

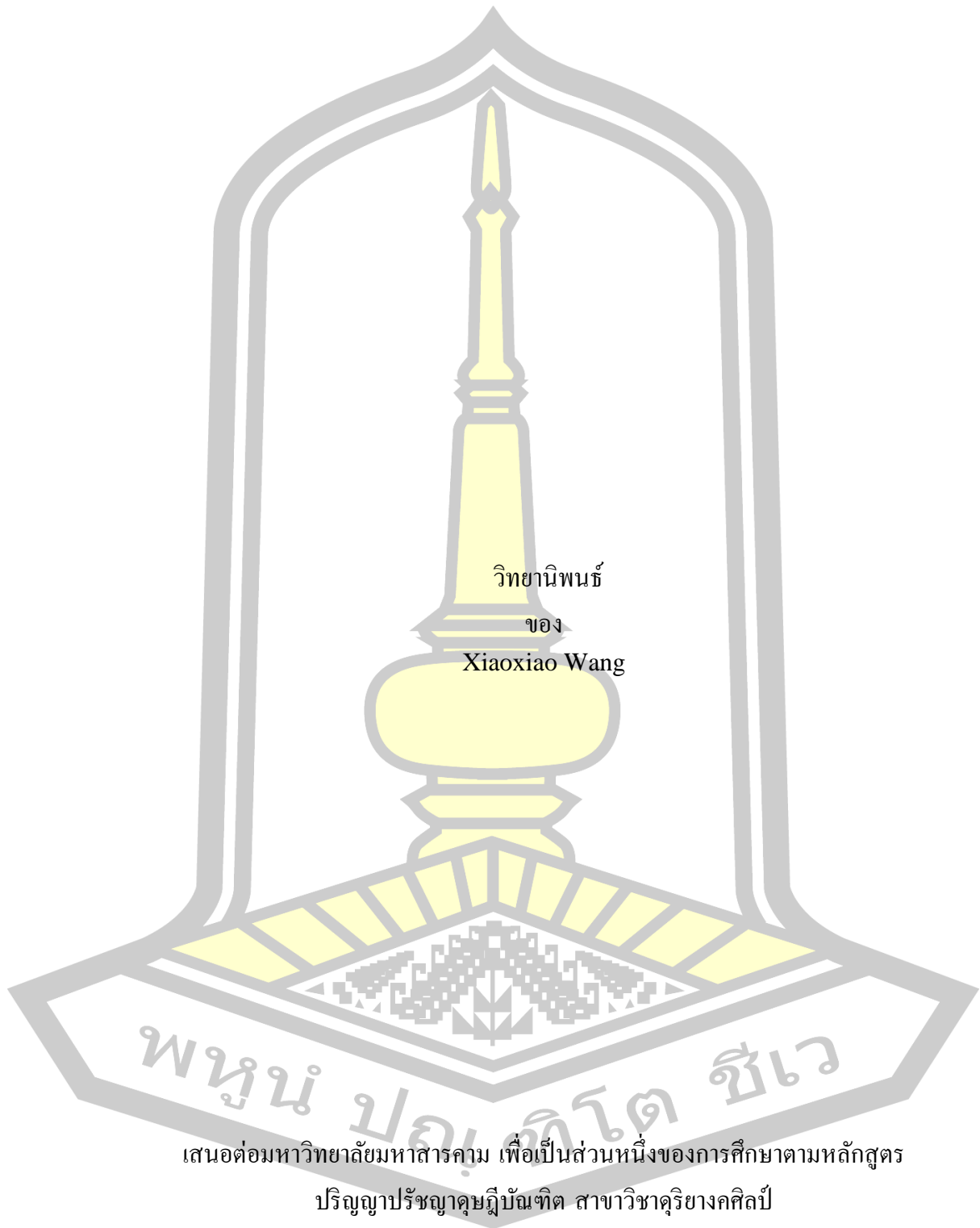
Duxianqin Music Instrument of Jing Ethnic Group in Guangxi, China

Xiaoxiao Wang

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Doctor of Philosophy in Music
February 2025

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เครื่องดนตรีคู่เขียนฉินของกลุ่มชาติพันธุ์จิงในเมืองกวางสี ประเทศจีน



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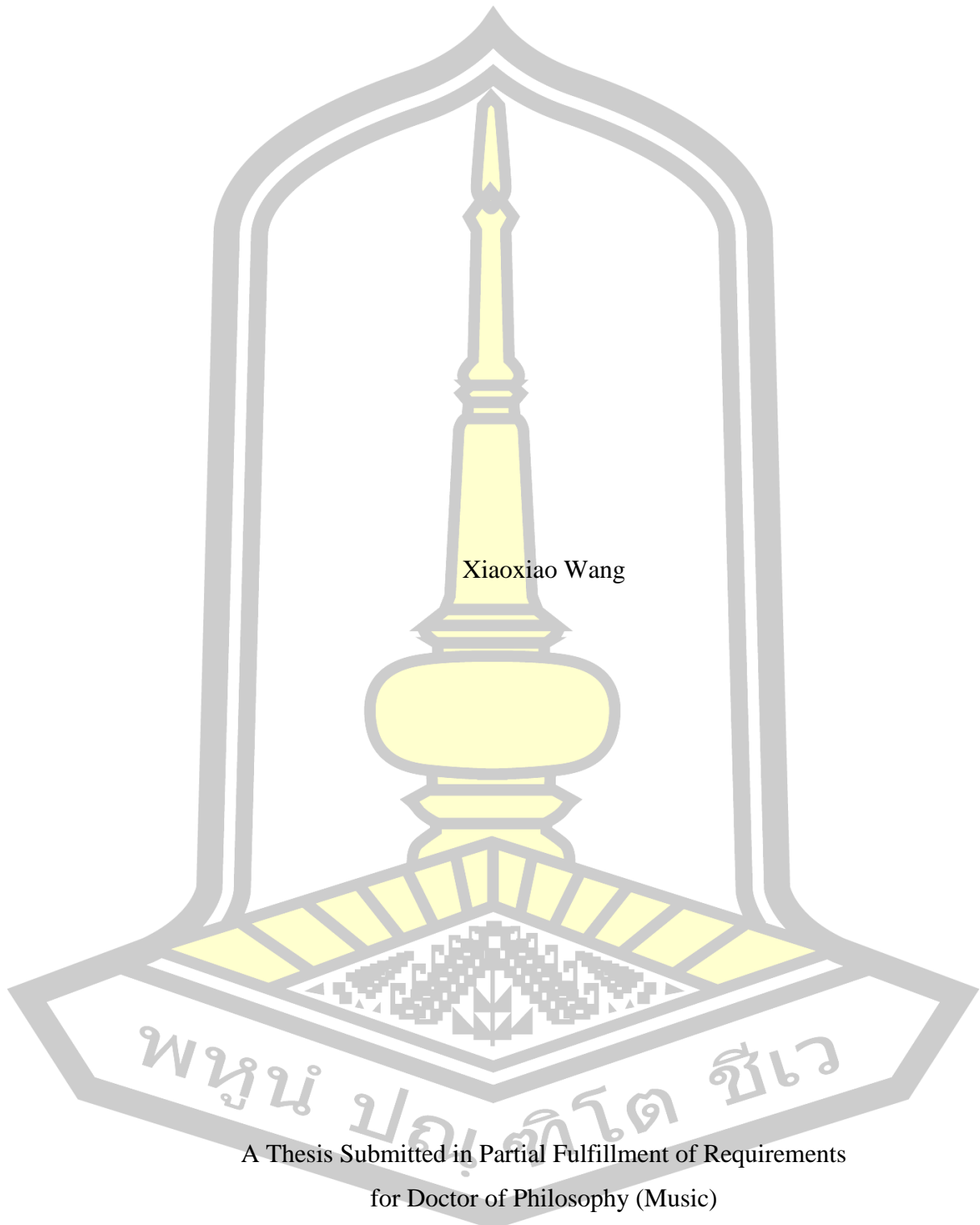
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ลิขสิทธิ์เป็นของมหาวิทยาลัยมหาสารคาม

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February 2025

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ABSTRACT

This article studies the musical instruments and music characteristic of the Duxianqin of the Jing ethnic group in Guangxi, China with three main purposes: 1) To investigate the development of Duxianqin of Jing ethnic group in Guangxi, China. 2) To analyze the music characteristic of Duxianqin of Jing ethnic group in Guangxi, China. 3) To propose the guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China. The research utilized interview from and questionnaires from as research tool. The result of this research reveals the following:

1. Duxianqin has gone through three different historical periods, from cultural expressions of religious rituals and folk festivals to diverse developments in contemporary internationalization.
2. By analyzing the application of performance techniques in five different levels of works, summarize how these performance techniques contribute to the expression of musical features in the works.
3. In the preservation process and transmission process Duxianqin of the Jing ethnic group in Guangxi, family transmission, school education and training, and online communication all play important roles.

Keyword : Guangxi Jing ethnic group, Duxianqin, Development, Music characteristic, Guideline of preservation

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My three-years doctoral program is coming to the end, and I took me two years to complete this research from preparing the paper to drafting the manuscript. Looking back on this period, I collected data, conducted on-site inspections, interviewed inheritors, conducted survey questionnaires, and maintained continuous communication with my advisor. Throughout the entire process, I received great care and assistance. I would like to take this opportunity to express my sincerest gratitude to them!

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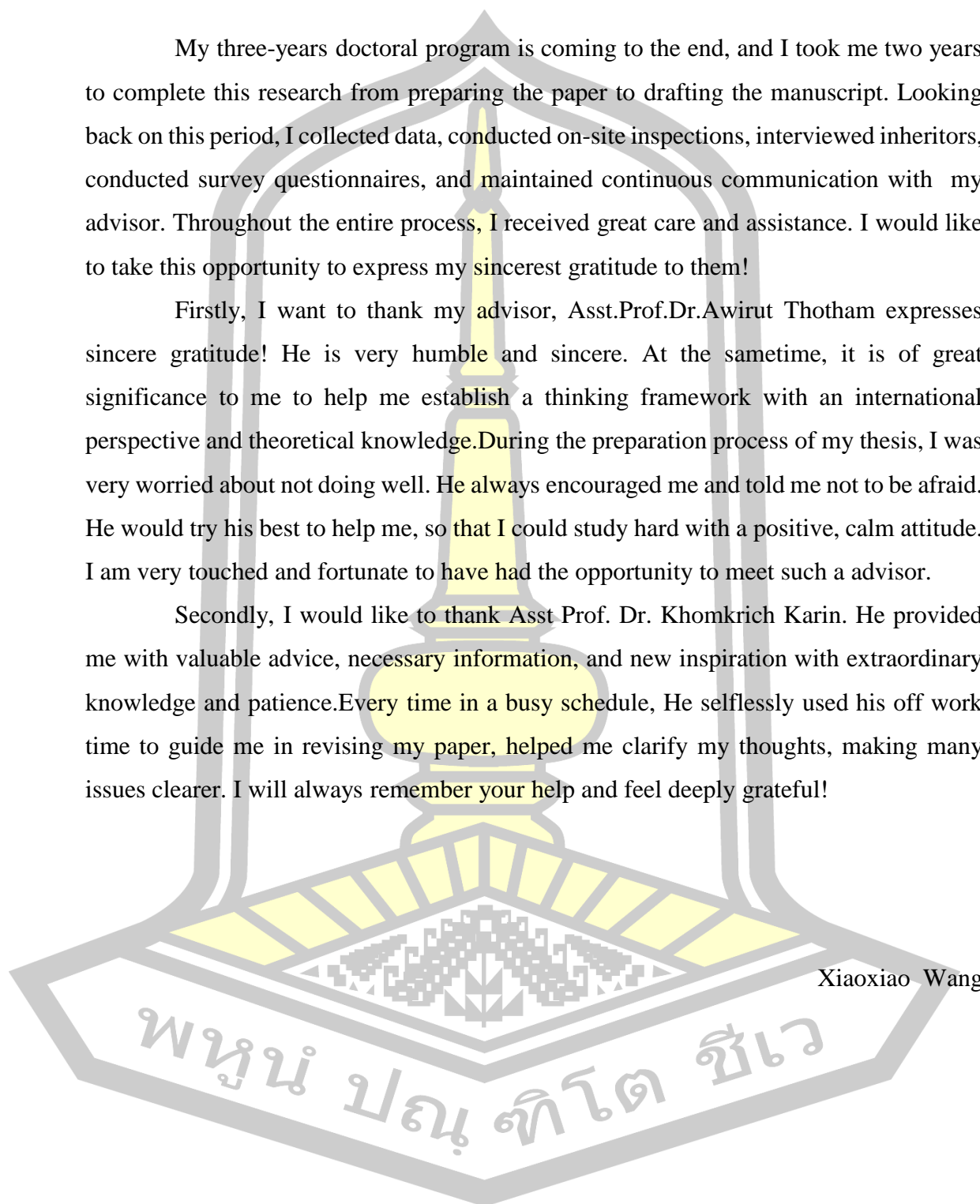


TABLE OF CONTENTS

	Page
ABSTRACT.....	D
ACKNOWLEDGEMENTS.....	E
TABLE OF CONTENTS.....	F
LIST OF TABLES.....	H
LIST OF FIGURES.....	J
CHAPTER I Introduction.....	1
1.1 Research background.....	1
1.2 Research objectives.....	3
1.3 Research questions.....	3
1.4 Benefits of research.....	3
1.5 Definition of Terms.....	3
1.6 Conceptual framework.....	4
CHAPTER II Literature review.....	5
2.1 History of the Jing ethnic group in Guangxi.....	5
2.2 Guangxi Jing ethnic group Culture.....	8
2.3 Summary of the Jing ethnic group Duxianqin in Guangxi, China.....	13
2.4 The playing techniques of Duxianqin in Guangxi, China.....	18
2.5 Theory used in the study.....	24
2.6 Literature and related research.....	27
CHAPTER III Research Methodology.....	35
3.1 Research scope.....	35
3.2 Research process.....	36
CHAPTER IV The development of Duxianqin of Jing ethnic group in Guangxi, China.....	49
4.1 The development of Duxianqin of Jing ethnic group in ancient period (202 BC-1800).....	50

4.2 The development of Duxianqin of Jing ethnic group in modern period (1801-1960).....	61
4.3 The development of Duxianqin of Jing ethnic group in contemporary period (1961-2025)	71
4.4 Summary.....	86
CHAPTER V Music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.....	89
5.1 A song (Chuan Zhen Yin Xian)	90
5.2 A song (Guo Qiao Feng Chui)	102
5.3 A song (Shan Ge Hao Bi Chun Jiang Shui)	110
5.4 A song (Zhi Yin)	117
5.5 A song (Huan Le De Jing Jia Nv)	124
5.6 Summary.....	132
CHAPTER VI The guideline of transmission of Duxianqin of Jing ethnic group in Guangxi, China.....	134
6.1 The preservation process of Duxianqin of Jing ethnic group in Guangxi, China	134
6.2 The transmission process of Duxianqin of Jing ethnic group in Guangxi, China.	137
6.3 The guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China	151
6.4 Summary.....	159
CHAPTER VII Conclusion Discussion and Suggestion	162
7.1 Conclusion	162
7.2 Discussion.....	164
7.3 Suggestion	170
REFERENCES	172
APPENDIX.....	176
BIOGRAPHY	187

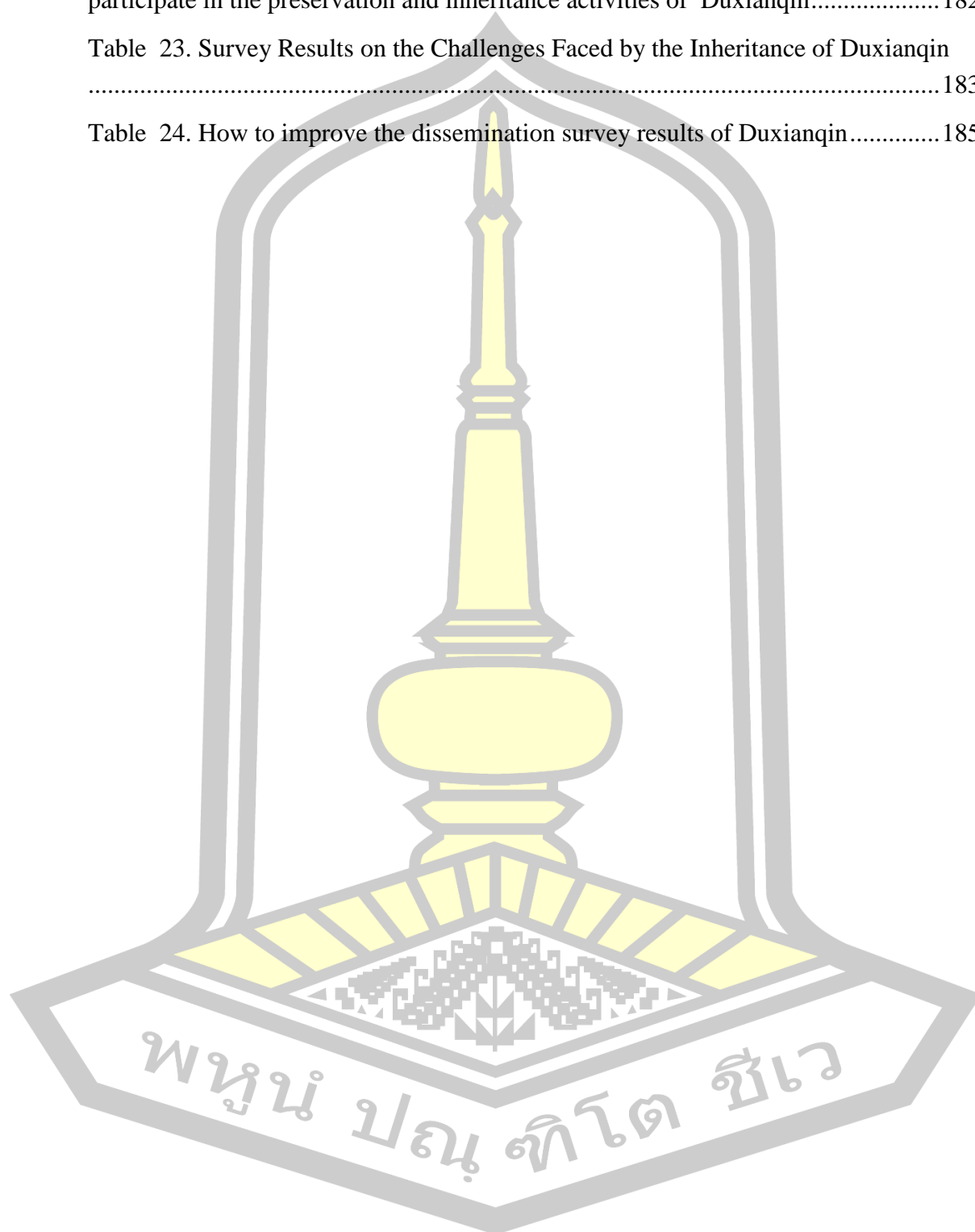
LIST OF TABLES

	Page
Table 1. Shows the statistics of casual informants, , including name, gender, nationality, age, address and occupation.....	41
Table 2. Selection of the songs	43
Table 3. The development of Duxianqin of Jing ethnic group in Guangxi, China.....	87
Table 4. “Chuan Zhen Yin Xian” musical structure	91
Table 5. “Guo Qiao Feng Chui” musical structure	103
Table 6. “Shan Ge Hao Bi Chun Jiang Shuii” musical structure.....	111
Table 7. “Zhi Yin” musical structure.....	118
Table 8. “ Huan Le De Jing Jia Nv” musical structure.....	125
Table 9. “ Huan Le De Jing Jia Nv” musical Strong weak chart.....	127
Table 10. Comparison of Melody, Rhythm, Form Structure, and playing technique of Three Music Pieces	132
Table 11. The literature mentions transmission guidelines for preservation and transmission.	137
Table 12. Save and disseminate questionnaire surveys during the process.	152
Table 13. Save and disseminate questionnaire surveys during the process.	154
Table 14. Save and disseminate questionnaire surveys during the process	155
Table 15. Save and disseminate questionnaire surveys during the process	157
Table 16. Summary of preservation process、 transmission process and guideline of preservation.....	161
Table 17. Age segmentation	176
Table 18. Distinguishing between the sexes.....	177
Table 19. A Survey on the Knowledge of the Duxianqin.....	178
Table 20. Investigation Results on the Historical Background of Duxianqin	179
Table 21. Investigation Results on the Transmission Channels of Duxianqin	181

Table 22. Survey results on whether 300 teachers and students are willing to participate in the preservation and inheritance activities of Duxianqin.....182

Table 23. Survey Results on the Challenges Faced by the Inheritance of Duxianqin183

Table 24. How to improve the dissemination survey results of Duxianqin.....185



LIST OF FIGURES

	Page
Figure 1. Map of Dongxing	6
Figure 2. Qingbing Wei Demonstration diagram of right-hand playing Techniques Source: xiaoxiao Wang(2011).....	19
Figure 3. Qingbing Wei playing the “Ya Gan” (压杆)	19
Figure 4. Qingbing Wei playing the “Peng Gan” (碰杆)	20
Figure 5. Qingbing Wei playing s the “Pai Gan” (拍杆)	20
Figure 6. Qingbing Wei plays the “La Gan” (拉杆) playing Techniques	21
Figure 7. Qingbing Wei playing the “Fan” (泛)	22
Figure 8. Qingbing Wei playing “Wan Yao” (腕摇)	22
Figure 9. Qingbing Wei playing of “Chan” (颤)	23
Figure 10. Map of Dongxing city, Guangxi Province, China.....	37
Figure 11. Main informant Chunfa Su.....	39
Figure 12. Main informant neng Wang.....	39
Figure 13. Main informant Haizhen Su	40
Figure 14. Main informant Xia Zhao.....	40
Figure 15. Main whistleblower Yuanyuan Ruan	41
Figure 16. Antique (Ancient period round bamboo tubular lyre).....	50
Figure 17. Tang Dynasty Dragon Headed Duxianqin	52
Figure 18. Bamboo tube qin.....	55
Figure 19. Ancient wooden Duxianqin.....	56
Figure 20. Bamboo Duxianqin and wooden Duxianqin	63
Figure 21. Antique Duxianqin	64
Figure 22. Old style Duxianqin.....	68
Figure 23. Innovative forms of performance	69

Figure 24. Modern Duxianqin.....	73
Figure 25. Modern Duxianqin.....	73
Figure 26. Different types of wood.....	75
Figure 27. Show to foreign friends	80
Figure 28. Tiktok playing software	82
Figure 29. Dongxing ing ethnic group Museum	83
Figure 30. Ethnic Instrumental Music Concert	84
Figure 31. ASEAN International Music Festival.....	85
Figure 32. D tuning	90
Figure 33. The pitch of Duxianqin position.....	90
Figure 34. The pitch of Duxianqin position.....	91
Figure 35. Chuan Zhen Yin Xian (bars1-11).....	92
Figure 36. Chuan Zhen Yin Xian (bars1-11).....	93
Figure 37. Chuan Zhen Yin Xian (bars11-22).....	93
Figure 38. Chuan Zhen Yin Xian (bars11-22).....	94
Figure 39. Chuan Zhen Yin Xian (bars11-22).....	94
Figure 40. Chuan Zhen Yin Xian (bars1-6).....	95
Figure 41. Chuan Zhen Yin Xian (bars1-11).....	95
Figure 42. Chuan Zhen Yin Xian (bars1-11).....	96
Figure 43. Chuan Zhen Yin Xian (bars1-11).....	96
Figure 44. Qingbing Wei plays the“Ya Gan”（压杆） playing Techniques.....	97
Figure 45. Qingbing Wei plays the"Pai Gan"拍杆 playing Techniques	99
Figure 46. Qingbing Wei plays the“Chan”(颤) playing Techniques	100
Figure 47. Qingbing Wei plays the"La Gan"（拉杆） playing Techniques	101
Figure 48. D tuning	102
Figure 49. The pitch of Duxianqin position.....	102
Figure 50. Guo Qiao Feng Chui (bars1-4).....	103
Figure 51. Guo Qiao Feng Chui (bars1-4).....	104
Figure 52. Guo Qiao Feng Chui (bars1-4).....	104

Figure 53. Guo Qiao Feng Chui (bars1-4).....	105
Figure 54. Guo Qiao Feng Chui (bars1-4).....	105
Figure 55. Guo Qiao Feng Chui (bars1-4).....	106
Figure 56. Guo Qiao Feng Chui (bars1-4).....	106
Figure 57. Guo Qiao Feng Chui (bars5-13).....	107
Figure 58. Guo Qiao Feng Chui (bars5-13).....	107
Figure 59. Guo Qiao Feng Chui (bars1-9).....	108
Figure 60. Guo Qiao Feng Chui (bars5-13).....	108
Figure 61. Guo Qiao Feng Chui (bars1-19).....	109
Figure 62. Guo Qiao Feng Chui (bars1-19).....	109
Figure 63. C tuning	110
Figure 64. The pitch of Duxianqin position.....	110
Figure 65. Shan Ge Hao Bi Chun Jiang Shui (bars1-28).....	111
Figure 66. Shan Ge Hao Bi Chun Jiang Shui (bars43-55).....	112
Figure 67. Shan Ge Hao Bi Chun Jiang Shui (bars43-55).....	112
Figure 68. Shan Ge Hao Bi Chun Jiang Shui (bars10-17).....	113
Figure 69. Shan Ge Hao Bi Chun Jiang Shui (bars10-25).....	113
Figure 70. Shan Ge Hao Bi Chun Jiang Shui (bars10-25).....	114
Figure 71. Shan Ge Hao Bi Chun Jiang Shui (bars10-25).....	114
Figure 72. Shan Ge Hao Bi Chun Jiang Shui (bars10-25).....	115
Figure 73. Shan Ge Hao Bi Chun Jiang Shui (bars29-31).....	115
Figure 74. Shan Ge Hao Bi Chun Jiang Shui (bars1-17).....	116
Figure 75. Shan Ge Hao Bi Chun Jiang Shui (bars1-17).....	116
Figure 76. E tuning	117
Figure 77. The pitch of Duxianqin position.....	117
Figure 78. Zhi Yin (bars1-11).....	118
Figure 79. Zhi Yin (bars1-11).....	118
Figure 80. Zhi Yin (bars1-11).....	119
Figure 81. Zhi Yin (bars1-11).....	119

Figure 82. Zhi Yin (bars1-11).....	120
Figure 83. Zhi Yin (bars1-11).....	120
Figure 84. Zhi Yin (bars1-8).....	121
Figure 85. Zhi Yin (bars5-16).....	121
Figure 86. Zhi Yin (bars1-16).....	122
Figure 87. Zhi Yin (bars1-8).....	122
Figure 88. Zhi Yin (bars1-8).....	123
Figure 89. Zhi Yin (bars1-8).....	123
Figure 90. Zhi Yin (bars1-8).....	124
Figure 91. F tuning.....	124
Figure 92. The pitch of Duxianqin position.....	125
Figure 93. Huan Le De Jing Jia Nv (bars1-17).....	126
Figure 94. Huan Le De Jing Jia Nv (bars18-42).....	126
Figure 95. Huan Le De Jing Jia Nv (bars31-80).....	127
Figure 96. Huan Le De Jing Jia Nv (bars19-37).....	128
Figure 97. Huan Le De Jing Jia Nv (bars38-47).....	128
Figure 98. Huan Le De Jing Jia Nv (bars1-39).....	129
Figure 99. Huan Le De Jing Jia Nv (bars6-19).....	129
Figure 100. Huan Le De Jing Jia Nv (bars6-19).....	130
Figure 101. Huan Le De Jing Jia Nv (bars6-19).....	130
Figure 102. Huan Le De Jing Jia Nv (bars31-42).....	131
Figure 103. Huan Le De Jing Jia Nv (bars48-68).....	131
Figure 104. Huan Le De Jing Jia Nv (bars1-4).....	132
Figure 105. Interview with inheritors of the Jing ethnic group.....	135
Figure 106. Family transmission.....	138
Figure 107. School education and training.....	140
Figure 108. Map of Dongxing.....	145
Figure 109. Map of Dongxing.....	145
Figure 110. Map of Dongxing.....	147

CHAPTER I

Introduction

1.1 Research background

The Duxianqin is the most representative musical instrument in the culture of the Jing ethnic group, with a long history and profound cultural connotations in the Jing region. The Duxianqin is not only a musical instrument, but also an important medium for the Jing ethnic group people to express emotions, spread history and culture. The "Jing ethnic group Duxianqin" was listed as a national intangible cultural heritage in China in 2011. Its dissemination and development reflect the national cultural identity of the Jing ethnic group. With the rapid development of modern society, the music culture of Jing ethnic group festivals is facing the risk of being marginalized and lost. Therefore, in-depth research on the music culture of Duxianqin, a member of the Jing ethnic group in Dongxing, Guangxi, will have a positive impact on the preservation, transmission, and guideline of preservation of traditional cultural diversity.

