers to the digitalization of documents, historical materials, art works and other contents of Dongba culture through digital technology to facilitate preservation, dissemination and research; the establishment of a digital publication platform of Dongba culture to provide researchers, scholars and the general public with the convenience of online browsing, retrieval and learning, and to promote the inheritance and exchange of Dongba culture; the creation

of a virtual museum of Dongba culture and the use of virtual reality technology to enable users to learn about the history, artifacts and traditional customs of Dongba culture through the Internet and mobile devices; build a digital library to collect and organize books, theses, pictures, videos and other materials related to Dongba culture, so as to provide a wealth of resources for academic research and teaching; develop digital educational applications on Dongba culture for different age groups and educational levels, provide schools and communities with diversified teaching resources for schools and communities, and promote the inheritance and popularization of Dongba culture; and utilize the digital publishing platform and network resources to strengthen exchanges and cooperation with the international community, and promote the recognition and dissemination of Dongba culture in the world.

Through digital publishing, Dongba culture can better go to the world and get wider attention and recognition, and at the same time, it also provides new opportunities and challenges for the inheritance and development of Dongba culture.

H5 technology

H5 technology, which usually refers to the development method based on technologies such as HTML5, CSS3 and JavaScript for creating interactive web applications, provides powerful tools and functions for web application development, enabling developers to create rich, interactive and cross-platform web applications to meet the needs of users on different devices.

THE ROLE OF DONGBA CULTURE IN TEACHING DIGITAL PUBLICATIONS

Expanding the traditional teaching mode

In the course of "Publishing and Digital Publishing", the individual combines the digital publication of local culture - Dongba culture, and provides a new teaching mode and means for teaching Dongba culture with h5 digital publication. The traditional teaching of Dongba culture mainly relies on oral transmission and paper teaching materials, which is limited by time and space constraints and has a limited scope of dissemination. Digital publications, however, can be used to achieve anytime, anywhere learning through carriers such as network platforms and mobile devices, breaking the time and space constraints of the traditional teaching mode, and providing learners with a more flexible and convenient way of learning.

Enrichment of teaching resources

Digital publications have enriched the resource base for teaching Dongba culture. Traditional teaching resources are limited by time and geography, and their contents are relatively single. Digital publications can digitally present the rich and diverse contents of Dongba culture, including text, pictures, audio, video and other forms, so that learners can more comprehensively understand and experience the connotation and characteristics of Dongba culture. At the same time, digital publications can also constantly update and expand the content, keeping the teaching resources updated and dynamic.

Enhancing the learning experience

Digital publications enhance the learning experience of learners. Through digital publications, learners can understand the texts, scriptures, myths and other contents of Dongba culture in a more intuitive and vivid way, thus enhancing the fun and interactivity of learning. For example, digital publications can make learners participate in them through animation, interactive graphics, virtual reality, etc., so that they can gain a deeper understanding of the connotation and spirit of Dongba culture. At the same time, digital publications can also provide personalized learning paths and

content recommendations according to learners' individual needs and learning progress, enhancing the relevance and effectiveness of learning.

Digital publications play an important role in teaching in combination with Dongba culture, expanding the traditional teaching mode, enriching teaching resources, enhancing the learning experience, and providing new ways and methods for the inheritance and development of Dongba culture.

PRACTICAL APPLICATION OF DONGBA CULTURE IN TEACHING DIGITAL PUBLICATIONS—H5 DIGITAL PUBLICATION DESIGN AND PRODUCTION

Content Selection and Organisation

The theme and content of the digital publication need to be determined first. In view of the characteristics and learning needs of Dongba culture, contents covering Dongba texts, traditional culture, beliefs, history, myths and legends can be selected. Then the content is sorted and screened to ensure the richness and accuracy of the content, and classified and organized according to different themes and levels so that users can access and learn relevant knowledge in an orderly manner.

In the process of making the work, students selected the Dongba culture they were interested in and sorted and selected the contents as follows Figure 1,2,3.