With the advent and acceleration of world economic integration and the information age, traditional maritime culture has been greatly and unprecedentedly influenced, and traditional ethnic clothing, food, traditional music, musical instruments, and other maritime ethnic cultures of the Jing ethnic group are gradually disappearing. In July 2013, Guangxi launched the construction of a demonstration zone for the protection, benefit, and prosperity of intangible cultural heritage along the China Vietnam border. With the border highway as the link, eight demonstration sites including the Dongxing Wanwei Intangible Cultural Heritage Exhibition and Display Base were built, forming the China Vietnam Intangible Cultural Heritage Corridor. Among them, Dongxing Jing ethnic group Duxianqin and other intangible cultural heritages have become key cultural and creative brands to be developed. (Liao Xinxin, 2020)

The Duxianqin of the Jing ethnic group is a representative of the culture of the Jing ethnic group, with characteristics such as the fleeting sound and the emphasis on the individuality of the performer. Due to the long-term self-destructive development of the art of Duxianqin, its protection and transmission are in crisis with the

strengthening of globalization and the acceleration of modernization. The existing four transmission modes of family transmission, apprenticeship transmission, folk customs transmission, and school transmission have become the main modes of inheriting the "intangible cultural heritage" of Duxianqin. In order to maintain the vitality of Duxianqin, we should adopt a parallel approach of "literature" protection and "living" protection in cross-cultural and interdisciplinary research perspectives. The protection of "literature" adopts methods such as "carpet like" collection and recording of information from previous and current artists. In addition to continuing the existing transmission mode, the protection of its cultural space should also be strengthened in the "live" transmission. (Huang Yu, 2013)

The art of the Jing ethnic group Duxianqin is a national intangible cultural heritage, and the transmission and development of this characteristic music culture have both social and economic benefits. The spread of the art of Duxianqin is facing difficulties such as weak teachers, difficulties in school education transmission, local cultural space being squeezed, and insufficient spread and strength. This requires diversified development strategies: shaping the brand of the Jing ethnic group culture and tourism, developing the combination of local economy and industry, cultivating professional teachers, building a school education transmission system, absorbing the essence of diverse music culture and strengthening communication to expand its influence and expand its cultural space. (Liu Chunying, 2019)

The Jing ethnic group is the only marine minority in China, and Duxianqin is its ancient folk stringed instrument. The art of Duxianqin has been in a state of self-development for a long time, resulting in its lower popularity compared to other ethnic instruments. The rapid development of the Internet has provided an effective platform for the dissemination of the art of the Jing ethnic group Duxianqin, spreading its unique charm and artistic aesthetic value more widely, allowing numerous scholars and folk music enthusiasts to conduct research one after another. (Su Fan, 2022)

Through the study of preliminary data, researchers have found that factors such as government policies, ethnic atmosphere, cultural environment, education system, and social media have had a significant impact on the development and protection of the Duxianqin, indirectly affecting its social status, artistic role, and performance style. Therefore, researchers mainly used ethnomusicology as the research method to conduct

field investigations and related studies on the development, musical characteristics, preservation, and guideline of transmission of the Duxianqin. This provides theoretical support and reference for the protection and development of Duxianqin music, as well as relevant information for those interested in further research.

1.2 Research objectives

1.2.1 To investigate the development of Duxianqin of Jing ethnic group in Guangxi, China.

1.2.2 To analyze the music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

1.2.3 To propose the guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

1.3 Research questions

1.3.1 What is the development of Duxianqin of Jing ethnic group in Guangxi, China?

1.3.2 What is the music characteristic of Duxianqin of Jing ethnic group in Guangxi, China?

1.3.3 What is the guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China?

1.4 Benefits of research

1.4.1 We will know the development of Duxianqin of Jing ethnic group in Guangxi, China.

1.4.2 We will study the music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

1.4.3 We will learn the guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

1.5 Definition of Terms

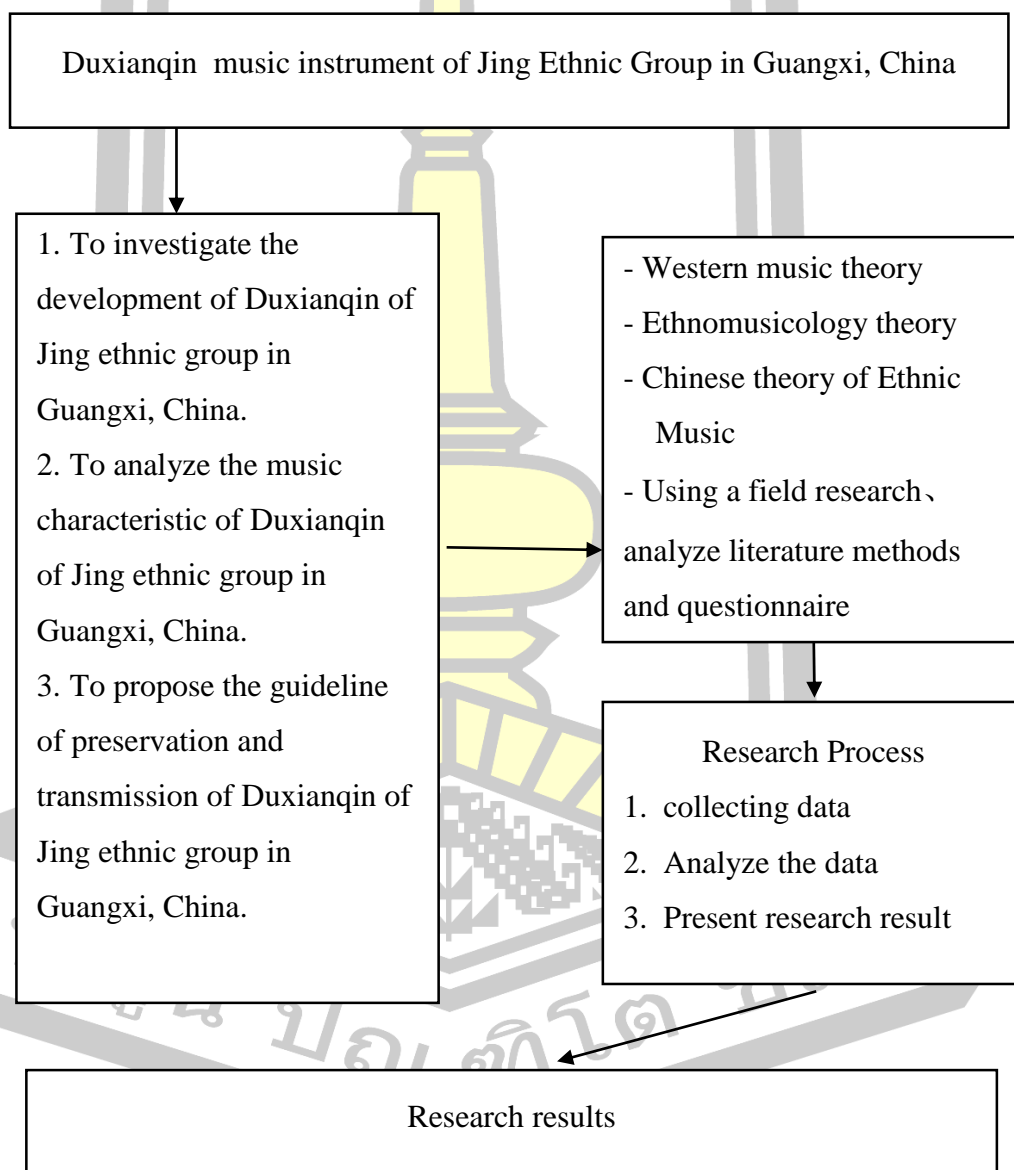
1.5.1 The development refers to the development of Duxianqin of Jing ethnic group in Guangxi from the history 202 B.C. to 2025.

1.5.2 Music characteristic refers to the melody, rhythm, and playing technique of Duxianqin of Jing ethnic group in Guangxi, China.

1.5.3 Guideline of preservation and transmission refer to the process of preservation and transmission by literature, society, family, education, internet communication of Duxianqin of Jing ethnic group in Guangxi, China.

1.6 Conceptual framework

This table is a conceptual framework for studying Duxianqin



CHAPTER II

Literature review

In this research, the researcher reviewed relevant documents to obtain the most comprehensive information that can be used in this research. The researcher reviewed the following topics.

- 2.1 The history of Jing ethnic group in Guangxi, China
- 2.2 The culture of Jing ethnic group in Guangxi, China
- 2.3 Summary of the Jing ethnic group Duxianqin in Guangxi, China
- 2.4 The playing techniques of Duxianqin in Guangxi, China
- 2.5 Theory used in the study
- 2.6 Literature and related research

2.1 History of the Jing ethnic group in Guangxi

2.1.1 Overview of the Jing ethnic group

The Jing ethnic group is a relatively small group among the 55 ethnic minorities in China, mainly distributed in Fangchenggang City, Guangxi Zhuang Autonomous Region. They mainly inhabit the three islands of Shanwei, Shanxin, and Wutou in Jiangping Town, Dongxing City, and are known as the "Three Islands of the Jing ethnic group". The historical origin and development of Jing ethnic group culture can be traced back to Duxianqin and Han dynasties in the third century BC. At that time, the ancestors of the Jing ethnic group thrived and developed a unique maritime culture here. Over time, the culture of the Jing ethnic group has continuously absorbed foreign cultures, such as Han, Yue, Chu and other cultures, gradually enriching and developing, forming a unique and distinctive culture of the Jing ethnic group. During the Ming and Qing dynasties, the culture of the Jing ethnic group entered its heyday, not only enjoying a high reputation in coastal areas, but also spreading overseas. (Wang Xuequn&Huang Ying, 2023)



Figure 1. Map of Dongxing

Source: <https://chinafolio.com/provinces/>, (2023)

2.1.2 Origin of the Jing ethnic group

By delving deeper into the origin history of the Jing ethnic group, it can be found that the settlement of the Jing ethnic group people was once the Baiyue area during Duxianqin and Han dynasties. In this region, the ancient Luo Yue ethnic group is the main residential population. From this perspective, the Jing ethnic group should undoubtedly be descendants of the ancient Luo Yue ethnic group. The ancient Luo Yue ethnic group is an important ethnic group in Chinese history, with a profound cultural heritage that has had a profound impact on the multi-ethnic cultural composition of our country. The Jing ethnic group, as descendants of the ancient Luo Yue ethnic group, also possesses rich historical and cultural connotations. Their traditional customs, lifestyle, language and culture all bear the historical imprint of the ancient Luo Yue ethnic group. The settlement of the Jing ethnic group in Fangchenggang City, Guangxi Zhuang Autonomous Region not only has rich historical and cultural heritage, but also has a unique geographical environment. These three islands - Yanwei, Shanxin, and Wutou - have superior geographical locations and charming natural landscapes, providing a favorable environment for the living and reproduction of the Jing ethnic group people.

(Zhao Minglong, 2019) "The Origin and Formation of the Jing Ethnic Group in Vietnam - Part Seven of the Luo Yue Culture Research Series."

2.1.3 The production and lifestyle of the Jing ethnic group, which is half fishing and half farming

Although the fishing tools of the Jing ethnic group are relatively rudimentary, to a certain extent, these simple tools have laid the foundation for their ethnic development. Since ancient times, the people of the Jing ethnic group have made a living by fishing in the ocean. Although their fishing tools are simple, they are an important pillar of their lives. With the deepening interaction between the Jing and Han ethnic groups, the ancestors of the Jing gradually learned to grow crops such as rice, thus achieving a transformation from a single fishing industry to a semi fishing and semi agricultural production and lifestyle. This transformation not only promoted the development of productivity of the Jing ethnic group to a certain extent, but also promoted the growth of the Jing population. The production and lifestyle of semi fishing and semi agriculture enable the Jing ethnic group people to grow crops while fishing, thus ensuring their source of livelihood. This diversified production method not only improves the production efficiency of the Jing ethnic group people, but also makes their lives more stable. With the improvement of productivity, the living standards of the Jing ethnic group people have gradually improved, thereby promoting the development of Jing ethnic group society. In addition, the semi fishing and semi farming production and lifestyle also provided conditions for the growth of the Jing ethnic population. With the guarantee of agricultural production, the lives of the Jing ethnic group people have been stabilized, and the population has gradually increased as a result. The increase in population has provided more human resources for the development of the Jing ethnic group and laid a foundation for their future development. (Bai Aiping, 2023)

Therefore, the origin of the Jing ethnic group is long and can be traced back to the 3rd century BC. The earliest ancestors thrived in the "Three Islands of the Jing Ethnic Group" area of Fangchenggang City, Guangxi, forming a unique marine culture. The traditional production method of the Jing ethnic group is half fishing and half farming, with fishing as the main focus, while also starting to cultivate crops such as rice. This production method promotes their livelihood stability and drives population

growth and social development. With the exchange with the Han ethnic group, the Jing ethnic group gradually developed more diversified economic activities, enhanced productivity, and laid a solid foundation for future development.

2.2 Guangxi Jing ethnic group Culture

2.2.1 Culture, music, clothing, and cuisine of the Jing ethnic group in Guangxi.

Culture: The Jing ethnic group culture of Guangxi, as a unique ethnic culture, stands out among the national ethnic cultures with its rich connotations and distinct characteristics. The Jing ethnic group is a minority ethnic group in the southern coastal areas of China, mainly residing in Dongxing City, Guangxi Zhuang Autonomous Region. Their cultural history is long and profound, and they are an important component of the diverse culture of the Chinese nation. (Zhong ShiHua 2023)

The conflict and integration between the status of traditional culture and modern society directly affect the diversity and continuity of Jing ethnic group culture. It mainly revolves around the core elements of traditional culture of the Jing ethnic group, such as language, clothing, cuisine, religious beliefs, etc. From the perspective of cultural transmission and modern social impact, the diversity and vicissitudes of Jing ethnic group culture are revealed. The results of this study provide us with a more comprehensive understanding of the diversity of Jing ethnic group culture. (Li JunMing 2017)

Through the study of the relationship between traditional culture of the Jing ethnic group and the development of modern society, we can see the multidimensional and multi-level characteristics of Jing ethnic culture, as well as its dynamic changes in modern society. The culture of the Jing ethnic group has rich connotations and diverse forms of expression, covering multiple levels such as instruments' material culture, institutional culture, and spiritual culture. In terms of instruments' material culture, the clothing, architecture, and cuisine of the Jing ethnic group all have distinct ethnic characteristics; In terms of institutional culture, the Jing ethnic group has strict family values and rules and laws; In terms of spiritual and cultural aspects, the Jing ethnic group's beliefs, folk stories, songs and dances, and traditional Chinese opera all have unique charm. These cultural elements are intertwined and together constitute the multi-

dimensional and multi-level characteristics of the Jing ethnic group culture. With the advancement of China's modernization process, the culture of the Jing ethnic group is also constantly undergoing changes. On the one hand, the traditional essence of Jing ethnic group culture has been retained in the transmission, such as national language, customs and habits; On the other hand, Jing ethnic group culture is also constantly innovating in the integration with modern culture, such as modern Jing cultural works, folk handicrafts, etc. This dynamic change not only reflects the strong vitality of Jing ethnic group culture, but also injects new vitality into the development of Jing ethnic group culture. (Lai Shijuan, 2013)

Music: From the perspective of traditional music of the Jing ethnic group and the transformation of modern society, Jing ethnic music has development and diversity in modern society. Among them, traditional music of the Jing ethnic group has diverse forms of expression, and in the changes and development of different social and cultural backgrounds, Jing ethnic group culture has diversity. The interaction and influence between traditional festivals of the Jing ethnic group and modern social changes. By reviewing the history of traditional festivals of the Jing ethnic group, it is further demonstrated that Jing music has continuously evolved and enriched in modern social changes, presenting diverse forms of expression. The research results show that traditional festivals of the Jing ethnic group have undergone changes in modern society, but still maintain diversity. Based on these research results, we can see that the diversity of Jing ethnic group culture is reflected in different aspects. Whether it is from traditional cultural elements such as language, clothing, food, religious beliefs, or from cultural practices such as music and festivals, one can feel the diversity and variability of Jing ethnic group culture. This diversity stems from the interaction between Jing ethnic group culture and modern society, and also reflects the efforts of the Jing ethnic group people to protect and inherit traditional culture. (Xu Pengcheng, 2019)

The core values and characteristics of the Jing ethnic culture in Guangxi are reflected in its unique marine culture, religious beliefs, folk art, and traditional customs. The marine culture of the Jing ethnic group has unique charm, manifested in fishing and hunting skills, marine rituals, marine customs, and other aspects. At the same time, the Jing ethnic group believes in deities such as Mazu and Guan Yu, emphasizing the harmonious coexistence between humans and nature, reflecting the national spirit of

respecting nature and respecting life. Folk arts such as Jing ethnic song and dance, Duxianqin, etc. are full of ocean atmosphere, beautiful melody, and unique style. Traditional customs such as weddings, festivals, and rituals have both strong regional and ethnic characteristics. (Li Weiwei, 2020)

Clothing: As an important carrier of human civilization, clothing has unique aesthetic concepts and profound cultural connotations for all ethnic groups. Among the rich ethnic cultures in our country, the ethnic costumes of the Jing ethnic group are unique and stand out with their strong maritime cultural atmosphere. The Jing ethnic group mainly inhabits coastal areas and their lives are closely related to the sea. Therefore, the ethnic costumes of the Jing ethnic group fully reflect the characteristics of marine culture in their design. The main tone of men's clothing is blue, which not only symbolizes the vastness and profoundness of the sea, but also represents the spirit and demeanor of Jing men who hold great ambitions and move forward courageously. The blue toned clothing washes away the secular dust and highlights the stability and grandeur of men. In contrast to men's clothing, the clothing of Jing ethnic group women is predominantly white. White symbolizes the purity and beauty of the waves, while also reflecting the pure, flawless, elegant and generous qualities of Jing ethnic group women. The white toned clothing is like a clear spring, washing away the hustle and bustle of the world and showcasing the gentleness and virtue of women. The clothing culture of the Jing ethnic group not only reflects their reverence and love for the ocean, but also an interpretation of the harmonious coexistence of nature. Against the backdrop of this vast blue ocean, the Jing ethnic group people have created vivid cultural paintings with their wisdom and talents. The unique aesthetic concept of Jing ethnic costumes also reflects their national personality. (Li Tong, 2021)

Diet: The cuisine culture of the Jing ethnic group is an important component of the diverse culture of the Chinese nation, and its distinct ethnic characteristics are highly renowned nationwide and even globally. This unique culinary culture stems from the seaside environment where the Jing ethnic group people have lived for generations, as well as their love for seafood and unique cooking techniques. The diet of the Jing ethnic group people is mainly seafood, not only because they live by the sea and have abundant seafood resources, but also because they believe that seafood has rich nutritional value and unique taste. On the dining table of the Jing ethnic group,

seafood such as fish, shrimp, and crabs are indispensable ingredients. These unique delicacies not only reflect the living habits of the Jing ethnic group people, but also demonstrate their appreciation and utilization of marine resources. In the culinary culture of the Jing ethnic group people, we can see their reverence for nature, love for life, and pursuit of food. The unique cooking techniques and ingredient combinations in the culinary culture of the Jing ethnic group also reflect their adherence to and innovation in traditional culture. In the rapid development of modern society, the people of the Jing ethnic group still maintain traditional dietary habits, which is not only their transmission of national culture, but also their beautiful expectations for future life. (Luo Lili, 2022)

2.2.2 Innovation of Jing ethnic group culture

In traditional Jing ethnic group culture, song festivals and dances are important components. However, with the changes in society, traditional song festivals and dance forms have gradually lost their original social foundation. To this end, the viewpoint of innovation is based on maintaining the core values of traditional culture. By modernizing traditional song festivals and dances to better meet the aesthetic needs of modern people, they can regain their foothold in society. (Luo Lili, 2022)

There are many ways to innovate Jing ethnic group song festivals, one of which is to introduce modern music elements. The music rhythm of traditional song festivals is single and the melody is simple, making it difficult to meet the aesthetic needs of modern people. Therefore, integrating modern music elements into traditional song festivals can not only enrich the musical expression forms of the festivals, but also make them more attractive. For example, one can try to apply the melodies and arrangement techniques of modern popular music to song festivals, making them lively and modern music works. Traditional dance has a single form of expression, and its props, costumes, and other aspects are relatively simple, making it difficult to attract the audience's attention on modern stages. (Yang Dongyan, 2009)

Using modern stage lighting, sound, projection and other technologies to create a dreamy atmosphere for dance, making it more visually impactful and artistic. At the same time, modern design concepts can be combined to inject fashionable elements into dance costumes and props, making them more modern. In the process of innovation, we must always adhere to the principle of inheriting and promoting the core values of

Jing ethnic group culture. This means that when innovating song festivals and dances, we should fully explore and inherit the moral concepts, national spirit, and social values contained in traditional culture, so that they can continue to play a role in consolidating national spirit and promoting social harmony in the new era. (Yang Dongyan, 2009)

The combination of traditional Jing ethnic clothing elements with modern fashion creates clothing that combines ethnic characteristics with modern aesthetic needs. In terms of handicrafts, we attempt to introduce new instruments' materials and technologies to make traditional handicrafts more practical and competitive in the market. The combination of Jing ethnic clothing elements and modern fashion is aimed at designing clothing that not only has ethnic characteristics but also meets modern aesthetic needs. Deeply exploring the traditional elements of Jing ethnic clothing, including color, pattern, instruments' material, etc., and cleverly integrating these elements into modern clothing design. (Hao Shijie, Liu Xueying, Jiang Yunle&Zhang Chunyan, 2023)

On the basis of maintaining the original ethnic characteristics, modern design concepts and techniques are applied to make clothing more in line with modern aesthetic concepts. This innovative design not only brings new vitality to traditional Jing ethnic clothing, but also enables it to be better inherited and protected as a national intangible cultural heritage. In addition, many attempts and innovations have been made in the field of handicrafts. Introducing new instruments' materials and process technologies to make traditional handicrafts more practical and competitive in the market. These innovative handicrafts not only enrich the market supply and meet the diversified needs of consumers, but also inject new vitality into the economic development of the Jing ethnic region. Combining traditional elements of Jing ethnic group clothing with modern fashion not only preserves the essence of national culture, but also meets the aesthetic needs of modern people. This innovative design not only benefits the transmission of traditional culture, but also injects new impetus into economic development. (Hao Shijie, Liu Xueying, Jiang Yunle&Zhang Chunyan, 2023)

With the popularization of Mandarin, the transmission of the Jing language is facing challenges. Therefore, we can draw on the advantages of other languages,

especially the excellent achievements of Mandarin and other minority languages, to inject new vitality into the development of the Jing language. This new Jing ethnic group language needs to maintain its ethnic characteristics while also possessing vitality and inclusiveness that are compatible with modern society. In terms of literary creation, traditional stories and legends of the Jing ethnic group are combined with modern literary techniques. (Zheng Yan, 2019)

Such works not only have ethnic characteristics, but also can be in line with modern society, and can better enable the outside world to understand and accept the culture of the Jing ethnic group. Through the dissemination of literary works, the Jing language will also be widely promoted and applied. On the one hand, it is important to attach importance to the education of Jing ethnic group language for young students, so that they can become familiar with and love their own ethnic culture; On the other hand, it is necessary to actively engage in foreign exchanges, so that more people can understand and learn the Jing language, thereby enhancing its influence both domestically and internationally. (Zheng Yan, 2019)

To sum up, the culture of the Jing ethnic group in Guangxi is deeply influenced by the ocean and foreign cultures, forming a unique national style. The music of the Jing ethnic group is full of rhythm and oceanic atmosphere, often accompanied by simple instruments, expressing their reverence and dependence on the sea. The clothing of the Jing ethnic group is brightly colored, especially women's clothing, which showcases strong local characteristics through embroidery and patterns. In terms of diet, seafood and rice are the main staple foods of the Jing ethnic group, and the diversity and deliciousness of seafood are the core of their food culture. With the development of time, the culture of the Jing ethnic group has absorbed cultural elements such as Han and Yue, constantly innovating and integrating while maintaining tradition, forming a cultural system that has both traditional heritage and modern characteristics.

2.3 Summary of the Jing ethnic group Duxianqin in Guangxi, China

2.3.1 Origin of Dongxing Duxianqin in Guangxi, China

Chinese scholars hold two views on the historical origins of Duxianqin. One view suggests that Duxianqin originated in China, while the other view suggests that it originated in Vietnam and was brought by the ancestors of the Jing ethnic group to

migrate to the three islands of the Jing ethnic group. However, more evidence suggests that Duxianqin originated in China. There are two folk beliefs about the origin of Duxianqin in the Jing ethnic group. One believes that it originated from the legendary story of the Duxianqin of the Sea Dragon King, and the other string is the hair of Princess Seven of the Sea Dragon King; One theory suggests that when the ancestors of the Jing ethnic group went fishing at sea, they discovered that the ropes on the mast could make a wonderful sound as the boat swayed and collided, which inspired them to imitate and make. But Duxianqin was developed in the southern region of China and is a stringed instrument known as Danpao in the Jing language. It is very popular in Fangcheng and various ethnic autonomous counties of Guangxi Zhuang Autonomous Region and is an ancient folk bamboo instrument of the Jing ethnic group. (Liu Yiwen, 2021)

As a typical plucked instrument, similar plucked instruments already existed in folk art activities in Dongxing, Guangxi at that time. These instruments are mainly made of slender wood, with one end tightly fastened to the strings and the other end used to hold the plucked strings. The early Duxianqin production process was relatively simple, with an ancient and elegant shape. The selection of wood and the combination of strings make these instruments unique in tone and deeply loved by local people. With the passage of time, the production process of Duxianqin gradually improved. The design of Duxianqin body has become more exquisite, and the selection of wood has become more meticulous, making the sound quality of Duxianqin more beautiful and the shape more beautiful. During this process, Duxianqin gradually developed into a highly artistic and practical instrument. In China, music culture has been closely related to folk life since ancient times. As a form of folk music expression, Duxianqin not only inherits national culture but also embodies the wisdom of folk artists. (Shi Heng, 2016)

The Duxianqin, named after having only one string, is a unique “Ya Gan” (压杆) playing instrument of the Jing ethnic group. In the Jing language, it is called the "Paoqin" or "Duxian Paoqin". It is popular in the Jing ethnic area and is popular in the three islands of the Jing ethnic group in Dongxing City. It is an ancient folk music instrument passed down from ancient China and a treasure of the Jing cultural and artistic heritage. A soloist uses a hollow body to resonate and produce sound by plucking the strings, and then changes the tone through the changes in the joystick,

producing a diverse and unique ethnic style with a strong maritime ethnic color. The art of the Jing ethnic group Duxianqin is one of the first batch of intangible cultural heritage at the Guangxi Zhuang Autonomous Region level. It was approved by the State Council in May 2011 and included in the third batch of national intangible cultural heritage list. (Huang Zhihao, 2008)

2.3.2 Structure of Dongxing Duxianqin in Guangxi, China

The structure of Duxianqin includes a resonance box, a joystick, a string axis group, A Duxianqin string, and a stick. The Duxianqin body is in a rectangular box shape, consisting of a frame plate, panel, bottom plate, etc. One end of the body is smaller, the other end is larger, and the smaller end is called the head. There are two common types: bamboo and wood. The length of a bamboo Duxianqin is generally between 105-120 centimeters. The head of Duxianqin is inserted with a bamboo joystick, and the upper part of the joystick is bent to the left in a bow shape. The lower end is fitted with a bamboo resonator. The wooden Duxianqin is made of panel, bottom plate, and frame board glued together, forming an irregular rectangular box shape. The wider end of Duxianqin face is the head, and the narrower end is the tail, with a length of 105 centimeters. The panel is usually made of paulownia wood, while the bottom plate is commonly made of pine wood. Whether it is a bamboo or wooden Duxianqin, the joystick is generally made of bamboo, and there are also ones made of ox horns or ivory, with a length of about 30 centimeters. The upper part of the joystick is curved in a bow shape, so some people also call it a "string bow". The lower part of the joystick is pierced with a resonant blade, which is a horn shaped rectangular resonator that not only plays a role in sound resonance but also serves as a decoration. The lower end of the joystick is inserted directly into the center of the tail of Duxianqin. The strings are usually made of steel wire or nylon wrapped with steel wire. The right end is pressed against the strings, passed through the string hole on the surface of the instrument, and wrapped inside the head of the instrument. The left end is tied to the lower part of the joystick through the gourd mouth. (Border Region, 2000)

The unique circular body of Duxianqin is equipped with a natural resonance box inside. As long as a joystick is inserted into the body of Duxianqin, the strings are tied, and the desired pitch is adjusted, it can be played easily. This type of instrument does not require special production skills, so in the folk culture of the Jing ethnic group in

China, Duxianqin is deeply loved by the general public. When playing a Duxianqin, a small bamboo piece is usually used as a plucking tool (also known as a bamboo plucker). This playing method makes the sound of Duxianqin gentle and melodious, like a heavenly melody. However, the resonance effect of Duxianqin body made of bamboo and wood is not ideal, and the sound is relatively small. With the advancement of technology, entering the electronic age, the interior of a Duxianqin is usually equipped with electronic sound equipment such as a pickup, amplifier, and power supply. Some Duxianqins can even be equipped with external amplification speakers, making the sound louder when playing. Nowadays, most of Duxianqin seen on the market are electronic Duxianqin. The sound production and resonance of the electronic Duxianqin are mainly completed by the sound system, no longer relying on the pronunciation of Duxianqin body itself. Simply install a suitable pickup and connecting jack on the original Duxianqin body, connect it to the speaker through a connecting cable, and you can play beautiful music. Compared to traditional bamboo and wooden Duxianqin, electric Duxianqin is not only convenient to carry, but also has a more stable sound quality, which is becoming more and more popular among people. (Lu Kegang, Yang Xiuzhao, He Hong, 1984)

The people of the Jing ethnic group love life, have a passionate and unrestrained personality, and enjoy singing, dancing, and playing Duxianqin in their spare time. Duxianqinist can be played alone or as an accompaniment. When playing, the performer can lay the Duxianqin flat on the table or stand, or sit or stand to play, or place the Duxianqin on both legs to sit and play. Using your right hand, hold a pick and work with your little finger to touch each “Ya Gan” (压杆) point on the string. Gently touch the outer third to eighth of the string with your palm to produce a compound sound of “Ya Gan” (压杆)s and fundamental notes. The left hand changes the tension of the strings by pushing and pulling the joystick, producing different levels of sound. When pulling the joystick, the strings are tensioned and the pronunciation increases; When pushing the joystick, the strings relax and the pitch decreases. The right-hand fingering techniques of Duxianqin include playing and picking, and continuous playing and picking can present a rolling effect similar to playing a pipa. The left hand has rich skills and can play various decorative notes, including string kneading, pushing, pulling, pushing, hitting, hitting, shaking,

“Chan” , sliding, etc. Through the exquisite performance of artists, the Duxianqin can play melodious, poignant, and sharp melodies that are intoxicating. In 2010, the art of the Jing ethnic group Duxianqin was successfully applied for as a national intangible cultural heritage project. (Yan Hongfang, 1993)

2.3.3 Characteristics of Dongxing Duxianqin in Guangxi, China

The sound of nature is unique. The music style and repertoire of a Duxianqin are powerful, lively, and lively, often combined with dance to provide the audience with a dual auditory and visual enjoyment. In a traditional sense, the music style and repertoire of Duxianqin have inherited a long historical heritage. Each piece of music is like a reproduction of a historical story, embodying the wisdom and emotions of the Jing ethnic group people in Dongxing. Whether in holiday celebrations or daily life, Duxianqin plays an irreplaceable role, becoming an important way for the Jing ethnic group people to express joy and emotions. (Zhou Wenjuan, 2004) "Exploring the Mysteries of Duxianqin"

As a unique ancient musical instrument of the Jing ethnic group in China, Duxianqin has a unique structure. Its structure is very unique, with only one string that emits a beautiful sound through the flicking of the joystick. Although this instrument is simple, its sound is very beautiful and melodious, full of flexibility, and can express rich musical emotions. The instruments' materials and craftsmanship of making Duxianqin are also quite distinctive. The instruments' materials used to make Duxianqin are mainly natural instruments' materials such as locally grown wood and bamboo. These instruments' materials are not only environmentally friendly, but also have unique sound quality. In the production process, craftsmen use manual techniques such as carving and polishing to polish wood and bamboo into smooth bodies, and then finely carve them to make each Duxianqin look like a work of art. This carving technique cannot be replicated. (2022, Hua Wei, Zhong Hai)

To sum up, the Duxianqin in Dongxing, Guangxi is an important symbol of traditional music culture of the Jing ethnic group, with origins dating back hundreds of years and deeply influenced by the lives and natural environment of the Jing ethnic group people. Its structure is unique, with the body usually made of wood and only one string. It adopts a simple yet exquisite design, presenting strong local characteristics.

The sound of the Duxianqin is rich and expressive, usually used in folk music performances of the Jing ethnic group, which can convey rich emotions. Its playing techniques are unique, often accompanied by the distinctive singing of the Jing ethnic group, showcasing their unique expression of nature, life, and emotions. This traditional musical instrument not only reflects the cultural history of the Jing ethnic group, but also demonstrates its musical innovation and inheritance of traditional art.

2.4 The playing techniques of Duxianqin in Guangxi, China

2.4.1 Duxianqin playing posture

Mastering the correct posture is paramount in acquiring proficiency in playing a Duxianqin instrument. First, one should sit on a chair of appropriate height while maintaining an upright posture. Position the Duxianqin on your knee, ensuring it remains parallel to your body. Employ your left hand to support the lower portion of the Duxianqin, maintaining moderate pressure to stabilize the instrument. The right hand should naturally rest above the strings, with relaxed and slightly bent fingers to facilitate playing (Liu WenRong, 2020)

When playing, the right hand plays the strings with shells or short bamboo pieces to make them sound trembling, while the left hand simultaneously shakes the bamboo pole to curl the sound and form a melody. When playing a single harp, hold a wooden stick in your right hand and gently touch the strings with your outer palm to produce sounds such as $1/2$, $1/3$, $1/4$, $1/5$, $1/5$, $1/6$, $1/8$, etc. Grasp the joystick with your left hand and adjust the tension of the strings by pushing or pulling to increase or decrease the height of the sound. (Hou Xinru, 2021)

2.4.2 playing technique of the Duxianqin

The right-handed playing technique mainly involves using specific tools, such as shells or short bamboo pieces, to play the strings. When playing, gently touch different positions of the strings with the outer palm (such as $1/2$, $1/3$, $1/4$, and other crossing points) to produce specific sounds. The techniques of the right hand include playing, picking, and quick alternation, which can achieve a similar "rolling" effect and produce a composite sound of overtones and fundamental frequencies. The combination of right-handed skills allows the fingers to move flexibly and quickly strike on the strings, producing rich overtones and base notes that combine with the left

hand's phonology, fingering, and finger movements to form various rich playing techniques (Mi Songhua, 2008)(As shown in the Figure: 2)



Figure 2. Qingbing Wei Demonstration diagram of right-hand playing Techniques
Source: xiaoxiao Wang(2011)

“Ya Gan” (压杆) : Using the second joint of your index, middle, and ring fingers (As shown in the Figure: 3)

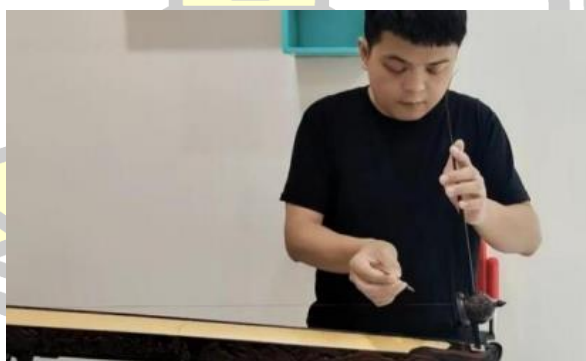


Figure 3. Qingbing Wei playing the “Ya Gan” (压杆)

Source: xiaoxiao Wang(2014)

"Peng Gan" (碰杆) The performance method is opposite to the racket, using the inside of the thumb to hit the Peng Gan to the left, forming an effect similar to an upward leaning sound c.



Figure 4. Qingbing Wei playing the "Peng Gan" (碰杆)

Source: xiaoxiao Wang(2014)

"Pai Gan" (拍杆) Bend the left fingers naturally and tap the Pai Gan playing to the right using the second joint of your index, middle, and ring fingers. (As shown in the Figure: 5)



Figure 5. Qingbing Wei playing s the "Pai Gan" (拍杆)

Source: xiaoxiao Wang(2014)

"La Gan" (拉杆) Pull the La Gan playing with your left hand (to the left) to the desired phoneme, creating a continuous sound effect that resembles a rapid upward slide. There are two basic gestures: one is to pull the La Gan playing with the left index finger, middle finger, and thumb to the desired phoneme; The second method is to use the inner side of the left thumb to stick the stick, the middle finger and ring finger tip to stick the stick, and the little finger tip to push the stick towards the desired phoneme.(As shown in the Figure: 6)



Figure 6. Qingbing Wei plays the "La Gan" (拉杆) playing Techniques

Source: xiaoxiao Wang(2014)

"Fan" (泛) : On the strings of a Duxianqin, there are specific points called "Fan" points, where the strings are lightly touched to produce clear "Fan". Usually these points are an integral fraction of the length of the string, such as $1/2$, $1/3$, $1/4$, etc. Touch the "Fan" (泛) points gently with your fingers, taking care not to press hard on the string. Touch gently and pluck the string with the plectrum, making sure that the plucking force is moderate and smooth. Move away from the string immediately after plucking so that the "Fan" (泛) can ring out more clearly. (as shown in the figure :7)



Figure 7. Qingbing Wei playing the "Fan" (泛)

Source: xiaoxiao Wang(2014)

"Wan Yao" (腕摇) The first joint of the left middle finger and the first joint of the ring finger are slightly bent, and the Wan Yao is pulled and shaken in the upward and downward directions of the sound, forming an echo-like effect. (as shown in the figure :8)



Figure 8. Qingbing Wei playing "Wan Yao" (腕摇)

Source: xiaoxiao Wang (2014)

"Chan" (颤) The left finger bends naturally. After playing the string with the right hand, the third joint of the index finger, middle finger, ring finger, and little finger of the left-hand pushes the Chan Yao to move repeatedly in the downward direction of the sound, forming a similar effect to repeatedly reverse Boeing when the original sound is pronounced. (As shown in Figure 9)



Figure 9. Qingbing Wei playing of "Chan" (颤)

Source: xiaoxiao Wang(2014)

2.4.3 The pitch control of the Duxianqin

The pitch control of the instrument is difficult, mainly due to two aspects: it is "invisible", that means, the player cannot judge the hearing and hand feel completely; the other is that the instrument has no interval, and the stepless interval formed by the rocker makes no interval between the interval, easy to confuse the concept of pitch, resulting in fuzzy pitch. For the difficulty of intonation control of the single-chord instrument, Pan JiangNing proposed a variety of techniques and methods. For example, the "power superposition" method solves the problem of pitch control through simple and scientific power force method, which emphasizes the combination of forearm rotation and finger power to improve the stability and accuracy of power control. (Douke Baba website, 2012)

To sum up, the playing posture of Duxianqin instrument is unique, the right hand is responsible for plucking the strings, while the left hand is used to control the pitch. The right-handed playing technique mainly relies on fingernail or bow plucking, emphasizing changes in strength and rhythm, and can express rich tones and emotions. The left hand adjusts the pitch by pressing the position of the string, and the performer needs to precisely control the position and intensity of the string to achieve the desired tonal effect. Pitch control is the key to performance. The technique of the left hand, combined with the rhythm of the right hand, can create a unique sound quality variation of the Duxianqin, making its tone expressive and emotionally rich.

2.5 Theory used in the study

This study intends to use Western music analysis theory, traditional Chinese music theory, and ethnic musicology theory to conduct in-depth research on the Guangxi Duxianqin, analyze its development process, musical characteristics, and musical characteristics, and through interviews and summaries, Also propose the guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

2.5.1 Western music theory

The theory mainly focuses on the analysis and research of rhythm, melody, harmony, and other aspects. Western music theory is mainly used to analyze the external structure of the melody of the Duxianqin, also known as melody. It reflects the overall or main idea of music, performed by individual parts of multiple independent tones, combined with patterns, rhythms, and beats. Tune is the most important means of expression in music form, the essence of music, and one of the decisive factors in music.

Rhythm: Rhythm refers to a series of regular notes, beats, and the arrangement of strengths and weaknesses, forming a temporal order. Music rhythm is one of the fundamental elements of music, playing an important role in the overall feeling and expression of music. Beat refers to a repetitive beat pattern over a period of time, for example, a 4/4 beat indicates four beats per measure, while a 3/4 beat indicates three beats per measure. The rhythm of music is not only to provide structure to the music, but also to guide the audience to feel the pulse and movement of the music. Different music styles and cultures have different ways of expressing rhythm, thus creating a variety of

Strength: The strength of music mainly involves dynamic expression, that is, the volume changes of notes. This is achieved through the use of dynamic symbols and terminology. Common dynamic terms and symbols, such as Fortissimo (abbreviated as ff), Pianissimo (abbreviated as pp), Mezzo Forte (abbreviated as mf), Mezzo Duxianqin (abbreviated as mp), Crescendo (abbreviated as *cres.* or *<*) (Decrescendo or Diminuendo, abbreviated as *dim.* or *>*), help musicians and conductors convey the emotions and expressions of music. By using strengths and weaknesses in different parts, music can convey various emotions, from passionate and passionate to gentle and delicate. Dynamic changes are crucial for the expression and performance of music, providing

composers and performers with rich tools for expression. (A Dictionary of Foreign Music Performance Terminology, 1994)

Western music analysis theory requires comprehensive analysis. Based on the above analysis objects, this article conducts an in-depth analysis of the essence of music, in order to analyze the music images that resonate with the audience. Adopting Western music analysis theory helps us to have a deeper understanding of the melody structure and rhythm of the Duxianqin. Furthermore, it helps researchers to study the music ontology structure of the various scholars in Guangxi and colorful music experiences.

2.5.2 Traditional Chinese music theory

The research method of Chinese traditional music theory is to interpret and analyze the musical structure and score structure of the Guangxi Duxianqin. Traditional Chinese music theory is a profound and complex system that has undergone thousands of years of development. This theory covers multiple aspects of music, including modes, rhythms, and instrumental playing technique. Like the Five Tones and Twelve Rhymes, the fundamental mode of traditional Chinese music is the Five Tone Mode, which divides intervals into five notes: Gong, Shang, Jiao, Zheng, and Yu. These five notes can also form rich tones through ups and downs during performance. In the twelve syllables, these five notes are extended to twelve notes through ascending and descending, forming a more detailed scale system. (Tian Yaonong, 2014)

In traditional Chinese music theory, the analysis of traditional music forms is very important, involving research on multiple aspects such as music structure, melody, rhythm, and expression. Traditional Chinese music often has unique musical structures, and different pieces may adopt different musical forms, such as starting and ending, five paragraphs, eight paragraphs, etc. (Shen Qia, 1986)

The analysis of musical forms helps to understand the overall structure and development process of music. So as to comprehensively and meticulously study the structure of traditional Chinese music, and deeply understand and study the musical essence of the Duxianqin. It is worth noting that nothing can be analyzed through a single research method. It is obvious that this is a very one-sided approach. Therefore, it is very important to use the research method of traditional Chinese music structure to

analyze the music ontology of the Duxianqin. However, for the collection of relevant literature, scores, recordings, and other instruments' materials on the Duxianqin, the analytical methods of Western music theory are also a very important supplement. However, Western music theory only focuses on score systems and modular music systems. Chinese traditional music theory will help researchers study the deep structure of the Duxianqin and provide relevant insights.

2.5.3 Chinese theory of ethnic music

Ethnomusicology is a discipline that studies and systematizes the principles, structures, forms, and characteristics of various ethnic music. The music of different ethnic groups has unique cultural backgrounds and aesthetic characteristics. Therefore, conducting theoretical research on ethnic music is an important means to deeply understand and protect the music culture of various ethnic groups. Ethnic music theory usually takes into account factors such as geographical location, history, religion, and social structure of different ethnic groups, which have a profound impact on the development and formation of music. The music of each ethnic group usually has its unique mode and scale system. These systems reflect the selection and organization of musical pitch in different cultures. The melody and rhythm of ethnic music often have unique styles. This includes the form of melody, the use of intervals, as well as the characteristics of rhythm patterns and complexity. Each ethnic group's music has its own unique instrument system. These instruments play a unique role in musical expression and have a profound impact on the style and atmosphere of music. Ethnic music is usually accompanied by lyrics, which reflect ethnic culture, history, and social life. The singing style is also an important aspect of research, including vocal techniques, singing styles, etc. (Wu Guodong, 2012)

In terms of theoretical science, the focus of music research is gradually shifting to people, musicians, behavior, and psychology in social and cultural environments, rather than just staying in music or narrower forms of music. Music turns to people, from works to performers and participants. The transformation of perspectives and concepts has led to a shift in ethnomusicology. Based on this viewpoint, this article analyzes the history, geography, ethnicity, language, social system, production and lifestyle, folk customs, and psychology of a culture or region through on-site investigation. Let's take a look at how they influence the music of this nation and region,

and how they generate unique musical aesthetic standards, that is, starting from the cultural background and production environment of music, examining its characteristics and exploring its patterns. This is ethnomusicology. Ethnomusicology is a science that studies the symbiotic relationship between music and its cultural environment through field investigations. The purpose of its research is to elucidate the laws of music development in various ethnic groups and regions, including general and special laws. Starting from the actual situation of music in various ethnic groups and regions, this paper explores its origin, formation, development, prosperity, and development, in order to achieve an understanding of the development laws of human music culture. (Luoqin, 2011)

I use the research methods of ethnomusicology to study the Duxianqin of the Jing ethnic group in Guangxi. Firstly, a field investigation was conducted on the Jing ethnic group in Dongxing, Guangxi. The entire investigation process will be divided into two stages: collecting literature, conducting questionnaire surveys, and analyzing research data. The first stage of work requires on-site recording, photography, video recording, as well as investigation, collection, and recording of various cultural phenomena related to music, including investigation of music and socio-cultural backgrounds, and connections with other arts. The second stage of work accurately summarizes the collected questionnaire surveys, photos, videos, etc., and rigorously processes and analyzes the data.

2.6 Literature and related research

In recent years, there has been relatively little research on the Duxianqin of the Jing ethnic group in Guangxi. The main ones are:

Chen Liqin 2013 said that, At present research on the music ontology and derivative ontology of the Duxianqin may be relatively limited. For example, the ontology of music focuses on the essence, existence, and substantive features of music. The study of the music ontology of the Duxianqin may include an analysis of its structure, rhythm, playing technique, etc., in order to reveal its position and role in the music system. The ontology of performer roles, studying the roles, identities, and experiences of Duxianqin to understand their position in traditional music culture, as well as their creativity and expressiveness in music performance. According to social

ontology, music is a part of social culture, and the existence and transmission of the Duxianqin instrument are closely related to various factors in society. The study of social ontology may include aspects such as the social function of Duxianqin and its role in the community. Research on the ontology of technology, production techniques, playing technique, and musical skills of the "Ha Festival" Duxianqin, in order to understand its ontological characteristics at the technical level. These research directions contribute to a deeper understanding of the role of "Ha Festival" in the entire music and social system. Such research helps to promote the protection, transmission, and development of traditional Uyghur music. Although specific research findings may vary by researcher and research institution, these directions provide possible research avenues for delving deeper into the musical ontology of the Duxianqin.