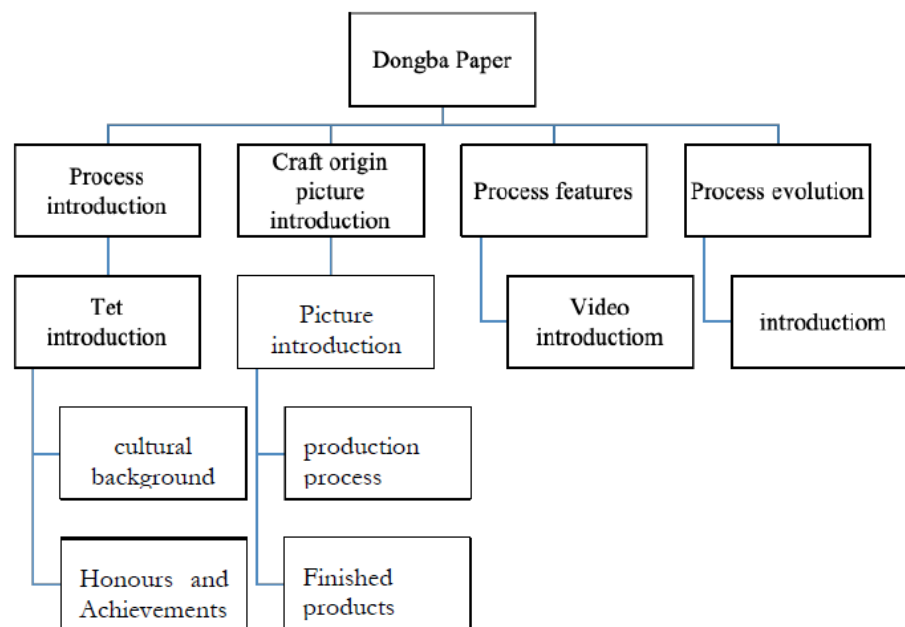


Figure 1: Dongba Paper

Group division of labor:

Video: Ha Laughter animation, Wang Yingxu; Words and pictures: Luo Ruling; Interface and interaction: Gong Zhenbo, Lin Baifan