Huang Yu (2012) said that the study of Duxianqin should pay attention to the interaction between man and Duxianqin in its historical process, and understand the interaction relationship between "instrument, music and people". The research method of oral history provides a new perspective and idea for the study of Duxianqin, and contributes to a more comprehensive understanding of Duxianqin culture.

Zhang Can and Zhang Qianyun (2016) said that unique position of Duxianqin in the maintenance of the Jing ethnic group culture, and believed that its transmission and development played an irreplaceable role in the protection and promotion of the Jing ethnic group culture. She proposed that Vietnam's Duxianqin has entered the professional teaching stage, and China should actively learn from Vietnam's excellent experience in the transmission and development of Duxianqin, so as to promote and promote the development of Chinese Duxianqin.

Yan Hongfang (1993) pointed out that the Duxianqin is an instrument unique to the Jing ethnic group. Its structure is very simple. It mainly uses a bamboo tube as its body and is played through a separate string. When playing the Duxianqin, the player usually presses the pillar with his left hand, while the right hand uses a small bamboo piece to play, the instrument can play four basic notes, various decorations and long trills. The sound of this instrument is very elegant, as sweet as a spring in the mountain. The Duxianqin not only represents the essence of the music culture of the Jing ethnic group people, but also is an important symbol of the national identity of the Jing ethnic

group people. It carries the history and culture of the Jing ethnic group people, and is a treasure in the spiritual life of the Jing ethnic group people.

Yin Ming(2012) said that Duxianqin is not only an instrument, it plays a pivotal role in the traditional Jing ethnic group culture and is an important part of the Jing ethnic group culture. Yin Ming also mentioned the attempt to integrate Duxianqins in modern music, showing how this ancient instrument is combined with modern musical elements to create new forms of musical expression. He stressed the importance of protecting and inheriting the art of the Jing ethnic group nationality, and called on all sectors of society to pay attention to and support the protection of this intangible cultural heritage to ensure that this unique art form can be preserved and passed on to the future generations.

Zhang Can (2012) proposed new insights different from traditional academic views. He believes that the reason why the Duxianqin can be handed down to this day is closely related to the historical background, geographical environment of the Jing ethnic group people and the communication and interaction with other cultures. This paper analyzes the cultural significance and value of Duxianqin in different time periods. Through the deep exploration of the history of the Duxianqin, Zhang Can tries to reveal how this traditional instrument is constantly adapted to and evolved in the long river of history, as well as its unique position and role in the Jing ethnic group nationality culture.

Neng Wang(2016) deeply analyzed the creation techniques and expression characteristics of the Jing ethnic group unique musical instrument music, and elaborated its unique musical language and emotional expression mode in detail. He said that, Duxianqin music deeply reflects the living state and emotional world of the Jing ethnic group, and reveals the close connection between music and national culture. At the same time, Neng Wang also put forward some problems encountered in the creation and performance of Duxianqin musical music, and gave constructive suggestions for improvement, in order to promote the further development and improvement of this traditional music form.

Li Lingwei, Wen Beilei, Liu Jingyi, Xiang Jing (2018) discussed the current situation and challenges of the Jing ethnic group instrument with cross-border ethnic characteristics, under the current social and cultural background. They not only

analyzed in detail the difficulties faced by the art of Duxianqin in modern society, but also put forward practical protection measures and transmission strategies, in order to ensure that this unique art form can be preserved and carried forward in the tide of globalization. The article particularly emphasizes the importance of community participation, and believes that only when the community residents actively participate in the protection and transmission of the Duxianqin, can the living transmission of culture be truly realized. At the same time, the article also points out the importance of educational transmission, and suggests that the art of Duxianqin should be incorporated into the education system, and more young people should understand and learn through school education and various forms of training courses for this traditional art. In addition, the article also mentioned the role of media communication, believing that the wide dissemination of TV, Internet, social media and other media channels can greatly improve the popularity and influence of the art, so as to attract more attention and support.

Huang Quan (1998) detailed the skills of Duxianqin instrument, including key movements such as pressing the left hand and plucking the right hand. He further points out that despite the relatively limited range, the instrument can play four basic notes and long trills, with elegant and unique tones, emitting a musical charm that cannot be copied. Huang Quan also stressed that despite the limited vocal range, the musicians can create colorful and varied musical effects by skillfully using the unique playing technique of pitch changes and rhythm processing. These techniques not only demonstrate the playing potential of the Duxianqin, but also demonstrate that the creativity and skill of musicians can bring a refreshing musical experience even with a limited vocal range.

Song Tang (2007) In his book *The Investigation and Research of the Jing ethnic group*, the Song and Tang dynasties deeply discussed the playing skills of the instrument and the importance of these skills in musical performance. He pointed out that the unique playing technique used by the Duxianqin not only give the instrument music a pure and beautiful color, but also create an ethereal and ethereal auditory effect. These characteristics make the music of Duxianqin full of the unique charm of Marine culture, fully showing the rich connotation and unique charm of Marine culture. The research of the Song and Tang dynasties not only revealed the uniqueness of

Duxianqin musical performance, but also emphasized its important role in inheriting and promoting Marine culture.

Xiao Wenpu & Wan Rong (2020) believe that under the background of the "Belt and Road" initiative, the use of network communication means to promote the transmission and development of the art of the Jing ethnic group with Duxianqin can inject new vitality and vitality into this ancient art. They pointed out that with the rapid advancement of globalization and modernization, the transmission and dissemination of traditional art and culture is facing unprecedented challenges. In order to ensure the continuous transmission of the art, we must make full use of modern network communication tools. This includes but is not limited to news websites, online new media platforms (such as Weibo, wechat) and short video social platforms (such as TikTok, Kuaishou). At the same time, they also put forward the problem of simplicity in the form and content of the art of Duxianqin communication, and suggested that the communication effect should be further improved.

Zhou Ru (2021) emphasized the important value of Duxianqin as an intangible cultural heritage and its important role in the social and cultural construction, and analyzed the difficulties faced in the process of transmission and put forward the corresponding transformation strategies. Zhou Ru think under the impact of modernization and globalization, alone harp transmission faces many difficulties, such as transmission people aging, fault, single, we should innovate transmission way, strengthen transmission talent training, promote industrialization, strengthen cultural identity and protection way to protect our cultural heritage.

Li Keliang. Su Haizhen (2023) believe that the Duxianqin is not only an artistic treasure handed down from generation to generation by the Jing ethnic group people, but also an important symbol of their national identity and cultural identity. Its protection and transmission will help to enhance the national pride and sense of belonging of the Jing ethnic group people, and promote ethnic unity and social stability. With the acceleration of the modernization process, the transmission of the Jing ethnic group nationality faces many challenges, such as the aging of the transmitters, the fault of transmission, and the weakening interest of the young generation in traditional culture. These problems make the transmission of Duxianqin face an unprecedented crisis. If Duxianqin is not effectively protected and inherited, its unique artistic charm

and cultural connotation will face the risk of loss, and then affect the integrity and uniqueness of the whole national culture.

Bian Jiang (2000) said that the production technology of the Jing ethnic group family is exquisite and contains rich folk wisdom and artistic creativity. At the same time, he also pointed out that under the impact of the modernization process, some traditional production techniques are facing the risk of being lost. Therefore, he called on all sectors of society to strengthen the protection and transmission of the production process of the Jing ethnic group nationality, and to encourage innovation and development, so that this precious cultural heritage can be continued and carried forward.

Wei Qian (2022) believes that under the strong leadership of the intangible cultural heritage policy, the transmission and development of the art of the Dongxing Jing ethnic group in Guangxi have achieved remarkable results. This effect is reflected in many aspects, including the increasing popularity of the art of the Duxianqin, the continuous expansion of the team of transmitters, and the innovation of Duxianqinart works and performance forms. These achievements not only enrich the cultural life of the Jing ethnic group people, but also promote the development of the cultural diversity of the Chinese nation. The author emphasizes that the formulation and implementation of the intangible cultural heritage policy provides a strong institutional guarantee for the transmission and development of the art of independence of the Jing ethnic group nationality. At the same time, the investment of capital is also an important factor to promote the development of the art. Therefore, Wei Qian suggested that policy support and capital investment should be continued to provide a more solid backing for the transmission and development of the art. This includes formulating more perfect protection policies, increasing support for transmitters, and providing necessary financial support for the innovation and development of the art.

Su Fan (2002) pointed out the problems and challenges existing in the transmission process, such as the aging of transmitters, narrow transmission channels and lack of transmission motivation. These problems not only affect the transmission and development of the art, but also pose a threat to the overall transmission of Jing ethnic group culture. In view of the above problems, Su Fan put forward a series of strategies and suggestions to promote the transmission and development of the art of

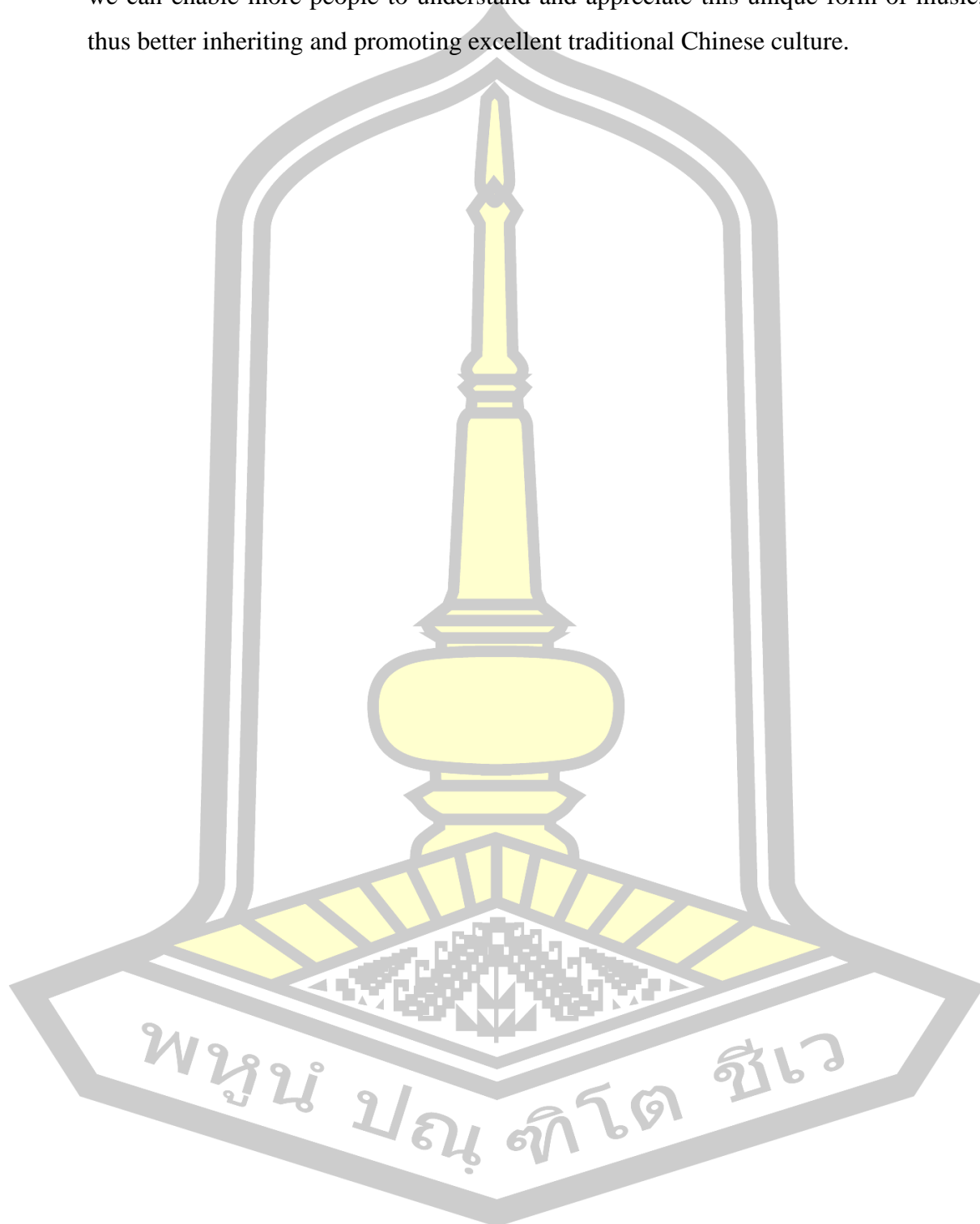
Jing ethnic group nationality. These suggestions include strengthening the training of transmitters, broadening the channels of transmission, increasing the publicity and promotion efforts, and promoting the integration with modern music. Through the implementation of these measures, it can stimulate more people's interest and love for the art of the Duxianqin, and inject new vitality and impetus into the transmission and development of the art.

Qi Jian Ling (2019) said that, In 1949, the only maritime minority in China, the Jing ethnic group, opened a new chapter of comprehensive development. In the multi-ethnic region of Beibu Gulf in Guangxi, enhancing ethnic cultural exchanges and maintaining ethnic unity have gradually become the conscious actions of people of all ethnic groups on the border. The cross-cultural communication process of the Jing ethnic group has gradually shifted from natural assimilation to cultural reciprocity and integration among ethnic groups. After the reform and opening up, the Jing ethnic group has always upheld and further developed this cross-cultural communication spirit.

Sun Jin (2020) said, Culture is a dialectical unity of preservation and change, and it is also a way of life and behavior that flows in everyone's blood. It is the sum of spiritual and material wealth created by humanity. To understand the cultural changes of the Jing ethnic group Ha Festival, it is necessary to observe the occurrence and history of the Jing ethnic group's Ha Festival. The memory of a nation comes not only from written records, but also from the lively and original temple fairs and rituals. As a living cultural carrier, the Jing ethnic group festival allows us to explore the development history, cultural connotations, and aesthetic characteristics of the Jing ethnic group.

In summary, there are abundant research achievements on Duxianqin of the Jing ethnic group in Guangxi. The research on the Duxianqin presents a multidimensional and diversified research trend. In contrast, traditional Duxianqin have certain limitations in playing technique and forms of expression. In order to better inherit and promote this cultural heritage, in recent years, many musicians and scholars have begun to focus on improving and innovating the Duxianqin, combining modern music elements and techniques to inject new vitality into the Duxianqin. Overall, the history of Duxianqin is too singular and lacks a sociological perspective, especially in terms of analyzing its impact on society. We can start from the perspective of ethnomusicology

to study and explore the influence of Duxianqin on society. Through in-depth research, we can enable more people to understand and appreciate this unique form of music, thus better inheriting and promoting excellent traditional Chinese culture.



CHAPTER III

Research Methodology

This chapter describes the research methodology used in the study, including the criteria for selecting the study area and informants, as well as the process of designing the questionnaire and interview.

3.1 Research scope

3.1.1 Scope of content

3.1.2 Scope of time

3.2 Research process

3.2.1 Selection of the research site

3.2.2 Selected key informant and songs

3.2.3 Research tools

3.2.4 Data Collection

3.2.5 Data Management

3.2.6 Data Analysis

3.2.7 Data Presentation

3.1 Research scope

3.1.1 Scope of content

The content scope of this section mainly includes the historical development, musical cultural and artistic characteristics, and social impact analysis of the Duxianqin Guangxi, China.

3.1.2 Scope of time

Data collection period from July 2022 to January 2024

Analysis period from January 2023 to August 2024

Inspection period: January 2022 to December 2024

The inspection locations include the Jing ethnic group Ecological Museum in Dongxing, Guangxi, Wanwei Village in Jiangping Town, Dongxing City, Dongxing City Cultural Museum, Dongxing City Art Troupe, Guangxi Academy of Arts, Zhao Xia Duxianqin Studio, and Wei Qingbing Duxianqin Studio.

In January 2022, I visited the Dongxing Jing Ethnic Ecological Museum in Guangxi and watched a solo performance.

In July 2022, I participated in a music appreciation class on the Duxianqin at Guangxi Academy of Arts and conducted on-site classroom inspections.

In December 2022, I visited the Dongxing Cultural Museum and Dongxing Art Troupe to watch performances by transmitters.

In the second stage of January 2023, I participated in Duxianqin rehearsal and conducted a field visit to the Dongxing Jing Ethnic Ecology Museum.

In August 2023, three transmitters were interviewed in Nanning and Dongxing, Guangxi.

In September 2023, I interviewed a soloist from Guangxi Academy of Arts.

In October 2023, I visited Wei Qingbing Duxianqin studio and started learning.

In December 2023, I watched a solo performance by an artist at a concert at China ASEAN Music Week.

3.2 Research process

3.2.1. Selection of the research site

In this dissertation, I chose Dongxing city, Guangxi Province, China to conduct fieldwork. (Figure 2)

Guangxi is located in southern China, bordered by continuous mountain ranges to the north and the South China Sea to the south. It has unique natural conditions and diverse cultures. The Guangxi Duxianqin is mainly distributed in the Jing ethnic settlement area of Dongxing City, Guangxi Zhuang Autonomous Region, including the three islands of Wutou, Shanxin, and Wanwei (commonly known as the "Jing Three Islands") in Jiangping Town, Dongxing City.

Dongxing is a key development and opening up pilot zone in China, accelerating the construction of modern steel bases, non-ferrous metal bases, energy and chemical bases, grain and oil food bases, commercial logistics bases, and coastal tourist destinations. It is an emerging port industrial city, an important city, and a renowned marine cultural city in the Beibu Gulf Economic Zone of Guangxi, which is ecologically friendly, highly open, and full of vitality. At the same time, it is also one of the important birthplaces of the traditional Duxianqin. In Dongxing, we can explore

the status and influence of the Duxianqin in the local music culture, and communicate with local Duxianqin and transmitters. Through on-site inspections and exchanges in Dongxing, we can gain a more comprehensive understanding of the diversity and characteristics of the traditional Duxianqin in Guangxi.(as shown in the figure 10)



Figure 10. Map of Dongxing city, Guangxi Province, China.
<https://chinafolio.com/provinces/guangxi-province> (2023)

3.2.2 Selected key informant and songs

3.2.2.1 Criteria for selecting key informants

Key informant:

- 1) He/She is more than 20 years of research experience in Duxianqin
- 2) He/She won on important awards at provincial level or above
- 3) He/She experts and scholars in this field

Casual informant

- 1) He/She is young singers or performers General informant
- 2) He/She is the inheritor of the Guangxi Jing ethnic group Duxianqin
- 3) He/she is currently the most popular music performer of the Jing ethnic group Duxianqin

ethnic group Duxianqin

According to the above criteria for selecting office holders, they are divided into two categories:

Groups: Key informant, casual informants.

Key whistleblower and casual informants: I have chosen Dongxing as my research site and plan to interview 5 transmitters of the Jing ethnic group Duxianqin, of which 5 have been recognized by the Chinese government as national intangible cultural heritage transmitters of the Jing ethnic group Duxianqin. They often participate in various artistic performances and music competitions, and have won many awards. Their music videos are widely spread on the internet. They often interact with schools, government departments, and institutions, and participate in teaching. They are folk artists recognized by the Chinese government as the Jing ethnic group's Duxianqin. Through long-term contact and investigation, they have gained a deep understanding of the cultural heritage of the Jing ethnic group Duxianqin. They are willing to share their unique insights and rich experience on the Guangxi Duxianqin, and are committed to promoting and inheriting this important intangible cultural heritage. As representative figures in the field of folk music in Guangxi, these performers have gained a deep understanding of the history, techniques, and style of Guangxi Duxianqin through long-term research and practice.

The research locations include: Dongxing Jing Ethnic Ecological Museum in Guangxi, Wanwei Village in Jiangping Town, Dongxing City, Dongxing City Cultural Museum, Dongxing City Art Troupe, Guangxi Academy of Arts, ZhaoXia Duxianqin Studio.

a. Su Chunfa

Male, born in 1955, from Wanwei Village, Jiangping Town, Dongxing City, is a representative transmitter of national intangible cultural heritage, invited multiple times to perform at home and abroad. For many years, the applicant has actively carried out transmission activities, held training courses, provided long-term free compulsory teaching, and taught multiple apprentices. I have been in the art industry for 55 years and have made unremitting efforts to promote the dissemination of Jing ethnic group culture. Representative songs "Gao Shan Liu Shui", "He Shui Bu Wang Wa Jing Ren", and "Da Yu Gui Lai"(as shown in the figure 11)



Figure 11. Main informant Chunfa Su
Source: Xiaoxiao Wang (2022)

b. Wang Neng

Male, born in 1947 in Fangcheng, Guangxi. He is the head of the art troupe and library in Fangcheng District, the director of the Fangchenggang Art Museum, a member of the Chinese Musicians Association, a director of the Guangxi Chorus Association, and the chairman of the Fangchenggang Music Association, a director of the Guangxi Children's Music Society. He is also a visiting researcher at the Ethnic Art Research Institute of Guangxi Academy of Arts, honorary chairman of the Guangxi Duxianqin and Guqin Professional Committee, and a national second level composer. Representative songs include "Happy Hajie", "Happy Jingjia Girl", "Homesickness Song", "I Love Jingdao", etc. (as shown in the figure 12)



Figure 12. Main informant neng Wang
Source: Xiaoxiao Wang (2022)

c. Haizhen Su

Female, born in 1973, from Dongxing, Guangxi. She is a model individual for ethnic unity and progress in Guangxi, a transmitter of the intangible cultural heritage of the Jing ethnic group Duxianqin, an excellent folk singer of the Jing ethnic group, and a member of the Guangxi Musicians Association.(as shown in the figure 13)



Figure 13. Main informant Haizhen Su

Source: Xiaoxiao Wang (2023)

d. Xia Zhao

Female, born in 1986 in Dongxing, Guangxi, transmitter of the intangible cultural heritage of the Jing ethnic group Duxianqin, outstanding folk singer of the Jing ethnic group, director of the Guangxi Ethnic Orchestra Association, and member of the Guangxi Musicians Association. (as shown in the figure 14)



Figure 14. Main informant Xia Zhao

Source: Xiaoxiao Wang (2023)

e. Yuanyuan Ruan

Female, Born in Dongxing, Guangxi in 1998, Duxianqin is the transmitter of intangible cultural heritage of the Jing ethnic group, an outstanding folk singer of the Jing ethnic group, and a tour guide at the Dongxing Jing Ethnic Museum in Guangxi.(as shown in the figure 15)



Figure 15. Main whistleblower Yuanyuan Ruan

Source: Xiaoxiao Wang (2022)

Table 1. Shows the statistics of casual informants, , including name, gender, nationality, age, address and occupation

Name	Gender	Birth year	Site	Profession	Positional title
Chunfa Su	Male	1955	Dongxing, Guangxi	performer, Composer, National level transmitter of intangible cultural heritage	Researcher at the Jing Ethnic Ecological Museum
NengWang	Male	1947	Fang Cheng, Guangxi	Director of Guangxi Chorus Association, Director of Guangxi Children's Music Society, Chairman of Fangchenggang Music Association, Visiting	Library director, director of Fangchenggang Art Museum, Honorary Chairman of Guangxi Duxianqin and Guqin

				Researcher of Ethnic Art Research at Guangxi Academy of Arts, Honorary Chairman of Guangxi Duxianqin and Guqin Professional Committee	Professional Committee, National Second-Class Composer.
Haizhen Su	Female	1973	Dongxing, Guangxi	Scholars, performers, transmitters of intangible cultural heritage	Director of Dongxing Jing ethnic group Ecological Museum
Xia Zhao	Female	1986	Dongxing, Guangxi	The transmitter of the intangible cultural heritage of the Jing ethnic group's Duxianqin, an excellent folk singer of the Jing ethnic group, and a member of the Guangxi Musicians Association	Director of Guangxi Ethnic Orchestra Association
Yuanyuan Ruan	Female	1998	Dongxing, Guangxi	Scholar, transmitter of the Jing ethnic group Duxianqin of the Jing ethnic group's Duxianqin art	Lecturer at Dongxing Jing ethnic group Museum in Fangchenggang City, Guangxi

3.2.2.2 Criteria for selecting songs.

1) There are over 200 musical works by Du Xianqin, a member of the Jing ethnic group in Guangxi. Through the recommendation of five inheritors of the Jing ethnic group Duxianqin, Chosen the five most famous representative works.