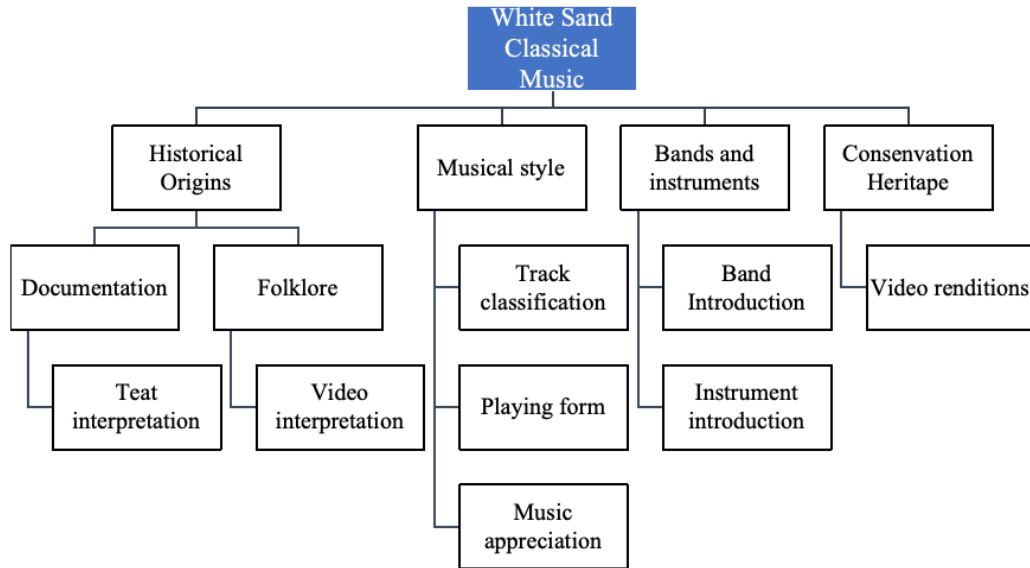


Figure 2: White Sand Classical music

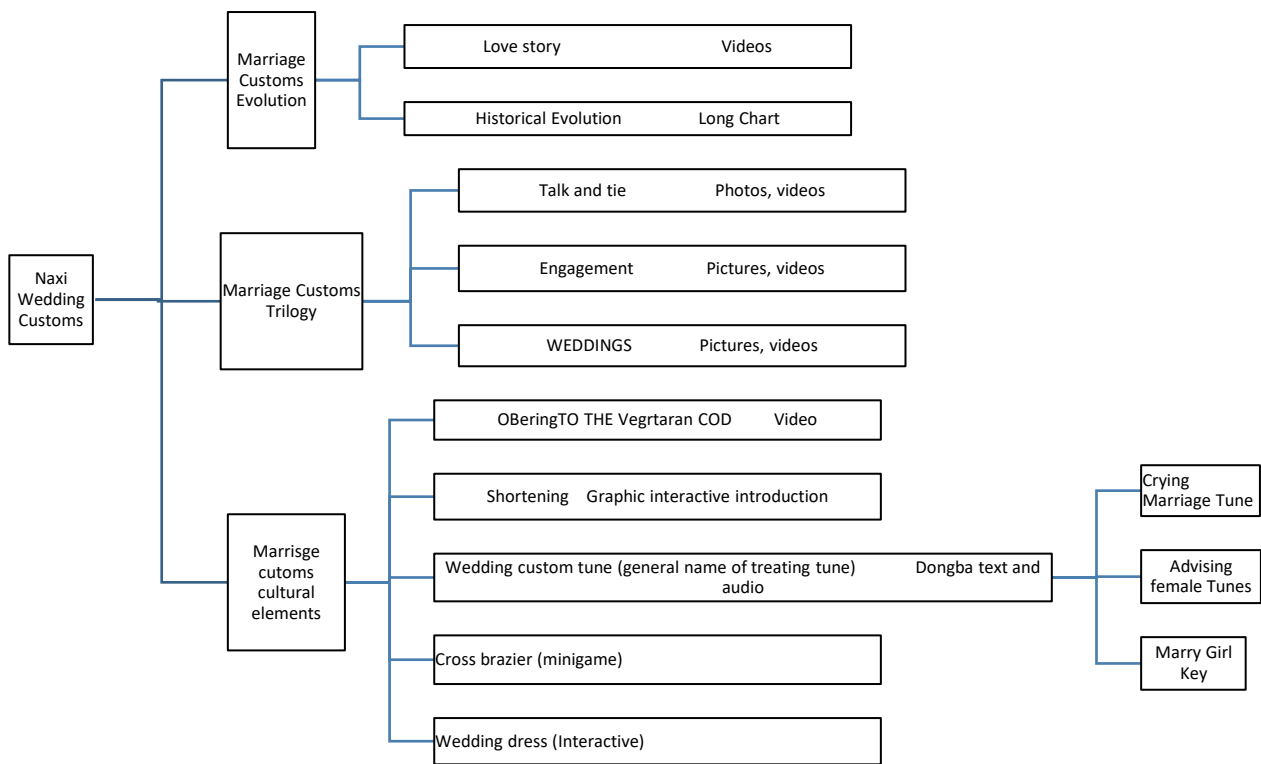


Figure 3: Naxi Wedding Customs

Division of Labor:

Material: Li Yumeng; Interface: Quan Wei, Zhang Xueling, Ji Kelui; Interactive: Wang Yuyue, He Huan, Ji Kelui, Zhang Xueling

As the above picture is an example, the content chosen by the students and the form of display are shown in the form of mind maps. The diversity of contents and forms of presentation of Dongba culture chosen by the students also provide a variety of contents for Dongba culture in the process of inheritance and digital publication.

Technical support and platform selection

After determining the content, it is necessary to choose suitable technical support and platform. H5 technology is one of the mainstream technologies for producing digital publications, which has the advantages of cross-platform and easy dissemination. Therefore, you can choose to use H5 technology for production, and consider using popular H5 development frameworks and tools, such as Vue.js, React.js, etc., to improve production efficiency and user experience. At the same time, it is also necessary to consider the release and dissemination channels of digital publications, and you can choose to release them to web pages, mobile applications and other platforms, so that users can access and learn anytime and anywhere, such as the following QR code, which is the completed work of the students' H5 production, which can be read by scanning the code with WeChat.



Figure 4: the code with WeChat

Design style and user experience

Design style and user experience are crucial parts of the production process of digital publications. The design style needs to be integrated with the Dongba culture, and can draw on symbols, patterns, colours and other elements of the Dongba culture to highlight the cultural characteristics and regional features. At the same time, the design style also needs to be simple, clear and beautiful to ensure that users can easily understand and operate. In terms of user experience, it is necessary to take into account the user's needs and habits, design a friendly interface and interaction, provide clear navigation and operational guidelines to ensure that users can easily access the information they need and learn to interact with each other, the following is a screenshot of the interface of the case design :

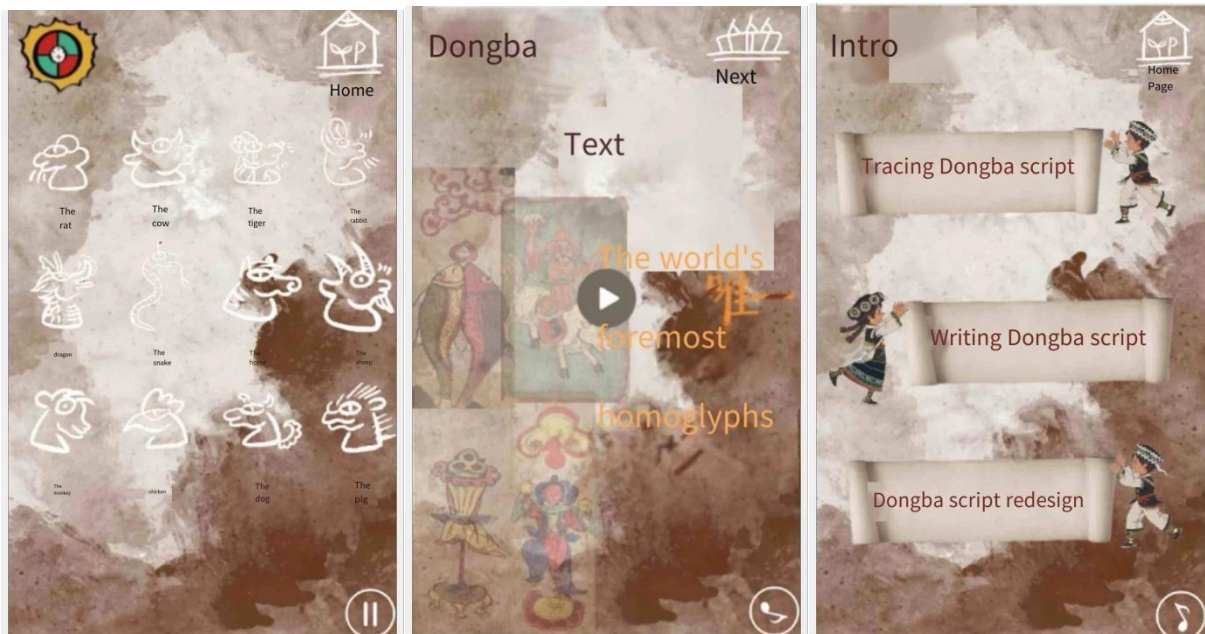


Figure 5. Screenshot 1, 2, 3 of the interface of the case design

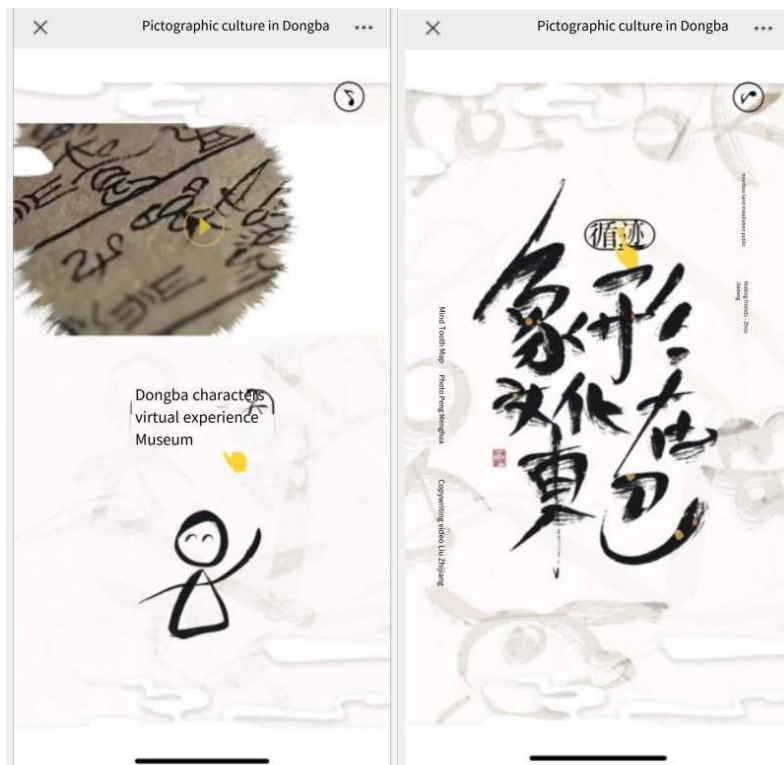


Figure 6: screenshot 4, 5 of the interface of the case design

The design and production of H5 digital publications need to comprehensively consider various aspects such as content selection and organization, technical support and platform selection, design style and user experience, etc., to ensure that the digital publications can fully reflect the

characteristics and learning needs of Dongba culture, and improve the learning effect and experience of learners. Through the above practical application methods, digital publications can better serve the needs of teaching Dongba culture, provide students with rich and diverse learning resources and experiences, and promote the inheritance and development of Dongba culture.