2) These pieces of music are still performed during major festivals and celebrations of the Jing ethnic group. The five songs include:

Table 2. Selection of the songs

Type	Total of Songs	Selected songs
Traditional songs	48	2
Contemporary song	67	1
Adapted songs	85	2

a. A song "Chuan Zhen Yin Xian"

The play "Chuan Zhen Yin Xian" is a classic piece on the Duxianqin, with unique musical and cultural value. Playing "Chuan Zhen Yin Xian" requires performers to possess extremely high skills. This piece imitates the action of threading a needle and thread, requiring the performer's fingers to move quickly and accurately on the strings during the performance, to demonstrate the agility and delicacy of needle and thread weaving. It reflects the patience and skills of workers. Through this song, the music praises the delicate beauty of labor, showcases the wisdom and hard work of laborers, and promotes the glorious spirit of labor. As an important piece of Duxianqin, "Chuan Zhen Yin Xian" carries the essence of folk music art. Through the transmission and interpretation of music, this traditional art form can be continued and developed.

b. A song "Guo Qiao Feng Chui"

As one of the classic pieces of Duxianqin, "Guo Qiao Feng Chui" has high value in terms of technique and artistic expression. Playing this piece requires the performer to possess superb skills and a deep understanding of music, making it an important piece for solo players to showcase their skills. Due to the great fame of this piece, many Duxianqin players have innovated and adapted it based on the transmission of the original piece, constantly revitalizing it and further promoting its dissemination and influence in the music industry. Through the unique sound of Duxianqin, "Guo Qiao Feng Chui" creates a visual sensation of the wind blowing across the bridge, making the audience feel as if they are there, experiencing the freshness of the breeze brushing their faces and the murmuring sound of the flowing water under the bridge.

c. A song "Shan Ge Hao Bi Chun Jiang Shui"

The song "Shan Ge Hao Bi Chun Jiang Shui" is not a traditional piece of Duxianqin, but a well-known folk song of the Zhuang ethnic group in Guangxi, China. This song became widely popular due to the movie "Liu Sanjie" and has become one of the classic pieces on the Duxianqin. Due to its popularity in Guangxi, this piece of music has become a must-have performance for various festivals in the region. The music expresses the Zhuang people's love for life and their admiration for beautiful love.

d. A song "Zhi Yin"

"Zhi Yin" is adapted from the theme song of the movie, and its background is closely related to the plot of the movie "Zhi Yin". The musical style of the Duxianqin is in line with the emotion and artistic conception conveyed in the movie. Through the unique timbre and playing skills of the Duxianqin, it expresses the longing for the hard to find Zhi Yin and the cherishing of deep friendship. The adaptation of the Duxianqin piano music "Zhi Yin" not only embodies the artistic charm of the Duxianqin, but also a musical interpretation and extension of the emotional theme of the movie "Zhi Yin". Through the playing of the Duxianqin, the emotion in the film can be reproduced and sublimated in the music, so that the listeners can feel in the music that crosses the time and space deep affection and the infinite yearning for the Zhi Yin.

e. A song "Huan Le De Jing Jia Nv"

The Happy Jing ethnic group Girl is a classic song of the Jing ethnic group Duxianqin zither. It shows the life interest and cultural characteristics of the people of the Jing ethnic group through the unique playing way of the Duxianqin zither. With its soft and beautiful timbre, clear treble, bright midrange and full bass, this piece of music expresses the joy and vitality of Jing ethnic group women in their daily life, as well as their yearning for and pursuit of a better life.

3.2.3 Research tool

I have two research tools, interview form and questionnaire form. The process is as follows:

- 1) I follow the research objectives to collect literature and survey questions.
- 2) I handed it over to my advisor for inspection.

- 3) I modified it based on the consultant's advice.
- 4) I took it to work in the wilderness.
- 5) I conducted an interview with the inheritor based on the question.
- 6) I conducted a questionnaire survey on 300 teachers and students from primary and secondary schools in Dongxing City, Guangxi.

3.2.4 Data collecting

Based on communication and interviews with major informants, in order to conduct in-depth research on the Guangxi Duxianqin, I adopted various methods for data collection, including music research under historical and cultural backgrounds, field investigations, literature analysis, comparative methods and questionnaire.

I conducted a literature review and collected original literature instruments' materials on the historical development of Guangxi Duxianqin. These instruments' materials include historical documents, academic papers, monographs, etc. Through the collection and organization of these literature, researchers have gained an understanding of the origin, development process, and development of the Guangxi Duxianqin. In addition, the researchers also interviewed some Guangxi Duxianqin and transmitter s, who provided oral information about the historical development of Guangxi Duxianqin. Through communication and interviews with them, the researchers obtained more detailed and vivid historical information.

Second, I collected original literature instruments' materials on the musical characteristics of Guangxi Duxianqin, And the performance style and techniques of Duxianqin. Through the study and organization of these literature, researchers have gained a more comprehensive understanding of the characteristics of Guangxi Duxianqin music. In addition, I also conducted field research and recorded a video and audio of the performance of the Guangxi Duxianqin. Through on-site observation and recording, the researchers obtained the actual expression form of Guangxi Duxianqin music. These video and audio instruments' materials will be analyzed as data.

Thirdly, I consulted relevant literature on the social impact of the Duxianqin of the Jing ethnic group in Guangxi. These instruments' materials include policy documents, academic research, media reports, etc. Through a review of these literature, researchers have gained an understanding of the social impact and dissemination issues of the Jing ethnic

group Duxianqin. And conducted interviews with the inheritor of the Jing ethnic group Duxianqin.

Fourthly, I conducted a questionnaire survey on 300 teachers and students in primary and secondary schools of the Jing ethnic group in Guangxi, regarding the guideline of preservation and transmission of the Jing ethnic group Duxianqin, and obtained the results.

3.2.5 Data Management

3.2.5.1 Recording

According to the research objectives, the researchers conducted real-time recording. The corresponding research objective is to classify the corresponding recording instruments' materials. Transfer the recording instruments' materials based on the relevant content of the research objectives. Firstly, regarding the historical development of the Guangxi Duxianqin, researchers screened recording instruments' materials based on research objectives and converted text instruments' materials for subsequent data analysis. Then, the researchers sorted out the original data of the study on the musical characteristics of Guangxi Duxianqin, found representative works, and transformed the recording instruments' materials into text form to prepare for later data analysis. Finally, the researchers compiled data on the preservation and dissemination of Guangxi Duxianqin, summarized the interview content, and transformed it into text form to prepare for data analysis.

3.2.5.2 Video

In terms of video instruments' materials, the research objective is to classify the corresponding video instruments' materials. Transfer video instruments' materials based on the relevant content of the research objectives. Firstly, in response to the historical development of Guangxi Duxianqin, researchers screened video instruments' materials based on research objectives, converted text instruments' materials, and conducted subsequent data analysis. Researchers have started organizing video instruments' materials to study the musical characteristics of the Guangxi Duxianqin. Classify representative works and transfer them to textual instruments' materials to prepare for later data analysis. Finally, researchers need to organize video data on the dissemination and development of the Guangxi Duxianqin, summarize interview content and text format, and prepare for data analysis.(Camera model: Canon EOS 5D3; Video phone model: Apple iPhone 14).

3.2.5.3 Books

In terms of books, they must also be classified and ranked according to research objectives. In the field investigation, researchers found that some books are about the historical development of Guangxi Duxianqin. Several of them are books that study the musical characteristics of Guangxi Duxianqin. Researchers use the method of literature review to sort out book knowledge, extract and form texts that are suitable for the research objectives. In this way, different books on the historical development of Guangxi Duxianqin can sort out different researchers with different perspectives on Guangxi Duxianqin, preparing for future data analysis. For books with the characteristics of Guangxi Duxianqin music, some literature instruments' materials should be collected to prepare for future data analysis. Thirdly, for the preservation and dissemination of books on the Guangxi Duxianqin, researchers used a literature review method to organize the literature, extract relevant viewpoints, and prepare for later data analysis work.

3.2.6 Data analysis

3.2.6.1 Study the development of Duxianqin of Jing ethnic group in Guangxi, China.

Based on the collection and management of literature and oral literature, analyze the methodology of ethnomusicology. Focus on the development of the Guangxi Jing ethnic group's Duxianqin in three periods: ancient period (202 BC-1800), modern period (1801-1960), and contemporary period (1961-2025). Explore the development of Duxianqin in Guangxi Jing ethnic group from four aspects: instrument history, music instruments, music and performance, and role and function. And deeply analyzed its changes and innovations in society, culture, technology, and education. Present your own opinions and use descriptive analysis.

3.2.6.2 Study Music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

Exploring the musical characteristics of the Guangxi Jing ethnic group Duxianqin, in order to analyze the musical characteristics of the Guangxi Jing ethnic group Duxianqin, researchers used Western music analysis methods and traditional Chinese music analysis methods for data analysis. Researchers should first record music scores, then analyze the melody, rhythm, and playing techniques.

3.2.6.3 Study The guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

Based on a literature review, field investigation, and questionnaire survey on the protection and transmission of the Guangxi Jing ethnic group Duxianqin, researchers used literature survey methods for data analysis. Collect and manage data through on-site investigations and questionnaire surveys, analyze and summarize relevant on-site investigation data. At the same time, an analysis and discussion were conducted on the questionnaire survey structure of 300 teachers and students of the Jing ethnic group, Duxianqin, in primary and secondary schools in Dongxing City, Guangxi. Proposed a more suitable method for the preservation and dissemination of the Guangxi Jing ethnic group Duxianqin for the current social and cultural development.

3.2.7 Data Presentation

Chapter I Introduction

Chapter II Literature Reviews

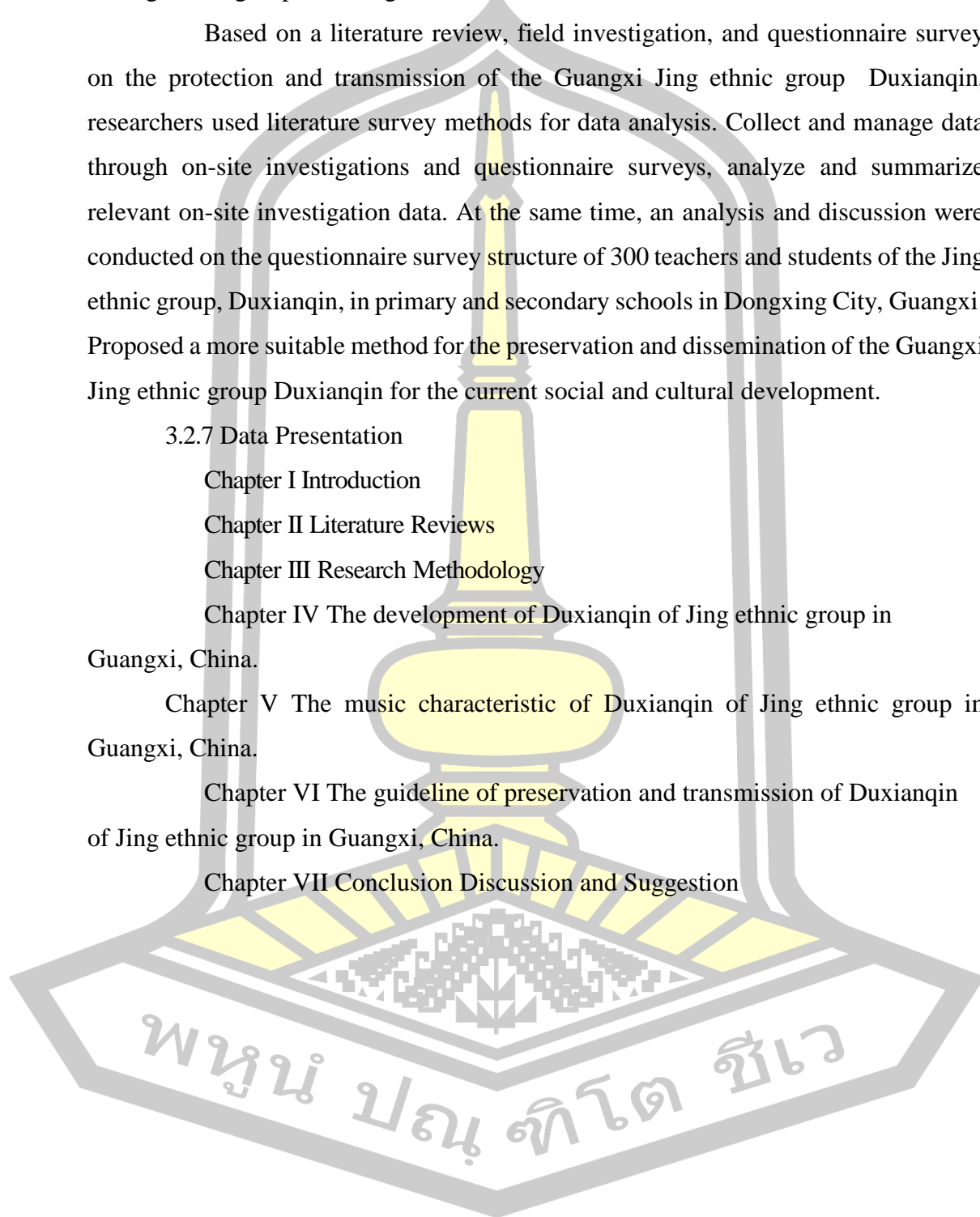
Chapter III Research Methodology

Chapter IV The development of Duxianqin of Jing ethnic group in Guangxi, China.

Chapter V The music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

Chapter VI The guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

Chapter VII Conclusion Discussion and Suggestion



CHAPTER IV

The development of Duxianqin of Jing ethnic group in Guangxi, China

In this chapter, the researcher will analyze the development stages and characteristics of Duxianqin based on literature and field survey results, and provide the background of the development of the Jing ethnic group Duxianqin in Guangxi.

4.1 The development of Duxianqin of Jing ethnic group in ancient period (202 BC-1800)

- 4.1.1 History
- 4.1.2 Music instruments
- 4.1.3 Music and performance
- 4.1.4 Role and function
- 4.1.5 Summary

4.2 The development of Duxianqin of Jing ethnic group in modern period (1801-1960)

- 4.2.1 History
- 4.2.2 Music instruments
- 4.2.3 Music and performance
- 4.2.4 Role and function
- 4.2.5 Summary

4.3 The development of Duxianqin of Jing ethnic group in contemporary period (1961-2025)

- 4.3.1 History
- 4.3.2 Music instruments
- 4.3.3 Music and performance
- 4.3.4 Role and function
- 4.3.5 Summary

4.4 Summary

4.1 The development of Duxianqin of Jing ethnic group in ancient period (202 BC-1800)

4.1.1 History

The history of Duxianqin can be traced back to the ancient period. According to existing literature and archaeological findings, the origin of Duxianqin may be in ancient China, and the exact time can be roughly traced back to the following periods:

Han dynasty (202 BC - 220 AD) :

The prototype of the one-stringed Duxianqin may have existed during the Han Dynasty. There are references to similar one-stringed instruments in documents related to the Han Dynasty, and these instruments were used for musical events at court and in the folklore. The Lefu Poetry Collection: Although the Lefu Poetry Collection is not a complete record of Han dynasty musical instruments, it contains many Han dynasty poems and musical compositions that refer to the use of a number of instruments, including Duxianqin. (Liu Yiwen, 2021)

During the Han Dynasty, one possible form of a single-stringed instrument was the "Duxianqin", a type of ancient Duxianqin with only one string. The exact form and use of this type of instrument may not have been described in detail in the history books, but archaeological discoveries and studies of the history of musical instruments suggest that similar Duxianqin did exist and were used in ancient China. (Wang Xuequn & Huang Ying, 2023) (As shown in the Figure: 16)

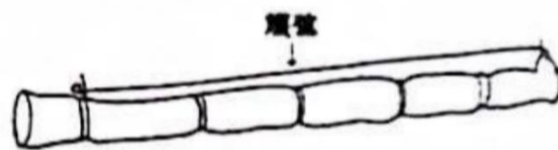


Figure 16. Antique (Ancient period round bamboo tubular lyre)

Source: neng Wang(2011)

Archaeologists have found the remains of musical instruments in some Han Dynasty tombs, although these were mostly multi-stringed instruments, including some simple Duxianqin. Music historians and experts in musical instrument research have

surmised that Duxianqin may have existed during Duxianqin and Han Dynasties through the study of ancient documents and archaeological findings.(Zhao Minglong, 2019)

There are records of Duxianqin in the history of ancient Chinese music. One of the early Duxianqin was the "Cerberus", which was already quite popular during Duxianqin and Han Dynasties. In the Records of the Grand Historian, it is mentioned that Confucius once played the Duxianqin, and there is also a record of the serpent in the Book of Rites and Records of Music, suggesting that it already existed in the pre-Qin period. In more specific music history records, the History of Ancient Chinese Music mentions that Duxianqin played an important role in ancient music. For example, the Sui Book of Music records the development of musical instruments in the Sui Dynasty, which also included Duxianqin. The playing style and timbre of such instruments were used in both ancient court music and folk music (Bai Aiping, 2023)

Duxianqin with a long history. This instrument played an important role in ancient Chinese music, and its simple structure and unique sound made it used in both ancient court music and folk music. The way of playing the Duxianqin includes plucking and strumming the strings, and it is capable of playing a rich variety of tones. This instrument was not only used in musical performances, but also played an important role in some ceremonies and religious activities.(Hua Wei&Zhong Hai. ,2022)

The Duxianqin appeared as early as the pre-Qin period and was further developed and applied in the Han Dynasty.The book also mentions that the shape and production process of Duxianqin changed in different historical periods, but its basic structure remained the same, that is, it consisted of a string and a resonance box. This simple and practical design made the Duxianqin a widely influential instrument in ancient music culture.(Liu Zengcai, 1962)

The Duxianqin, which is played by plucking and strumming the strings, is an instrument that produces a rich variety of tones and is used not only in musical performances, but also in a number of religious and ceremonial activities. Its basic structure consists of a single string and a resonance box, and this simple and practical design has made the Duxianqin widely influential in ancient music culture. (Liu Zengcai, 1962)

As an ancient Chinese traditional musical instrument, according to historical records, it did appear during Duxianqin and Han Dynasties. It is more clearly documented and described in the literature of Duxianqin-Han period. It is a single-stringed instrument that produces different pitches by varying the tension of the strings and the playing position, and is one of the important instruments in early Chinese musical culture. (Li Jiahui., 2017)

Tang dynasty (618-907) :

The Tang Dynasty was an important period in the development of ancient Chinese music and culture, and records of Duxianqin have gradually increased. There was a wide variety of musical instruments in the Tang Dynasty, and the Duxianqin may have been developed and popularised during this period. (Lai Shijuan, 2013)

There are not many archaeological discoveries or historical documents about Duxianqin of the Tang Dynasty, but relevant information can be found in some archaeological instruments' materials. In some Tang Dynasty tombs, archaeologists have found relics of various musical instruments, including some fragments of Duxianqin. These findings provide clues about the actual form and use of musical instruments at that time. So among the musical instruments of the Tang Dynasty, instruments like the Duxianqin may have been used with their special construction and playing styles. Although these objects are usually rare, some sites and museums of the Tang Dynasty contain collections of actual or replica Tang Dynasty musical instruments. (Xu Pengcheng, 2019)(As shown in the Figure: 17)



Figure 17. Tang Dynasty Dragon Headed Duxianqin

Source: neng Wang(2011)

The Tang Dynasty was a flourishing period of Chinese musical culture, with a wide variety of musical instruments and playing techniques. Duxianqin may also have played a role in this diverse musical environment. Although there is little direct archaeological evidence for the Duxianqin in the Tang dynasty, we can gain a preliminary understanding of this instrument through tomb finds, artworks, and related documents. (Yan Hongfang., 1993)

Song dynasty (960-1279) :

During the Song dynasty, musical culture was rich and diverse, and the variety of instruments and playing techniques were further developed. The Duxianqin may have been used in this context as part of a particular musical style or performance. Duxianqin was also depicted in poems and paintings during the Song dynasty, suggesting that it was influential among literati and artists during this period.(Li Tong, 2021)

Records of Duxianqin in the Song Dynasty have increased compared to those of the Tang Dynasty, with more detailed descriptions of music theory and instrument categorisation. Records of musical instruments in the Song Shi (宋史, 1345) have increased in comparison to the Tang dynasty, but specific descriptions of Duxianqin are still limited. Instrument classification and musical activities are recorded in some detail, but Duxianqin are not usually the focus of discussion (Luo Lili, 2022)

The collection of poems, *Le fu shi ji* (Collected Poems of the House of Music), contains some references to music and musical instruments of the Song dynasty. Although it focuses mainly on poetry and musical expression, the instruments mentioned therein sometimes provide indirect insights into the use of Duxianqin. (Guo Maoqian, *Yuefu Poetry Collection*, 1200)

Taihe music score: this is a Song dynasty music score book that deals with musical instruments and music theory and may contain descriptions of Duxianqin. The book records the types of instruments and how they were played at the time. Archaeological discoveries of different kinds of musical instruments, including some fragments of Duxianqin, have been found in a number of Song Dynasty archaeological sites and tombs. Images or models of Duxianqin can occasionally be seen in Song dynasty murals and artefacts. (Luo Lili, 2022)

Overall, there are more records of Duxianqin in the Song Dynasty than in the Tang Dynasty, but there are still relatively few records of the Duxianqin.

Yuan dynasty (1271-1368) and Ming Dynasty (1368-1644) :

During the Yuan and Ming dynasties, the Duxianqin continued to be popular in folklore and at court, and gradually became an important part of some local musical cultures. Especially in some ethnic areas in the south, the Duxianqin was better inherited and developed as a traditional musical instrument.

Archaeological finds from the Ming Dynasty may include some physical remains of Duxianqin. These archaeological instruments' materials help to understand the actual form and playing style of the one-stringed Duxianqin. Historical accounts of Duxianqin sometimes mention a number of musical instruments, including the Duxianqin, in Yuan dynasty notebooks and history books. Although primarily focused on musical activities and playing styles, these accounts provide indirect insights into the one-stringed Duxianqin.(Yang Dongyan, 2009)

Opera and music literature of the Yuan Dynasty deal with the performance and use of Duxianqin. Especially in some operas, the presentation and playing style of the instrument can reflect the situation of the instrument at that time. The historical documents of the Ming Dynasty contain more detailed records of the instrument compared to those of the Song Dynasty. The use of Duxianqin may be mentioned in the Ming History and its related documents, especially when describing the music and instruments of the Ming dynasty. (Yang Dongyan, 2009)

In a number of Ming Dynasty tombs, archaeologists have discovered the remains of various musical instruments, including the Duxianqin. These discoveries have helped to understand the form and use of musical instruments during the Ming Dynasty. For example, the remains of musical instruments in some tombs include fragments or models of the one-stringed Duxianqin, providing information about the instruments' materials used to make the instrument, its shape and size. To summarise, records of the Duxianqin are more detailed in the Yuan and Ming dynasties compared to earlier periods. (Hao Shijie, Liu Xueying, Jiang Yunle&Zhang Chunyan, 2023)

Although there are relatively few historical records of Duxianqin in the Ming and Yuan dynasties, archaeological discoveries of some documents and historical books provide insights into its use and development during these two periods.

4.1.2 Music instruments

In ancient times, the instruments' materials for making the Duxianqin mainly came from nature. The commonly used instruments' materials for the body of Duxianqin include bamboo and wood, while the strings are mostly made of silk or animal and plant fibers. Bamboo is abundant in local resources and easy to process and shape. Due to limitations in craftsmanship and resources, the production of Duxianqin places special emphasis on the natural characteristics of instruments' materials and the precision of craftsmanship. (Hao Shijie, Liu Xueying, Jiang Yunle&Zhang Chunyan, 2023) (As shown in the Figure: 18)

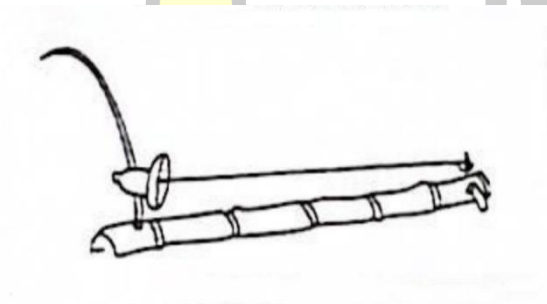


Figure 18. Bamboo tube qin

Source: neng Wang(2011)

The initial strings were mostly made of plant fibers or animal tendons, which, although easily obtainable, had relatively poor sound quality and durability. With the development of qin making technology, the body of Duxianqin gradually began to use wood. Compared to bamboo, wood is more sturdy and can create more complex and exquisite qin body structures. Early wooden single string Duxianqins still used plant fibers or animal tendons to make strings, but as demand changed, more durable instruments' materials were also being attempted. (Zheng Yan, 2019)

Wood plays an important role in the production of the ancient Duxianqin, and the choice of wood not only affects the appearance of the instrument, but also has a direct bearing on the sound quality and timbre of Duxianqin. Softwoods such as pine and cedar are commonly used, which are light and have good resonance. These woods are

light and have good resonance, and are carefully selected and processed by the instrument maker according to the characteristics of the wood. Pine is soft, easy to work and resonates well, making it suitable for the main body of the instrument. Spruce is used for the headstock and tailpiece because it is tough and has good sound transmission properties. The treatment of the wood is particularly important. The wood is dried naturally to reduce the moisture in the wood and to improve its stability and sound quality. After drying, the wood is sanded, planed, etc., to make the surface smooth and suitable for further production. (Zheng Yan, 2019) (As shown in the Figure: 19)

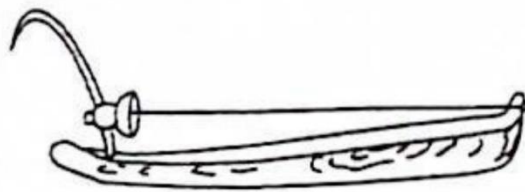


Figure 19. Ancient wooden Duxianqin

Source: neng Wang(2011)

Bamboo instruments' material plays an equally important role in the making of the ancient solenoid, and the choice of bamboo instruments' material directly affects the resonance of the body and the purity of the tone. Bamboo is a fast-growing, tough instruments' material with good elasticity and sound transmission ability, which makes it suitable for use as one of the main instruments' materials for the Duxianqin. Bamboo processing is a key step in the making of the ancient Duxianqin. Firstly, the craftsmen would select strong bamboos with long and even joints, and then dry the selected bamboos to prevent deformation or cracking during use. Next, the selected bamboo is cut into appropriate lengths, dried and treated against insects. After these steps, the bamboo is further processed into the various parts of the instrument's body, including the neck, body, and resonance box. Bamboo Duxianqins are particularly common in the Jing ethnic group region, not only because of their physical properties, but also because of their symbolic significance in Jing ethnic group culture. (A Dictionary of Foreign Music Performance Terminology, 1994)

Through historical documents and field investigations, I found that craftsmen do not have strict standards for the selection, processing, assembly, and tuning of musical instruments, and the quality and tone of each instrument are difficult to achieve the ideal state. Not only is the efficiency of the production process low, but it is also difficult to determine the accuracy and sound quality of the Duxianqin.