PRACTICAL TEACHING AND TEACHING EVALUATION

During the practice of the H5 digital publication of Dongba culture, students selected some typical contents of Dongba culture, including the basic introduction of Dongba texts, interpretation of Dongba scriptures, stories of Dongba myths and legends, etc., and used H5 technology to produce and design a digital publication with interactivity and multimedia display. Next, practical teaching was carried out and the teaching effect was evaluated.

The digital publication was used as an auxiliary teaching material in the teaching and combined with the content of classroom teaching. By presenting students with various forms of content such as text, pictures, audio and video in the digital publication, students were guided to learn and discuss, and their interest and participation in learning were stimulated.

The teaching effectiveness of the H5 digital publication on Dongba culture was assessed through questionnaires and student feedback. The survey results show that the vast majority of students are satisfied with the design and content of the digital publication, believing that it provides rich and diverse learning resources and learning modes, and helps to deepen their understanding and mastery of Dongba culture. At the same time, some students also put forward some suggestions for improvement, such as increasing interactivity and optimizing the interface design, in order to enhance the user experience and learning effect.

Taken together, the above assessment results show that the H5 digital publication on Dongba culture has achieved certain results in teaching, provided students with rich and diverse learning resources and experiences, and promoted the inheritance and development of Dongba culture. However, there is also a need to further refine and improve the content and functions of the digital publications to meet the learning needs of different students and improve the teaching effect.

CONCLUSION

In the process of practice, we have also encountered some challenges and problems. Firstly, due to the complexity and specialization of Dongba culture, the production of digital publications requires a lot of time and effort. Secondly, there are also differences in students' acceptance and usage habits, which require personalized design and teaching for different students' needs. Finally, the renewal of digital technology will also have a certain impact on the production and use of digital publications, which needs to be followed up and updated in a timely manner.

The practical application of H5 digital publications of Dongba culture has certain challenges and opportunities, which need to be explored and practiced continuously in order to improve the teaching effect and user experience, and promote the inheritance and promotion of Dongba culture.

REFERENCES

- Yang, Juan. (2018). Research on digitization of traditional cultural resources of Dongba culture[J]. *Times Civilization*, 2018(07):146-147.
- Poupard, D. (2019). Revitalising Naxi Dongba as a 'Pictographic' Vernacular Script.

- International Journal of Digital Humanities (2019). Digital Approaches to Understanding Dongba Pictographs.
- Wang, H., Wang, H., & Chen, X. (2021). Construction of Corpus and Knowledge Database for Naxi Dongba Manuscripts Based on an Internationally Sharing Platform.
- Lin, X., & He, C. (2020). Teaching Innovation through Digital Tools: The Case of Dongba Culture. Yunnan Minzu University (2022). Integrating Intangible Cultural Heritage into Digital Teaching Materials: The Case of Dongba.
- Zhang, K., & Li, L. (2020). The Role of Digital Publishing in the Transmission of Dongba Cultural Heritage.
- Chen, Y. (2021). H5 Technology and Interactive Digital Books for Cultural Education."
- Li, G. (2021). Innovative Digital Teaching Resources for Dongba Cultural Heritage.
- Digital Education in Intangible Cultural Heritage (2022). Exploring H5 Digital Solutions for Teaching Dongba Culture.
- Wang Mingliang, Li Xiaoyu. (2020). Research on the protection and inheritance of Dongba culture based on digitalization technology[J]. Modern Education Technology, 2020(07):169-171.
- Li Y. (2019). Research on the application of digital publications in teaching based on H5 technology[J]. Digital Library Forum, 2019(05):30-32.
- Wang W. (2017). The application of H5 technology in teaching[J]. Modern Information Technology, 2017(03):194-195.
- Zhang LH, Zhou WQ. (2019). Exploration and practice of designing teaching courseware using H5 technology[J]. Science and education literature, 2019(09):79-80.