4.1.3 Music and performance

In ancient times, the Duxianqin was an important national musical instrument of the Jing ethnic group in Guangxi, and it had a special status in the religious ceremonies of the Jing ethnic group, and also played an important role in various social and cultural activities, and its musical forms and characteristics reflected the religious beliefs, living customs and aesthetic interests of the Jing ethnic group society. Especially in rituals and prayers. The music of Duxianqin is often dominated by solemn and mysterious melodies, expressing reverence and prayers to the gods through simple but infectious notes. The music is often repetitive and cyclical, with monotonous but powerful tones, creating a sacred and solemn atmosphere. (Tian Yaonong, 2014)

In daily life, the Duxianqin is also an important entertainment tool for the Jing ethnic group people. In their leisure time or at family gatherings, people use the Duxianqin to play folk songs or improvise to express their emotions and promote affection and friendship. The music is simple but expressive, and is often narrative in nature, telling the story of daily life. The music of the ancient Duxianqin has a variety of styles and exquisite playing skills, including solemn and solemn religious music, joyful and enthusiastic festival music, and relaxing and enjoyable daily entertainment music, etc. Each style reflects a specific social and cultural background and aesthetic orientation. Each style reflects a specific social and cultural background and musical aesthetic orientation. Religious music is often dominated by low and powerful tones, festival music is fast-paced and melodic, and daily entertainment music is melodic and narrative. To a certain extent, these styles and techniques reflect the uniqueness of the Jing ethnic group music culture. (Shen Qia, 1986)

The playing techniques of Duxianqin were already quite mature in ancient times, and the commonly used techniques include glissando, “Chan”, and plucking. “Hua” and “Chan” techniques produce continuous sound effects by sliding and

vibrating the fingers on the strings, which increase the lyricism and expressiveness of the music. The plucking technique, on the other hand, controls the length and strength of the notes through different fingerings and strengths, showing the diversity and richness of the music. Improvisation plays an important role in the performance of the ancient Duxianqin. Performers created unique musical compositions through improvisation according to the circumstances and emotions of the time. This tradition of improvisation not only demonstrates the skill and creativity of the players, but also reflects the flexibility and openness of the Jing ethnic group music culture. (Wu Guodong, 2012)

Through historical documents and field investigations, I found that as an important part of the culture of the Jing ethnic group in Guangxi, ancient Duxianqin music, although slightly monotonous in form, fully demonstrates the musical wisdom and artistic creativity of the Jing ethnic group people. Through the study of Duxianqin music in religious ceremonies, folk festivals, and daily life, we can not only understand the music culture of ancient Jing ethnic group society, but also see the important position and influence of Duxianqin in Jing ethnic group society. The music of Duxianqin during this period laid a solid foundation for later development and became an important heritage of the Jing ethnic music culture.

4.1.4 Role and function

In ancient times, Duxianqin players played multiple roles in Jing ethnic group society, not only as music bearers, but also as guardians and disseminators of culture. The Duxianqin served as an important cultural vehicle through which players expressed emotions and told stories, and played an important role in religion, rituals, and daily life.

The Duxianqin player plays an important role in religious ceremonies and rituals. The sound of Duxianqin is believed to have a sacred power to communicate with the gods, and therefore the players have a high status in these ceremonies. They need to be highly skilled and have a deep understanding of religious music in order to effectively communicate the will of the gods and ensure the smooth conduct of the rituals. This role requires performers who are not only skilled in their craft, but also have deep religious beliefs and cultural literacy. (Zhou Wenjuan, 2004)

At folk festivals and entertainment events, Duxianqin are an important source of joy for people. They enlivened the festive atmosphere and strengthened community cohesion by playing cheerful music. Most of the players in this period were folk artists who passed on their skills orally in the villages, transmitting culture and emotions through music. During major festivals such as weddings and harvest festivals, the Duxianqin players express their aspirations for a better life and their wishes for happiness through their unique musical expressions.(Shi Heng, 2016)

The transmission of Duxianqin playing skills, like most folk non-heritage cultures, takes place mainly through family and master-apprentice relationships. Older players pass on their skills and experience to the younger generation, creating a musical tradition that is passed down from generation to generation. The transmission within the family provides continuity and stability to the Duxianqin playing technique, while ensuring the purity and unique style of the technique. The master-apprentice relationship provides a wider means of spreading the skills, and through exchange and learning between masters and apprentices, the Duxianqin skills are spread and developed on a wider scale. (Luoqin, 2011)

Ancient Duxianqin also followed the "feeling" improvisation in their compositional style, which was a form of expression of their personal talent and rich emotions. They improvised according to the atmosphere and emotions of the scene, giving the music a unique expressive and infectious power. Improvisation is particularly common in folk festivals and religious ceremonies, where the performers express the immediate emotions and atmosphere through improvised music, enhancing the vividness and infectiousness of the music.

there are two types of Duxianqin players, one is often the literati, who are not only proficient in music, but also dabble in literature, poetry and other artistic fields. Combining the music of Duxianqin with literary works, the music expresses the emotions and moods of the literary works, forming a unique way of artistic expression. For example, many ancient poets recited their poems with the accompaniment of Duxianqin to enhance the expressive and infectious power of the poems through music. Duxianqin players also played an important role in the transmission of ancient operas and folk tales. They tell moving stories through music to convey national history and cultural memory. The application of the music of Duxianqin in opera performances not

only enhances the infectiousness of the theatre, but also makes the music and the theatre performances complement each other, forming a unique art form.

The other is the cultural elite, who enjoy high status and respect in society. As guardians and disseminators of culture, performers express their deep understanding of society and life through music, winning the respect and affection of the people. They not only have high attainments in music, but also play an important role in the social and cultural fields. The influence of ancient Duxianqin players is not only limited to the field of music, but also plays an important role in cultural transmission and social education. They conveyed national culture and historical memory through music, enhancing national cohesion and cultural identity. The influence of the performers is not only reflected in the transmission of musical skills, but also in the transmission of cultural and spiritual dimensions. (Wu Guodong, 2012)

Through historical documents and field investigations, I found that Guangxi Jing ethnic group Duxianqin players in the ancient period played an important role in society, culture and religion. They expressed their emotions and told stories through music, conveying national culture and historical memory. The transmission and innovation of Duxianqin playing skills made the Duxianqin music important and influential in the ancient society. Through the study of Duxianqin players of this period, we can see the important role of Duxianqin music in cultural transmission and social development, and it also provides an important historical background for understanding the development of modern Duxianqin music.

4.1.5 Summary

In ancient times (202 BC -1800 BC), the Duxianqin was mainly used in religious ceremonies and folk festivals, and was an indispensable part of social life. In the development process of the Jing ethnic group in Guangxi, the art of Duxianqin has integrated elements of Han and Zhuang music cultures, and has been further enriched and developed through continuous exchanges with other ethnic groups. Due to the lack of unified standards for the selection, processing, assembly, and tuning of musical instruments during the production process, the timbre and quality of each Duxianqin are difficult to achieve the ideal state, resulting in low production efficiency and difficulty in ensuring sound quality and accuracy. Although the musical form of ancient

Duxianqin was relatively simple, it fully demonstrated the musical wisdom and artistic creativity of the Jing ethnic group people. In ancient society, culture, and religious life.

4.2 The development of Duxianqin of Jing ethnic group in modern period (1801-1960)

4.2.1 History

During the period of 1801 to 1960 was a time of great social change in China, and the Jing ethnic group in Guangxi was no exception. With the continuous influx of foreign cultures and the advancement of modernisation, the Jing ethnic group society gradually transformed from a traditional agricultural and fishery economy to a diversified economy, and the traditional way of playing the Duxianqin and its cultural connotations changed accordingly, with differences in the Duxianqin's system, the music score, the form of playing, the performance occasions, and in many other aspects.

The period from the end of the 19th century to the middle of the 20th century the structure of Duxianqin has been improved during this period. For example, the improvement of body instruments' materials, strings and axes made the sound quality and pitch of the instrument more stable and easier to play. In the quest for a richer sound, Duxianqin makers experimented with different woods and string instruments' materials. The improved Duxianqin has a clearer and more varied sound. On the basis of inheriting the traditional playing techniques, players continued to innovate. For example, the left hand "Hua" and right hand pizzicato techniques were further developed, making the performance more expressive. (Wang Wenli, Li Shiyuan, 2012)

In the 1992 edition of Traditional Chinese Musical Instruments, the Duxianqin is documented to cover its history, structure, playing techniques and modern development. The origin of Duxianqin can be traced back to ancient times and it has a long history. In different periods, the Duxianqin has had different developments and improvements.

Despite the dramatic changes in social structure and economic development, the Duxianqin, as a instruments' material culture, is still alive in the lives of the Jing ethnic group people, and its importance in ceremonies such as weddings and rituals remains undiminished. It is worth noting that the way of transmission has gradually shifted from traditional oral teaching to school education, and the music scores have been textualised

from oral teaching. The repertoire of Duxianqin has gradually been enriched with new musical elements in addition to traditional folk music, which is undoubtedly of great significance for the transmission and development of the art of Duxianqin.(Yuan Jingfang, 1992)

Through historical documents and field investigations,I found that the art of Duxianqin during this period not only existed as a carrier of Jing culture, but also as a manifestation of cultural identity and national cohesion during major Jing festivals. The art of Duxianqin of the Jing ethnic group in Guangxi has absorbed the music culture and elements of the Han and Zhuang ethnic groups in its development process. Through continuous exchange with other ethnic elements, the art of Duxianqin has been further developed.

4.2.2 Music instruments

During the period of 1801 to 1960, the instruments' materials used in the making of Duxianqin underwent important transformations and developments. During this period, with the development of society and the advancement of technology, the changes in the selection of wood and the advancement of treatment technology were a major feature of the Duxianqin production process. The changes are mainly reflected in three aspects:

- 1) Qin makers choose more types of high-quality wood, such as rosewood, rosewood, and rosewood. These woods have good resonance characteristics and durability, enhancing the sound quality and service life of Duxianqin. Advanced wood drying technology has been introduced to reduce wood deformation and cracking, and improve the stability of Duxianqin body. The application of modern anti-corrosion and pest control techniques in wood treatment has extended the service life of the Duxianqin. With the development of industrial technology, the craftsmanship of making Duxianqin has gradually shifted from manual to mechanical processing, making the production of Duxianqin more refined and standardized.(Yang Jun, 2019)

Using precision tools for wood cutting and carving makes the production of the instrument body and strings more precise, enhancing the sound quality and appearance of the instrument. The standardization of qin making techniques ensures that every Duxianqin has consistent quality and timbre. Some components have started

modular production, making it easier to replace and repair, improving the production efficiency and maintenance convenience of Duxianqin.(Huang Yu, 2012)

Luthiery has made significant progress in the treatment of bamboo. Luthiers have improved the treatment of bamboo by steaming, drying and preserving it to further enhance its stability and sound quality. These improvements ensured a purer tone and a significant increase in durability, and they brought the bamboo Duxianqin to new heights of sound quality and performance. So although the introduction of metal instruments' materials has had an impact on the production of Duxianqin, bamboo still occupies an important place in modern Duxianqin production.(Lai Shijuan.,2013)

2) The wood used in the production of Duxianqin became more sophisticated. High-quality hardwoods such as mahogany and rosewood began to be widely used in the production of the body of the instrument. These woods were favoured by luthiers for their high density and good resonance. At the same time, the special treatment and carving of these hardwood instruments' materials not only improved the sound quality, but also enhanced the artistic value of Duxianqin. (Li Jiahui,2020) (As shown in the Figure: 20)



Figure 20. Bamboo Duxianqin and wooden Duxianqin

Source: Xiaoxiao Wang (2023)

3) The introduction of metal instruments' materials was an important innovation in the production of modern single string Duxianqins. Especially in the production of strings, there has been a gradual shift from traditional silk strings to steel wire strings. The use of steel wire strings increases the tension and durability of the

strings, making the tone of Duxianqin brighter and clearer. Metal instruments' materials are also used for the decoration and support structure of Duxianqin body, enhancing the overall stability and aesthetics of Duxianqin. (Yan Hongfang ,1993)

Metal strings are gradually replacing traditional plant fibers and animal tendons, providing clearer, longer lasting, and more stable sound quality. Common metal instruments' materials include steel wire and copper wire. The introduction of metal brackets and components into the body structure of Duxianqin has improved its robustness and durability. Start experimenting with synthetic instruments' materials such as glass fiber and carbon fiber to create a more lightweight and acoustic body. By combining traditional wood and modern synthetic instruments' materials in the body and strings, a Duxianqin is created with both traditional sound and modern durability. (Yin Ming,2012) (As shown in the Figure: 21)



Figure 21. Antique Duxianqin

Source: Xiaoxiao Wang (2023)

From the late 19th century to the mid-20th century, the instruments' materials and techniques used in the production of the Guangxi Jing ethnic Duxianqin underwent significant changes and developments. The diversification and quality improvement of wood selection, the improvement and standardization of qin making technology, as well as the introduction of new instruments' materials and composite instruments' materials, have jointly promoted the technological progress and artistic expression of the Duxianqin. The changes during this period not only improved the sound quality and

durability of the Duxianqin, but also enriched its cultural connotations and forms of expression. (Zhang Can, 2012)

Through historical documents and field investigations, I found that the production process of Duxianqin has gradually been standardised. Craftsmen have set strict standards for the selection of instruments' materials, processing, assembly and tuning to ensure that the quality and tone of each and every one of these instruments reaches an ideal state. The introduction of new technologies such as machining and modern measuring tools has not only improved the efficiency of the production process, but also significantly enhanced the precision and sound quality of Duxianqin. The introduction of modern technology has also had a positive impact on the production process of Duxianqin, but the transmission of manual skills remains an important part of Duxianqin production. The craftsmen continue to innovate and improve the production of Duxianqin by combining the traditional handcraft skills with modern technology through masters and apprenticeships.

The modern period is an important stage in the development of the production technology of Duxianqin. With the development of society and the advancement of technology, the instruments' materials and craftsmanship of Duxianqin have been significantly improved and innovated. The introduction of high-quality hardwood and metal instruments' materials, the improvement of bamboo processing technology, and the application of new technologies have brought the Duxianqin to new heights in terms of sound quality, durability, and aesthetics. The production process of Duxianqin during this period not only retained traditional manual skills, but also integrated modern technology, laying a solid foundation for the development of Duxianqin in modern society.

4.2.3 Music and performance

The modern period was an important turning point for the Duxianqin music of the Guangxi Jing ethnic group. During this period, the development of Duxianqin music was profoundly influenced by social changes and cultural exchanges, and these social and cultural contexts provided rich soil for the development of Duxianqin music. Modern China has experienced profound social changes and cultural exchanges between China and foreign countries. With the introduction of Western culture and the modernisation of Chinese society, the Duxianqin music has gradually formed a

diversified musical style, diverse playing technique, multi-dimensional performance space and systematic music education in the process of absorbing and integrating foreign cultures.

In terms of musical style, the Duxianqin music has absorbed more modern musical elements while retaining the traditional style. There are various styles of Duxianqin music, ranging from folk music that retains traditional characteristics to new works influenced by Western music. The traditional music style focuses on the beauty of melody and the expression of emotion, while the new music style places more emphasis on the complexity and diversity of the musical structure. With the introduction of western music and culture and the strengthening of cultural exchanges between China and foreign countries, the Duxianqin music began to absorb and integrate new musical elements, gradually forming new musical forms. For example, the ensemble of Duxianqin and other instruments became popular, and this kind of multi-instrument ensemble not only enriched the level and expressiveness of the music, but also injected new vitality into the Duxianqin music.(neng Wang,2016)

In terms of playing technique, there have been new developments and innovations in modern Duxianqin performance. For example, players have begun to try to increase the number of strings and improve their playing techniques in order to expand the range and tonal expression of the Duxianqin. Traditional techniques such as glissando, “Chan”, and plucking were further refined and diversified, while more Western music techniques such as harmonic accompaniment and polyphony were introduced.(Huang Quan ,1998)

The process of urbanisation has accelerated in modern times, with the gradual rise of urban music culture. The Duxianqin has begun to move from the countryside to the city, and has been performed in urban theatres, concert halls and other public venues. The rise of urban music culture has expanded the audience of Duxianqin, making it possible to expand the performance occasions and development space of Duxianqin in multiple dimensions. (Song Tang,2007)

Music education for the Duxianqin has gradually emerged in modern times, with the establishment of music education institutions and the preparation of music textbooks providing a systematic and standardised approach to the transmission and development of Duxianqin music. Music education not only teaches performance skills,

but also focuses on the cultivation of music theory and creative ability. This systematic music education has not only improved the skills of Duxianqin players, but also promoted the professional and academic development of Duxianqin music.(Xiao Wenpu&Wan Rong ,2020)

Through historical documents and field investigations,I found that the modern period is important period in the development of Guangxi Jing ethnic group Duxianqin music.The Duxianqin music experienced profound changes and innovations in the intersection of tradition and modernity, nation and world. Through the study of Duxianqin music of this period, we can see the unique development path and rich cultural connotations of the Jing music culture in the process of modernisation. The Duxianqin music of this period has laid a solid foundation for the development of modern Duxianqin music, and also provides important historical information for us to understand and pass on the musical culture of the Kyung ethnic group.

4.2.4 Role and function

The modern period was a time of rapid social change in China, a time when China experienced social upheaval and cultural renaissance side by side. During the late Qing Dynasty and the Republic of China, war and social unrest had a certain impact on the development of Duxianqin music. However, this period was also an important stage of cultural renaissance, and the revival movement of national culture promoted the importance and protection of traditional music, in which the Duxianqin music was inherited and developed. The status and professionalisation of Duxianqin players of the Guangxi Jing ethnic group also changed significantly during this period.

As urbanisation accelerated, many Duxianqin players began to move out of the countryside and into the theatres and concert halls of the cities to become professional musicians. During this period, Duxianqin were no longer confined to festivals and religious ceremonies in the countryside, but began to display their skills in various performance venues in the cities. The emergence of professional musicians gradually moved the Duxianqin from folk entertainment to professional art, and promoted the widespread dissemination and development of Duxianqin music. As the degree of professionalism increased, Duxianqin began to participate in all kinds of professional concerts and public performances. Through these performances, they not only gained financial income, but also expanded the influence of their music. The rise of

professional concerts enabled Duxianqin to display their skills on a larger stage, attracting the attention and love of a wider audience.(Zhou Ru ,2021) (As shown in the Figure: 22)



Figure 22. Old style Duxianqin

Source: Wang Neng (2011)

The development of modern music education has provided a systematic way for the training of the Duxianqinist. The establishment of various music academies and professional training institutions has enabled Duxianqin to receive systematic training not only in their skills, but also in music theory and composition. The popularisation and specialisation of education has led to a significant improvement in the quality and standard of modern Duxianqin. During this period, many Duxianqin mastered more systematic and scientific performance methods through formal music education, laying a solid foundation for the development of modern Duxianqin music. The technique of modern Duxianqin performance has been further refined and diversified on the basis of traditional techniques. Performers continue to explore new playing techniques, such as "La Gan" and rapid pizzicato, which make the expression of Duxianqin richer and more varied. Performers of this period not only paid attention to the transmission of skills, but also actively carried out technological innovation, injecting new vitality into the music of Duxianqin.(Huang Zhihao, 2008) (As shown in the Figure: 23)



Figure 23. Innovative forms of performance

Source: Xiaoxiao Wang (2024)

With the introduction of Western music and culture, Duxianqin began to absorb and integrate new musical elements and diversify their musical creations. They not only played traditional folk music, but also created new musical works, such as Duxianqin concertos and chamber music. These works not only enriched the repertoire of Duxianqin music, but also demonstrated the creative talents and artistic pursuits of the performers. Through exchanges with western music cultures, the music of Duxianqin has been newly developed and expanded, and diversified musical styles have been formed. In the modern period, Duxianqin players not only performed domestically, but also actively participated in international cultural exchange activities. Through cooperation with foreign musicians, they have demonstrated the unique charm of Duxianqin music and promoted the exchange and fusion of Chinese and foreign cultures. Such cross-cultural exchanges not only enriched the expressive power of Duxianqin music, but also broadened the scope of influence of Duxianqin music, injecting a new impetus into the development of Duxianqin music. (Li Keliang, Su Haizhen, 2023)

In the modern era, despite changes in the social environment, Duxianqin performers remained the guardians and transmitters of Jing ethnic group culture. They continue to pass on the musical traditions and cultural heritage of the Jing ethnic group by playing and teaching the Duxianqin. Against the backdrop of enhanced national identity, Duxianqin performers have become promoters of ethnic culture, promoting awareness and respect for the culture of the Jing ethnic group through performances

both inside and outside the villages and tribes of the Jing ethnic group. Their performances are not only popular in the local community, but also begin to showcase the culture of the Jing ethnic group nationwide. During this period, Jing ethnic group Duxianqin performers continued to serve as educators, cultivating a new generation of Duxianqin performers through family transmission and formal education. With the development of the education system, some Duxianqin performers may still teach music and cultural courses in schools. (Bian Jiang,2000)

With changes in social status and cultural attitudes, female Duxianqin have begun to emerge. They have shown their unique artistic talents in music creation and performance, breaking the traditionally male-dominated situation. The emergence of female performers not only enriches the group structure of Duxianqin, but also brings new forms of expression and artistic styles to Duxianqin music. They have a softness in the use of the rocker and in the expression of the music, and they have a more precise mastery of the special vocabulary of the traditional music of Duxianqin. They are able to externalise their playing techniques into musical vocabulary such as posture, gesture and movement in their Duxianqin performance, which is an expression based on the logic of the Jing ethnic group Duxianqin national music language beyond the perception of the musical score, revealing the deep connection between Duxianqin music and culture.(Wei Qian ,2022)

Through historical documents and field investigations,I found that the first half of the 20th century, with the rise of the national cultural revival movement, Duxianqin performers actively participated in it, promoting the protection and revival of traditional culture. They not only make contributions in the field of music, but also participate in the research and protection of music culture. When facing the impact of modernization and globalization, Duxianqin strive to adapt to the new social environment. Some musicians have begun to try combining Duxianqin with other musical forms, innovating their playing methods to attract a wider audience.As an important component of national culture, the music of Duxianqin has become a significant carrier of cultural identity and national pride for the Jing ethnic group people. The holding of various cultural activities and music festivals provides a platform for the transmission and development of Duxianqin music, enhancing the cultural confidence and sense of identity of the Jing ethnic group people. The awakening of national consciousness not

only promoted the development of Duxianqin music, but also promoted the transmission and promotion of Jing ethnic culture.

4.2.5 summary

The modern period (1801-1960) was a critical period of profound social change in China. Under the continuous influx of foreign cultures and the promotion of modernization, the Jing ethnic group society in Guangxi is gradually transforming from traditional agriculture and fishery economy to diversified economy. During this process, the playing style and cultural connotations of Duxianqin also underwent changes. With the transformation of social structure and economic model, Duxianqin has undergone significant changes in terms of system, score, performance form, and performance occasions.

4.3 The development of Duxianqin of Jing ethnic group in contemporary period (1961-2025)

4.3.1 History

Since the middle of the 20th century, with the further modernisation of Chinese society and the acceleration of globalisation, the Duxianqin as a traditional musical instrument has faced new challenges and opportunities. These changes are mainly reflected in the improvement of instruments' materials, the optimisation of structure, the enrichment of playing techniques, and the dissemination of the instrument.

The Duxianqin has made frequent appearances at international music festivals and cultural exchange events, winning the attention and recognition of the international music community. A number of Duxianqin players have won awards in international competitions and performances, promoting the spread of Duxianqin around the world. With the increase in international cultural exchanges, the Duxianqin has co-operated with musicians from other countries and regions in cross-cultural music creation and performance. Such collaborations have contributed to the diversification of Duxianqin. (Su Fan, 2002)

In terms of occasions of use, it has undergone great changes. In addition to being used to perform traditional rituals and celebrations music in the Ha Festival, the Duxianqin has also been incorporated into school music education and community cultural activities, and through modern technological means, the Duxianqin's

performance and production techniques have been digitally preserved and disseminated, and so it has also gained a foothold in a wider range of cultural exchanges and artistic performances. Especially after the Duxianqin was inscribed on the national intangible cultural heritage list in 2011, it has since been featured not only in Guangxi Jing, but also in the larger real and online world. The state's emphasis on intangible cultural heritage has led to more attention being paid to the preservation and transmission of Duxianqin, and the government and all sectors of society have given strong support to the preservation and transmission of Duxianqin, giving it a new lease of life in modern society.(Yan Hongfang, 1993)

The musical style of Duxianqin has become more diversified. The Duxianqin has not only preserved traditional folk tunes, but also integrated modern music elements, and the repertoire has also shifted from the traditional "Gao Shan Liu Shui", "Chuan Zhen Yin Xian", "Guo Qiao Feng Chui" to the more popular music that is more pleasing to the ears of the people, such as "Shan Ge Hao Bi Chun Jiang Shui", and the way of playing is also becoming more and more rich, and the ensemble with the modern musical instruments, and even with the combination of electronic music, which greatly enriched the form and connotation of the art of Duxianqin. These innovations have greatly enriched the form and connotation of the Duxianqin.(Qi Jian Ling ,2019)

Through historical documents and field investigations,I found that the transmission and innovation of the Jing ethnic group people in the art of music. From ancient religious ceremonies to modern social celebrations to modern cultural exchanges, the Duxianqin has always been an important part of the Jing ethnic group culture, witnessing the changes and development of the Jing ethnic group society. Through the preservation and transmission of Duxianqin, the Jing ethnic group people have not only preserved their valuable cultural heritage, but also contributed to the enrichment of the musical culture of China and the world.

4.3.2 Music instruments

Contemporary period,the instruments' materials used in the making of Duxianqin have been further diversified on the basis of tradition, and modern technological instruments' materials have been introduced. The application of new instruments' materials and technologies not only improves the sound quality and

durability of Duxianqin, but also makes its production process more scientific and standardised. The changes are specifically reflected in the following two aspects.

The body materials of modern Duxianqin are more diverse. In addition to traditional woods such as mahogany, rosewood, and rosewood, the use of composite musical instrument materials such as synthetic resins and carbon fibers is becoming increasingly common. The materials of these new instruments have improved the durability and tone stability of the instrument body.(Lu Kegang, Yang Xiuzhao, He Hong, 1984) (As shown in the Figure: 24-25)



Figure 24. Modern Duxianqin
Source: Xiaoxiao Wang (2023)



Figure 25. Modern Duxianqin
Source: Xiaoxiao Wang (2023)

Wire strings are gradually replacing traditional silk strings. Wire strings are stronger and more durable, have a brighter and longer lasting tone, and are less susceptible to humidity and temperature. In addition, some Duxianqins use nylon strings, which are moderately soft and have a warm tone. In terms of resonance box

design, modern Duxianqin have made many improvements to the internal structure and design of the resonance box to optimise tone and volume. The shape and internal design of the resonance box is more scientifically orientated and uses acoustic principles to enhance the resonance effect. Modern Duxianqins often feature metal string spindles and precision tuners to ensure stability and accuracy in tuning. This improvement allows the player to adjust the intonation more easily. On the basis of inheriting the traditional techniques, modern Duxianqin continue to innovate and develop a variety of new playing techniques, such as fast pizzicato and compound fingering. The richness of these techniques makes the expression of Duxianqin more diversified. Some modern Duxianqins have integrated electro-acoustic technology, which can amplify the volume or change the sound effect through the sound system. This provides more possibilities for the use of Duxianqin in modern music. (Border Region, 2000)

The selection and treatment of timber for the modern Duxianqin is more scientific and refined, and luthiers have improved the quality and use of timber through modern technical means. High quality hardwoods such as mahogany, rosewood, ebony and so on are widely used in the production of modern Duxianqins. These woods undergo modern treatment processes, such as high-temperature drying and chemical treatment, to ensure the stability and resonance of the wood, and avoid the problems of cracking and deformation that are prone to occur during traditional wood treatment. (Wei Qian., 2022)

Modern instruments' materials such as carbon fibre and composites are beginning to be used in the making of Duxianqins. Carbon fibre, which is lightweight, tough and durable, is used to make the neck and body parts. These instruments' materials not only reduce the weight of the Duxianqin, but also increase its resistance to deformation and durability. In addition, the use of composite instruments' materials has significantly improved the resonance and tone of Duxianqin. Some synthetic instruments' materials, such as polymers, have also been gradually introduced into the production of Duxianqin for use in strings and other components. The application of these instruments' materials has led to significant improvements in the tone stability, tension, and longevity of the Duxianqin, meeting the needs of modern players. The modern Duxianqin is more diversified and refined in terms of decorative craftsmanship. Through laser engraving, lacquer art, inlay and other modern decorative techniques,

luthiers not only improve the sound quality of Duxianqin, but also make the Duxianqin more beautiful and rich in artistic value in terms of appearance.(Sun Jin ,2020)(As shown in the Figure: 26)



Figure 26. Different types of wood

Source: Xiaoxiao Wang (2023)

The production process of modern Duxianqin is more standardized and scientific. The master craftsman who makes Duxianqin has established strict technical standards in various aspects such as instruments' material selection, processing, assembly, and debugging to ensure that the quality and tone of each Duxianqin reach the ideal state. The master craftsman who makes Duxianqin cuts the wood into the basic shape of Duxianqin body according to the design drawings. The body of Duxianqin is usually elongated, with the length and width determined according to specific design requirements. Use a carving knife and other tools to carve the body of Duxianqin, forming a resonance box and the head of Duxianqin. During the carving process, it is necessary to ensure that the resonance chamber structure inside the Duxianqin body is reasonable in order to obtain the best sound quality. Polish the body of Duxianqin to make its surface smooth and free of thorns, in order to enhance its aesthetics and feel. The master of making a qin selects suitable string instruments' materials according to their needs.(Mi SongHua,2008)

Traditionally, plant fibers and animal tendons are often used, while modern times, metal strings (such as steel wire and copper wire) are more commonly used. Then install the strings between the head and tail of Duxianqin, ensuring that the tension of

the strings is moderate to achieve optimal sound quality. The Duxianqin keys are usually made of hard wood or ivory and installed on the body of the instrument to support the strings and adjust the pitch. Modern technological means have been incorporated. For example, the application of computer-aided design (CAD) and CNC machining technology has made the processing of the various components of Duxianqin more delicate, the assembly more precise, the sound quality more pure, and the production of Duxianqin more professional and efficient. Although the production process of Duxianqin tends to be professionalised and standardised, the transmission of handmade techniques is still the essence of Duxianqin art. The fusion of handmade techniques and modern technology enables the modern Duxianqin to maintain its traditional sound while providing better performance and artistic value. (Liu Yiwen, 2021)

Through historical documents and field investigations, I found that the modern period is a mature stage in the development of the production process of Duxianqin. The production of Duxianqin is more demand-centred, taking into full consideration the needs of modern society in terms of improving its tone, stability, durability and aesthetics, and combined with modern technology, the production of Duxianqin has embarked on a more professional and standardised path, which is a good start for the transmission of Duxianqin art.

4.3.3 Music and performance

The modern period is an important stage in the development of Duxianqin music of the Guangxi Jing ethnic group in the context of globalisation and modernisation. During this period the Duxianqin music, while retaining its traditional characteristics, experienced diversification and innovation in form, content and expression, and became increasingly valued and loved by all walks of life, and after being inscribed on the list of the national intangible cultural heritage, the issue of its transmission and dissemination has also attracted concern and attention.

In terms of musical style, Duxianqin music shows different development paths in different cultural contexts in the city and the countryside. In the city, Duxianqin music pays more attention to artistry and innovation, while in the countryside, Duxianqin music retains more of its traditional musical form and content. Therefore, in terms of musical style, Duxianqin music has different branches, including traditional

folk music, modern art music, and crossover music, each of which has a different development direction and audience. In the process of playing, the performers will also integrate the characteristics of different music styles to make the performance of Duxianqin music richer. For example, modern Duxianqin music includes traditional single melody music, polyphonic music with harmonic accompaniment, and polyphonic music with other instruments, which is more colourful than pure instrumental music.(Liao Mingjun.,2009)

The Duxianqin music are constantly developing in transmission and innovation, showing rich artistic expression and technique level. Modern Duxianqin playing techniques have been further developed and innovated on the basis of traditional techniques. In addition to traditional techniques such as sliding, “Chan”, plucking, etc., players have introduced many modern playing techniques, such as "La Gan", bow skipping, and rapid pizzicato. Through the use of these techniques, the timbre and expressive power of Duxianqin have been greatly enriched and expanded.

Modern Duxianqin music is also composed in a rich variety of forms, including not only traditional folk music and religious music, but also many new forms of music, such as Duxianqin concertos, chamber music and crossover music. Composers have created a series of musical works with modern characteristics by combining the unique sound and expressive power of Duxianqin with modern musical compositional techniques. These works retain the flavour of traditional music while incorporating the innovative elements of modern music. In addition, improvisation, as one of the compositional surnames of Duxianqin, still occupies an important position in modern Duxianqin music. Many modern Duxianqin are not only good at playing existing works, but also actively engage in improvisation, creating unique musical works according to the atmosphere and emotion of the performance scene. This tradition of improvisation not only demonstrates the skill and creativity of the performer, but also reflects the flexibility and openness of Duxianqin music.Liao Mingjun.,2009)

Contemporary period electronic music and multimedia art have been widely used in the music of Duxianqin. The use of electronic effects and digital audio processing technology has made the timbre of Duxianqin richer and more varied, and performers can create a variety of sound effects through electronic devices. The introduction of multimedia art, such as video and lighting effects, combined with the

music of Duxianqin creates an integrated artistic performance that enhances the visual and auditory effects of the music.(Pan JiangNing ,2010)

With the rise of the national cultural renaissance movement, the Jing ethnic group people have attached increasing importance to Duxianqin music. Various cultural activities and music festivals have been held, providing a platform for the transmission and development of Duxianqin music. There have been more and more exchanges and presentations of Duxianqin music on the international stage. the performances and exchanges of Jing ethnic group Duxianqin musicians at international music festivals and academic conferences have enhanced the world's knowledge and understanding of Duxianqin music. the performance of Duxianqin with western symphony orchestras or with other ethnic instruments has resulted in musical works in a multicultural context, as well as promoting understanding and integration between different cultures. International co-operation and cultural exchanges in Duxianqin music have allowed the world to see the unique charm of Duxianqin music and enhanced the international spread of Duxianqin art and Jing ethnic group culture.(Doker Baba website, 2012)

Significant progress has been made in the systematic and diversified development of the transmission and education of modern Duxianqin music. The establishment of modern music education institutions has provided a systematic and standardised approach to the transmission and popularisation of Duxianqin music. Various music colleges and professional training institutions have trained a large number of excellent Duxianqin players and educators through the establishment of professional Duxianqin courses and training programmes. These institutions not only teach performance skills, but also focus on the cultivation of music theory and creative ability. Modern teaching methods have been incorporated into the transmission and teaching methods. The combination of traditional oral transmission and modern multimedia teaching enables students to master traditional skills while being exposed to modern playing technique and compositional approaches. For example, through audio and video teaching, students can repeatedly watch and learn from masters' performances to enhance their skills. The training and development of transmitter s has also received attention from all sides. Many master musicians of Duxianqin not only devote themselves to music performance and creation, but also actively participate in music education and transmission, passing on their skills and experience to the younger

generation through lectures and training courses. The efforts of these transmitters have not only ensured the continuation and development of Duxianqin music, but also injected new vigour and creativity into it. (Zhong ShiHua, 2023)

In conjunction with the development of the Internet, there have been significant changes in the way in which Duxianqin music is created, performed and disseminated. The application of digital technologies, such as audio and video recording and webcasting, has enabled the widespread dissemination of Duxianqin music. Digital resources for music education, such as online courses and e-textbooks, have provided new ways to learn and disseminate Duxianqin music. In addition, through social media and music platforms, Duxianqin music has been able to spread and share rapidly, attracting more attention and love. (Huang Zhihao, 2008)

Through historical documents and field investigations, I found that in the modern period, the Duxianqin music of the Guangxi Jing ethnic group has undergone important development and innovation in the context of globalisation and modernisation. Through the study of Duxianqin music in this period, we can see the rich changes and diverse development of Duxianqin music in terms of form, style, technique and transmission. Modern Duxianqin music not only retains the traditional musical characteristics, but also forms a unique modern musical style by absorbing and integrating new musical elements. The Duxianqin music of this period is not only an important part of the Jing ethnic group culture, but also a valuable heritage of Chinese and even world music culture.

4.3.4 Role and function

In contemporary period times, Duxianqin performers play more diverse roles in the Jing ethnic group society, inheriting tradition while incorporating modern elements. Duxianqin performers continue to serve as cultural transmitters, maintaining the musical traditions of the Jing ethnic group through teaching and performance. At the same time, they also innovate by incorporating modern music elements into the performance of the Duxianqin, creating new musical styles and revitalizing the instrument in contemporary culture. Duxianqin performers not only teach Duxianqin in communities and families, but also serve as teachers in schools, music schools, and cultural institutions, systematically imparting Duxianqin skills and knowledge of Jing ethnic culture. In addition, as cultural ambassadors, they introduce the culture of the

Jing ethnic group to audiences around the world through international exchanges and performances.(As shown in the Figure: 27)



Figure 27. Show to foreign friends

Source: Xiaoxiao Wang (2023)

Duxianqin performers are still important participants in various social activities in modern society. They perform in traditional festivals, cultural festivals, public welfare activities, and modern art festivals, enhancing community cohesion and cultural identity. With the development of globalization, Duxianqin performers have participated in more cross-cultural exchange activities. They showcase the unique charm of Duxianqin through international music festivals, cross-border cooperation projects, and other means, and absorb musical elements from other cultures, promoting understanding and exchange between cultures. The development of modern technology has also provided a new platform for the dissemination of Duxianqin. Duxianqin performers showcase their performances to a wider audience through television, radio, live streaming, and social media, attracting the younger generation's interest in traditional culture. Some Duxianqin performers also participate in the cultural and creative industry, combining the art of Duxianqin with the commercial market through music production, film and television music, commercial performances, and other means, promoting the integration of culture and economy.(Border Region, 2000)

Su Chunfa, the third generation of Duxianqin, has made great contributions to the transmission of Duxianqin. Chunfa Sustarted practising the Duxianqin when he was less than 5 years old and learnt from Nguyen Thi Hoa, a second-generation Duxianqin

folk artiste, who has been playing the Duxianqin for 50 years. In the past, he was engaged in fishery production and border trade, then he was elected as the head of the "Ha Festival" pavilion in Spreading Tail Village, and since then, he spends more than 80 per cent of his time in Ha Pavilion every day. After the death of his master Nguyen Shih Ho, Chunfa SuPhat became the only Duxianqin player. In order to prevent the art of Duxianqin from disappearing, since 1994, he has been running remedial classes at his own expense, training a large number of excellent national Duxianqin transmitters such as Tang Xiaoyuan. Over the years, he has performed the Duxianqin many times for leaders of the Party and the State and ministries and commissions, for guests from inside and outside the region, and for friends from nearly 20 countries. In addition to teaching and playing the Duxianqin, Chunfa Suhas made more than 500 Duxianqins over the years through his knowledge of Duxianqin construction. He has improved the Duxianqin by incorporating radio applications into it, resulting in a new type of Duxianqin that can be manipulated in terms of sound level. Chunfa Suhas practiced the transmission and promotion of the art of the Jing ethnic group Duxianqin through his own actions, and has written his sincere love for the art and culture of the Jing ethnic group people on the path of teaching. (Lu Kegang, Yang Xiuzhao, He Hong, 1984)

In 2012, under the leadership of Dongxing Municipal Government, the "Dongxing Jing ethnic group Duxianqin Celestial Music Art Troupe" was set up by the private sector, for the first time in the form of an organisational structure, to pass on and promote the Jing ethnic group Duxianqin art as a cultural and artistic brand and to organise the Troupe to participate in performances and exchanges at home and abroad for a number of times. On the Internet's new media platforms, there are also transmitters or learners of the Jing ethnic group Duxianqin who post videos of their performances or broadcast them live on the platforms. To a certain extent, the cultural value of the Jing ethnic group Duxianqin has also been greatly promoted. (Yan Hongfang, 1993)

The spread of the Internet has greatly facilitated the process of social dissemination of Duxianqin, leading to significant changes in the way Duxianqin players compose, perform and disseminate their music. The development of recording technology has made it possible to preserve and disseminate the music of Duxianqin in high quality. Performers have been able to disseminate the music of the kora to a wider audience through the recording of albums and music videos. For example, Zhao Xia, a

modern-day Duxianqin player and regional-level non-genetic transmitter of the art of Duxianqin, has gained a large number of fans by posting recorded videos of her Duxianqin on major public platforms. By combining the performance of Duxianqin with popular music with a high degree of popularity, she has attracted the attention of many people and expanded the popularity and audience of Duxianqin.

Through the Internet, the solo can reach global audiences, show its unique timbre and traditional culture, and promote cross-cultural exchanges and interest in the instrument at home and abroad. At the same time, the addition of webcasting has brought considerable income to these transmitters. Zhao Xia admits, "Nowadays, conducting webcasts is the main source of funding for the transmission and dissemination of Duxianqin at their local transmission bases, and all of this is able to promote the influence of Duxianqin, and the popularisation and transmission of Duxianqin music." (As shown in the Figure: 28)



Figure 28. Tiktok playing software

Source: Xiaoxiao Wang (2023)

Artistic characteristics, humanistic values, and transmission and As a national intangible cultural heritage project, the art of the Jing ethnic single stringed instrument has entered the Golden Hall in Vienna, Austria, and has taken root and spread overseas, establishing single stringed instrument dissemination centers in many countries around the world. This indicates that the Jing ethnic Duxianqin is not only valued domestic

ically in China, but also has influence internationally, becoming a link and carrier for promoting national identity and cultural exchange between China and foreign countries. The protection and transmission of the art of the Duxianqin have also achieved positive results. For example, the Dongxing Jing ethnic group Museum and Dongxing Jing ethnic group Ecological Museum have been built, and the art of the Jing ethnic group Duxianqin has been included in the museum's exhibition and protection of transmission. In addition, through activities such as Duxianqin music concerts and competitions, we also promote the transmission and dissemination of the Jing ethnic Duxianqin music art.(Chen Kunpeng, 2013)

Dongxing Jing ethnic group Museum, also known as Jing ethnic group Ecological Museum, is located in Wanwei Jingdao Scenic Area, Jiangping Town, Dongxing City, Guangxi Zhuang Autonomous Region. The museum officially opened on July 29, 2009, covering an area of 3000 square meters, and belongs to the category of historical museums. As the first museum in China dedicated to showcasing the culture of the Jing ethnic group, Dongxing Jing ethnic group Museum is committed to collecting, protecting, researching, collecting, and displaying the material and intangible cultural heritage of the Jing ethnic group. The museum has a collection of 360 pieces (sets) of Jing ethnic folk customs, including 12 precious cultural relics. These collections comprehensively reflect the historical changes, production and life, customs and beliefs, language and writing, ethnic costumes, as well as music and dance of the Jing ethnic group.(As shown in the Figure: 29)



Figure 29. Dongxing ing ethnic group Museum

Source: Xiaoxiao Wang (2023)

The systematisation and popularisation of modern music education for the Duxianqin has provided a solid guarantee for the training of performers. Various music colleges and training institutions have trained a large number of outstanding Duxianqin players and educators by offering professional courses and training programmes in the Duxianqin. These institutions not only teach performance skills, but also focus on the cultivation of students' music theory and creative abilities, making the transmission and development of Duxianqin music more systematic and standardised. For example, colleges and universities such as the School of Music of Guangxi Normal University and Guangxi University for Nationalities offer professional courses on the Duxianqin, and invite well-known performers from home and abroad to give lectures and guidance, thus enhancing the students' skills and artistic cultivation. In the wave of globalisation and international development, the Duxianqin players have started to think about the path to take the national instrument Duxianqin to the international level. (Zhou Ru, 2021) (As shown in the Figure: 30)



Figure 30. Ethnic Instrumental Music Concert

Source: Xiaoxiao Wang (2023)

Modern-day Duxianqin players have begun to be active on the international stage, demonstrating the unique charm of the Jing ethnic group Duxianqin music by participating in international music festivals, academic conferences and cross-cultural exchanges. In the context of globalisation, there are more opportunities for Duxianqin to participate in international exchanges and co-operation, absorbing and integrating musical elements from different cultures to enrich the expressiveness and diversity of

Duxianqin music. Through international exchanges, the music of Duxianqin has gained wider dissemination and recognition around the world. For example, the modern Duxianqin players neng Wang and Chen Kunpeng have demonstrated the unique charm of the Jing ethnic group Duxianqin by playing the Duxianqin in international music festivals and cross-cultural exchange events. At the same time, co-operation with musicians from other different countries also enables the creation of musical works from different cultural backgrounds with an international perspective. Therefore, the multicultural environment of modern society provides rich instruments' materials and inspirations for the development of Duxianqin music. In their compositions and performances, the Duxianqin have drawn on and integrated different cultures and musical styles to form a unique musical style.(Zhao Minglong.,2019).

With the acceleration of cultural globalization, the unique national instrument of the Jing ethnic group,Duxianqin is gradually entering the international stage. Its influence mainly reflects international cultural exchanges. Jing ethnic group Duxianqin performers have been invited to participate in various international music festivals, such as the China ASEAN Cultural Exchange Activities and the China National Music Week in Paris, France, allowing world audiences to understand the charm of Jing ethnic group music. The Duxianqin has been performed on the same stage as ethnic instruments from Vietnam, Japan, Thailand, and other places, forming a unique cross-cultural musical expression and promoting the interaction of Southeast Asian ethnic music.(As shown in the Figure: 31)



Figure 31. ASEAN International Music Festival

Source: Xiaoxiao Wang (2023)

4.4 Summary

This chapter covers three periods ancient period(202 BC-1644) 、 modern period(1801-1960) 、 contemporary period(1961-2025) , Comprehensively explores the development of Duxianqin in Guangxi Jing ethnic group in four chapters, the History of the Instruments, the Music and performance, and Role and function. These chapters not only show the development trajectory of Duxianqin in different historical periods, but also analyse in depth its changes and innovations in social, cultural, technique and educational aspects.

1) Ancient period(202 BC-1800), In the ancient period, the Duxianqin was mainly used in religious ceremonies and folk festivals, and was an important part of social life. The art of Duxianqin of the Jing ethnic group in Guangxi has absorbed the music culture and elements of the Han and Zhuang ethnic groups in its development process. Through continuous exchange with other ethnic elements, the art of Duxianqin has been further developed.craftsmen do not have strict standards for the selection, processing, assembly, and tuning of musical instruments, and the quality and tone of each instrument are difficult to achieve the ideal state. Not only is the efficiency of the production process low, but it is also difficult to determine the accuracy and sound quality of the Duxianqin.ancient Duxianqin music, although slightly monotonous in form, fully demonstrates the musical wisdom and artistic creativity of the Jing ethnic group people. Guangxi Jing ethnic group Duxianqin players in the ancient period played an important role in society, culture and religion. They expressed their emotions and told stories through music, conveying national culture and historical memory.

2) Modern period (1801-1960),The period from the end of the 19th century to the middle of the 20th century was a time of great social change in China, and the Jing ethnic group in Guangxi with the continuous influx of foreign cultures and the advancement of modernisation, the Jing ethnic group society gradually transformed from a traditional agricultural and fishery economy to a diversified economy, and the traditional way of playing the Duxianqin and its cultural connotations changed accordingly, with differences in the Duxianqin's system, the music score, the form of playing, the performance occasions, and in many other aspects.

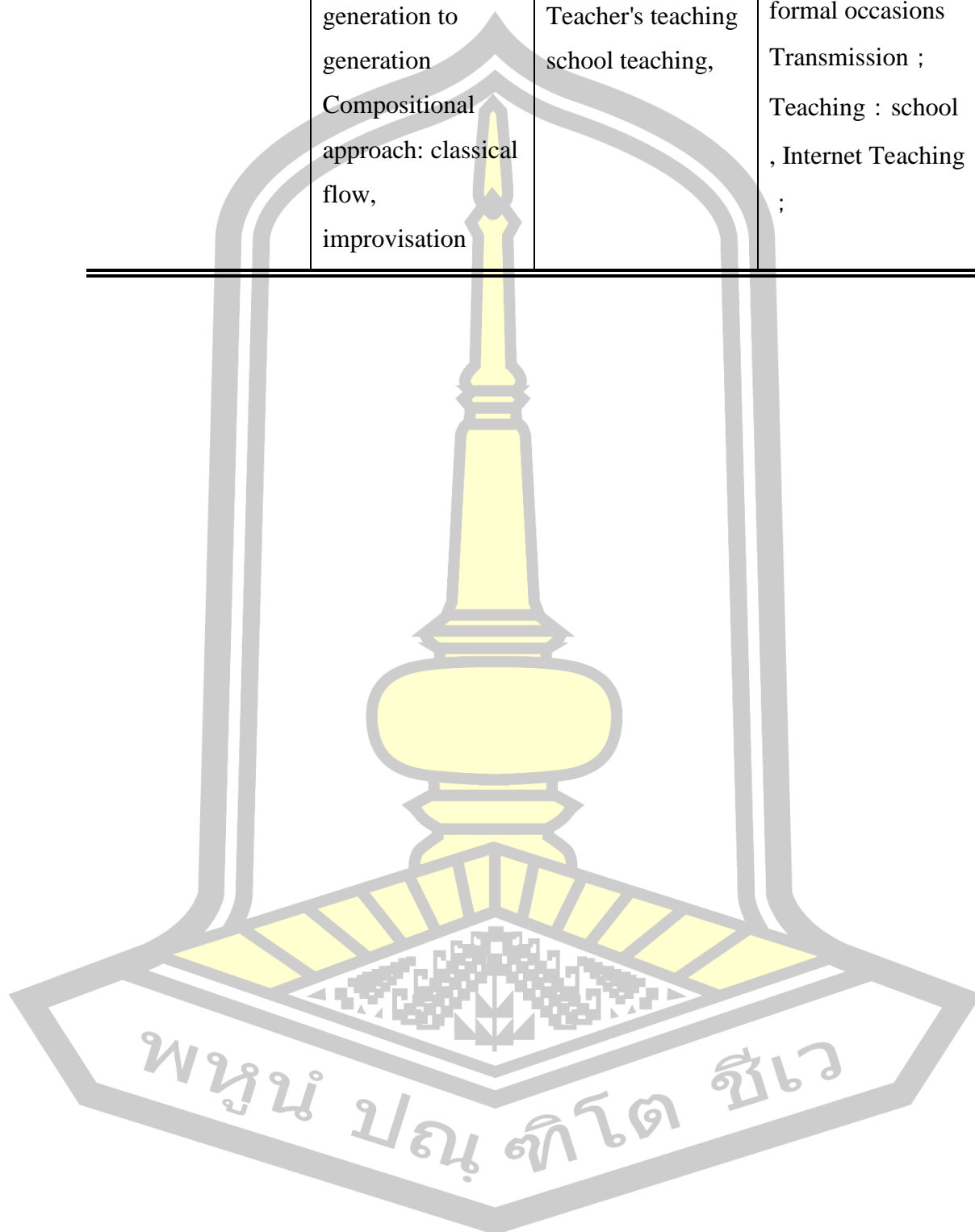
3) Contemporary period (1961-2025), Duxianqin has further expanded its international influence and diversity through international stage performances and cultural exchanges in the

context of globalisation and diversification. With the further modernisation of Chinese society and the acceleration of globalisation, the Duxianqin as a traditional musical instrument has faced new challenges and opportunities. These changes are mainly reflected in the improvement of instruments' materials, the optimisation of structure, the enrichment of playing techniques, and the dissemination of the instrument.

Table 3. The development of Duxianqin of Jing ethnic group in Guangxi, China

	Ancient period(202 BC-1800)	Modern period (19th - mid-20th centuries)	contemporary period (1961-2025)
History	religious ceremonies ; migration of peoples ;	holiday celebrations ; social change ; Integration of Han and Zhuang cultures	community activities ; modernisation and development ; intangible heritage
Instruments	bamboo wood and silk strings Processing: drying, insect proofing	High-quality hardwood, metal Processing: steaming, drying, preserving	ebony, carbon fibre, composites, synthetics Processing: High temperature drying, chemical treatment
Music and performance	Single style	Multiple styles, multiple skills, increasing difficulty in performance	Crossover styles, ensembles, concertos, electronic music, modern techniques
	Venue: Palace, Rituals, Folklore	Venue: City, Rituals, Folklore ; Concert Hall ;	Venue: Rituals, Folklore ;

Role and function	Teaching : from generation to generation Compositional approach: classical flow, improvisation	Teaching : Teacher's teaching school teaching,	International stage, formal occasions Transmission ; Teaching : school , Internet Teaching ;
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CHAPTER V

Music characteristic of Duxianqin of Jing ethnic group in Guangxi, China

This chapter selects the most representative and popular works of Duxianqin from the Jing ethnic group in Guangxi through music analysis. This article describes the unique musical characteristics of Guangxi Jing ethnic group Duxianqin from the aspects of melody, rhythm, and playing technique.

5.1 A song (Chuan Zhen Yin Xian)

5.1.1 The melody

5.1.2 The rhythm

5.1.3 The playing technique

5.2 A song (Guo Qiao Feng Chui)

5.2.1 The melody

5.2.2 The rhythm

5.2.3 The playing technique

5.3 A song (Shan Ge Hao Bi Chun Jiang Shui)

5.3.1 The melody

5.3.2 The rhythm

5.3.3 The playing technique

5.4 A song (Zhi Yin)

5.4.1 The melody

5.4.2 The rhythm

5.4.3 The playing technique

5.5 A song (Huan Le De Jing Jia Nv)

5.5.1 The melody

5.5.2 The rhythm

5.5.3 The playing technique

5.1 A song (Chuan Zhen Yin Xian)

The melody of "Chuan Zhen Yin Xian" with the ups and downs of the musical scale, is like a needle and thread slowly passing through the needle hole, weaving quickly like needles and threads on the fabric, conveying the rhythm and vitality of labor.

5.1.1 The melody

This piece of music is set in F tuning (as shown in the figure :32)



Figure 32. D tuning

Source: Xiaoxiao Wang (2024)

The Duxianqin instrument are defined the pitch as follows(as shown in the figure :33)

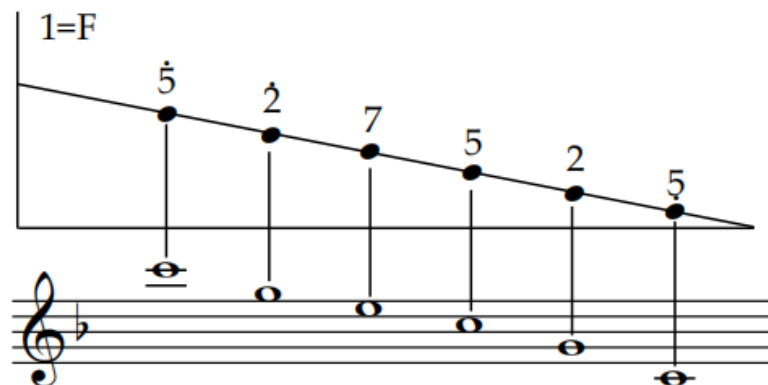


Figure 33. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

The Duxianqin adopts a pentatonic mode, The Chinese tradition national mode refers to the pentatonic mode composed of the five tones of Gong, Shang, Jue, Zhi and Yu. The interval relationship between the five tones of Gong, Shang, Jue, Zhi,

and Yu is roughly the same as that of F, G, A, C,D,On the numbered notation, it is similar to the interval relationship between 5 . 2 . 7 . 5 . 2 . 5 .

“Chuan Zhen Yin Xian” It is a musical form analysis with a three part variation structure (A A¹ A²) and (Coda) .(as shown in the figure :34)

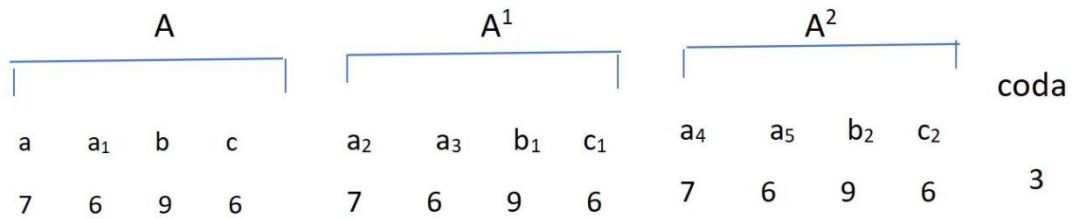


Figure 34. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

Table 4. “Chuan Zhen Yin Xian” musical structure

Three-stage variation(A A ¹ A ²)	Section	Bar	Feature
	A	1-28	Main melody section
	A ¹	28-56	First variation
	A ²	56-84	Second variation
	Coda	84-87	Ending

a. The Motivation of Melody(as shown in the figure :35)

Chuan Zhen Yin Xian

The musical score for 'Chuan Zhen Yin Xian' is presented in a single staff with a tempo marking of ♩=60. The score is divided into several systems, with specific melodic motifs and repetitions highlighted. The first system (bars 1-5) features a tempo marking of ♩=60 and a dynamic marking of *mp*. A blue box labeled 'Motif 1' is placed above the first measure, with a blue arrow pointing to the notes in the second measure. The second system (bars 6-10) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' and a blue arrow pointing to the notes in the seventh measure. The third system (bars 11-15) features a 'Motif 2' highlighted with a blue box labeled 'Motif 2' above the notes in the thirteenth measure. The fourth system (bars 16-22) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the nineteenth measure. The fifth system (bars 23-29) features a 'Motif 1' highlighted with a blue box labeled 'Motif 1' above the notes in the twenty-fifth measure. The sixth system (bars 30-36) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the thirty-third measure. The seventh system (bars 37-43) features a 'Motif 1' highlighted with a blue box labeled 'Motif 1' above the notes in the forty-first measure. The eighth system (bars 44-50) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the forty-seventh measure. The ninth system (bars 51-57) features a 'Motif 1' highlighted with a blue box labeled 'Motif 1' above the notes in the fifty-fifth measure. The tenth system (bars 58-64) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the sixty-second measure. The eleventh system (bars 65-71) features a 'Motif 1' highlighted with a blue box labeled 'Motif 1' above the notes in the sixty-ninth measure. The twelfth system (bars 72-78) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the seventy-sixth measure. The thirteenth system (bars 79-85) features a 'Motif 1' highlighted with a blue box labeled 'Motif 1' above the notes in the eighty-third measure. The fourteenth system (bars 86-92) shows a 'Repetition' of the motif, indicated by a blue box labeled 'Repetition' above the notes in the ninety-first measure. The score concludes with a dynamic marking of *pp* and a *rit.* marking.

Figure 35. Chuan Zhen Yin Xian (bars1-11)

Source: Xiaoxiao Wang(2024)



b. The melody line presents a unique sawtooth shape.(as shown in the figure :36)

▲
Chuan Zhen Yin Xian

Figure 36. Chuan Zhen Yin Xian (bars1-11)

Source: Xiaoxiao Wang(2024)

c. Pitch is mostly centered around a series of 2 or 4 degrees.(as shown in the figure :37)

Chuan Zhen Yin Xian

Figure 37. Chuan Zhen Yin Xian (bars11-22)

Source: Xiaoxiao Wang(2024)

d. Ornamentation: Enhance the decorative aspect of music and make the melody more vivid. (as shown in the figure :38)

Chuan Zhen Yin Xian



Figure 38. Chuan Zhen Yin Xian (bars 11-22)

Source: Xiaoxiao Wang(2024)

e. Gradual ending: The intensity (Coda) of the ending gradually weakens ($p \rightarrow pp$), and the melody slowly converges, making the whole song full of poetry. (as shown in the figure :39)

Chuan Zhen Yin Xian

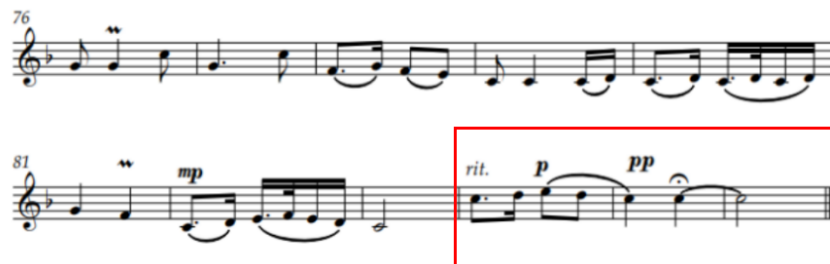


Figure 39. Chuan Zhen Yin Xian (bars 76-81)

Source: Xiaoxiao Wang(2024)

5.1.2 The rhythm

a. Rhythm changes: The instrument switches back and forth between 2/4 and 3/4 beats. (As shown in the Figure: 40)

Chuan Zhen Yin Xian

The musical score for Figure 40 is titled "Chuan Zhen Yin Xian". It features a tempo marking of ♩=60. The score consists of six measures. The first measure is in 2/4 time, the second in 3/4, the third in 2/4, the fourth in 3/4, the fifth in 2/4, and the sixth in 3/4. The notes are primarily eighth notes with various ornaments. A blue arrow points to the fourth measure with the text "Rhythm is constantly changing". A dynamic marking of *mp* is present in the fifth measure. Red boxes highlight the time signature changes in each measure.

Figure 40. Chuan Zhen Yin Xian (bars 1-6)

Source: Xiaoxiao Wang (2024)

Rhythm characteristics: eighth note, Syncopation and Dotted Rhythm, Ornamentation

b. eighth note: The melody is relatively stable, mainly composed of eighth notes (as shown in the figure: 41)

Such as:

The musical score for Figure 41 is titled "Chuan Zhen Yin Xian". It shows a single measure in 4/4 time, consisting of four eighth notes. The notes are G4, A4, B4, and C5. The tempo marking is ♩=60.

Chuan Zhen Yin Xian

The musical score for Figure 41 is titled "Chuan Zhen Yin Xian". It consists of two staves of music. The first staff has six measures, and the second staff has five measures. The tempo marking is ♩=60. The notes are primarily eighth notes with various ornaments. Red boxes highlight the eighth notes in each measure. A dynamic marking of *mp* is present in the fifth measure of the first staff.

Figure 41. Chuan Zhen Yin Xian (bars 1-11)

Source: Xiaoxiao Wang (2024)

c. Syncopation: Syncopation is used multiple times in the melody to break free from fixed beats and create a flexible rhythm. (as shown in the figure :42)

Such as:

Chuan Zhen Yin Xian

Figure 42. Chuan Zhen Yin Xian (bars1-11)

Source: Xiaoxiao Wang(2024)

d. Dotted Rhythm: The split rhythm imitates the flexible and rhythmic movements of the hands when threading needles. (as shown in the figure :43)

Such as:

Chuan Zhen Yin Xian

Figure 43. Chuan Zhen Yin Xian (bars1-11)

Source: Xiaoxiao Wang(2024)

5.1.3 The playing technique

"Chuan Zhen Yin Xian" Through the use of "Ya Gan" (压杆), "Pai Gan" 拍杆, "Chan" (颤), "La Gan" (拉杆).

a. "Ya Gan" (压杆) (As shown in the Figure: 44)

Chuan Zhen Yin Xian

$\text{♩} = 60$

The musical score consists of six staves of music in 3/4 time. The tempo is marked as quarter note = 60. The score includes various musical notations such as slurs, accents, and dynamic markings like *mp*. Red boxes are drawn around specific notes on the first, second, third, fourth, and sixth staves, highlighting the 'Ya Gan' technique.



Figure 44. Qingbing Wei plays the "Ya Gan" (压杆) playing Techniques

Source : Xiaoxiao Wang (2024)

b. "Pai Gan"拍杆 (As shown in the Figure: 45)

Chuan Zhen Yin Xian

♩=60

6

11

16

23

28

33

38

ศูนย์ ประถมศึกษา

Chuan Zhen Yin Xian

2

44

50

55

61 *mp*

66

71 *mp*

76

81 *mp* *rit.* *p* *pp*



Figure 45. Qingbing Wei plays the "Pai Gan" 拍杆 playing Techniques

Source : Xiaoxiao Wang (2024)

c. "Chan"(颤) (As shown in the Figure: 46)

Chuan Zhen Yin Xian

2
44

50

55

61 *mp*

66

71 *mp*

76

81 *mp* *rit.* *P* *PP*



Figure 46. Qingbing Wei plays the "Chan"(颤) playing Techniques

Source : Xiaoxiao Wang (2024)

d. "La Gan" (拉杆) (As shown in the Figure: 47)

Chuan Zhen Yin Xian

2

44

50

55

61

66

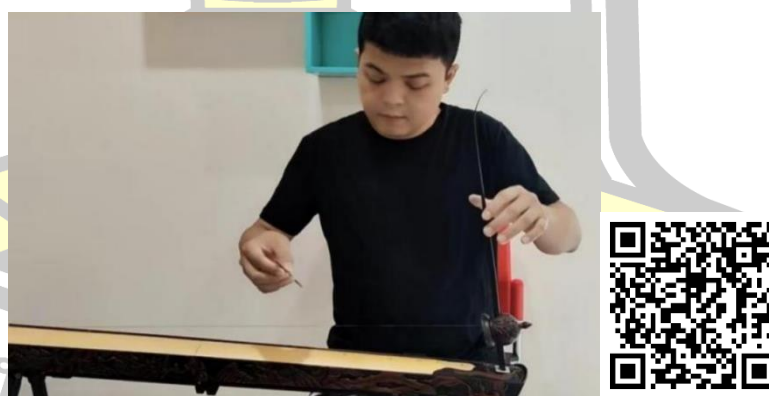


Figure 47. Qingbing Wei plays the "La Gan" (拉杆) playing Techniques

Source : Xiaoxiao Wang (2024)

5.2 A song (Guo Qiao Feng Chui)

As one of the classic pieces for the Duxianqin, "Guo Qiao Feng Chui" is of high value in terms of technique and artistic expression. Because of its fame, many Duxianqin players have innovated and adapted the original piece. The unique tone of Duxianqin creates an image of the wind blowing across the bridge, making the listener feel as if they were there, experiencing the breeze on the face and the gurgling of water under the bridge.

5.2.1 The melody

This piece of music is set in bB tuning (as shown in the figure :48)



Figure 48. D tuning

Source: Xiaoxiao Wang (2024)

The Duxianqin instrument are defined the pitch as follows(as shown in the figure :49)

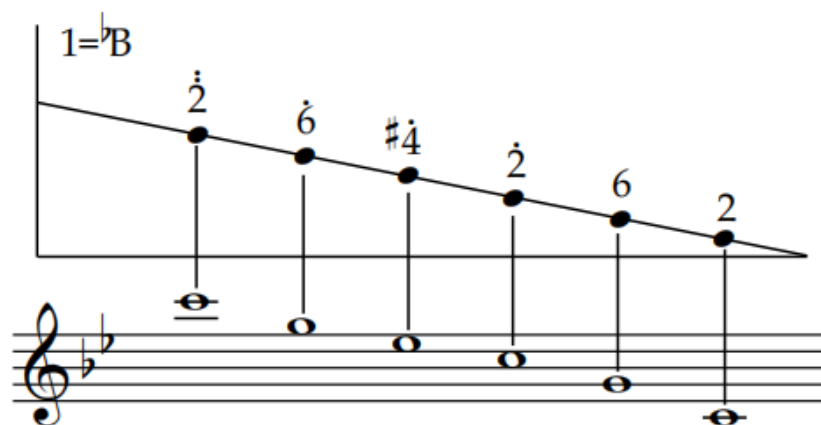


Figure 49. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

The key of this song is B^b Major, Includes two downgrades, B^b and E^b, this song uses Binary Form, A- A1.

Table 5. "Guo Qiao Feng Chui" musical structure

Binary Form, A- A ¹	Section	Bar	Feature
	A	1-8	Main melody sectionn
	A ¹	9-16	Variations with decorative notes

Section A (1-8 Bar)

a. The melody is mostly composed of pentatonic scales, and the theme melody is presented. The melody mostly revolves around the main chord (I) B^b. (As shown in the Figure: 50)

GUO QIAO FENG CHUI



Figure 50. Guo Qiao Feng Chui (bars 1-4)

Source: Xiaoxiao Wang (2024)

b. The intervals of the melody are mainly composed of stepwise motion, with frequent five degree jumps, making the melody full of singing quality.(As shown in the Figure: 51)

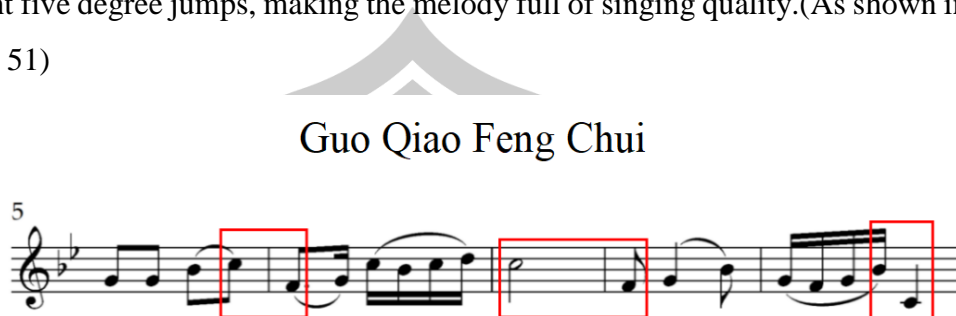


Figure 51. Guo Qiao Feng Chui (bars1-4)

Source: Xiaoxiao Wang (2024)

c. There is a 7-degree jump in the melody, which adds dynamism.(As shown in the Figure: 52)



Figure 52. Guo Qiao Feng Chui (bars1-4)

Source: Xiaoxiao Wang (2024)

d. Section A 'of Part 2 (9-16 bar), the melody unfolds further and the rhythm becomes more intense, especially with the rapid passing notes appearing in the 10th bar, making the music more lively.(As shown in the Figure: 53)

GUO QIAO FENG CHUI



Figure 53. Guo Qiao Feng Chui (bars1-4)

Source: Xiaoxiao Wang (2024)

5.2.2 The rhythm

a. The tempo of this piece is 2/4 beats, indicating that each bar has two beats, and each beat is a quarter note.(As shown in the Figure: 54)

GUO QIAO FENG CHUI



Figure 54. Guo Qiao Feng Chui (bars1-4)

Source: Xiaoxiao Wang (2024)

b. A stable rhythm dominated by eighth notes, In the main melody sectionn (such as 1-5 bar), a large number of eighth notes are used to form a smooth melody.(As shown in the Figure: 55)

Such as:



GUO QIAO FENG CHUI

Figure 55. Guo Qiao Feng Chui (bars 1-4)

Source: Xiaoxiao Wang (2024)

c. Syncopation, there is a split rhythm that emphasizes weak beats, making the music more lively.(As shown in the Figure: 56)

Such as:



GUO QIAO FENG CHUI

Figure 56. Guo Qiao Feng Chui (bars 1-4)

Source: Xiaoxiao Wang (2024)

d. The rapid passage of sixteenth notes enhances the rhythm of the melody.(As shown in the Figure: 57)

Such as:

GUO QIAO FENG CHUI

The musical score for Figure 57 is in 2/4 time and B-flat major. It consists of four staves of music. The first staff shows a sequence of sixteenth notes. The second staff has a red box around a sixteenth-note pair. The third staff has two red boxes around sixteenth-note pairs. The fourth staff has a red box around a sixteenth-note pair. A QR code is located to the right of the score.

Figure 57. Guo Qiao Feng Chui (bars5-13)

Source: Xiaoxiao Wang (2024)

e. Dotted Rhythm, The extended duration of Dotted Rhythm makes the rhythm more elastic.(As shown in the Figure: 58)

Such as:

GUO QIAO FENG CHUI

The musical score for Figure 58 is in 2/4 time and B-flat major. It consists of three staves of music. The first staff shows a dotted quarter note. The second staff has a red box around a dotted quarter note. The third staff has a red box around a dotted quarter note. A QR code is located to the right of the score.

Figure 58. Guo Qiao Feng Chui (bars5-13)

Source: Xiaoxiao Wang (2024)

5.2.3 The playing technique

The performance of "Guo Qiao Feng Chui" requires not only a solid musical background, but also a high level of technique and a keen sense of touch. Through the use of "Chan" (颤) "Chan Yao" (颤摇), "Pai Gan"拍杆, "La Gan" (拉杆).

a. "Chan" (颤) (As shown in the Figure: 59)

GUO QIAO FENG CHUI



Figure 59. Guo Qiao Feng Chui (bars 1-9)

Source: Xiaoxiao Wang (2024)

b. "Chan Yao" (颤摇) (As shown in the Figure: 60)



Figure 60. Guo Qiao Feng Chui (bars 5-13)

Source: Xiaoxiao Wang (2024)

c. "Pai Gan"拍杆 (As shown in the Figure: 61)

GUO QIAO FENG CHUI

Musical score for "Pai Gan" (拍杆) in G major, 2/4 time. The score consists of four staves. Red boxes highlight specific notes: bar 1 (G4), bar 2 (A4), bar 3 (B4), bar 4 (C5), bar 5 (B4), bar 6 (A4), bar 7 (G4), bar 8 (F4), bar 9 (E4), bar 10 (D4), bar 11 (C4), bar 12 (B3), bar 13 (A3), bar 14 (G3), bar 15 (F3), bar 16 (E3), bar 17 (D3), bar 18 (C3), bar 19 (B2).



Figure 61. Guo Qiao Feng Chui (bars1-19)

Source: Xiaoxiao Wang (2024)

d. "La Gan" (拉杆) (As shown in the Figure: 62)

GUO QIAO FENG CHUI

Musical score for "La Gan" (拉杆) in G major, 2/4 time. The score consists of four staves. Red boxes highlight specific notes: bar 1 (G4), bar 2 (A4), bar 3 (B4), bar 4 (C5), bar 5 (B4), bar 6 (A4), bar 7 (G4), bar 8 (F4), bar 9 (E4), bar 10 (D4), bar 11 (C4), bar 12 (B3), bar 13 (A3), bar 14 (G3), bar 15 (F3), bar 16 (E3), bar 17 (D3), bar 18 (C3), bar 19 (B2).



Figure 62. Guo Qiao Feng Chui (bars1-19)

Source: Xiaoxiao Wang (2024)

5.3 A song (Shan Ge Hao Bi Chun Jiang Shui)

As a popular folk song of the Zhuang people in Guangxi, “Shan Ge Hao Bi Chun Jiang Shui” with its melodious and emotional melody, not only shows the unique musical aesthetics of the Zhuang people, but also profoundly expresses their love of life and their yearning for beautiful love. The song became a household name due to the wide spread of the film "Liu Sanjie", and its beautiful melody and heartfelt lyrics have become a treasure in the treasury of Chinese folk songs, which has gradually been integrated into the repertoire of Duxianqin, becoming a major highlight of the art of Duxianqin.

5.3.1 The melody

This piece of music is set in C tuning (as shown in the figure :63)



Figure 63. C tuning

Source: Xiaoxiao Wang (2024)

The Duxianqin instrument are position the pitch as follows(as shown in the figure :64)

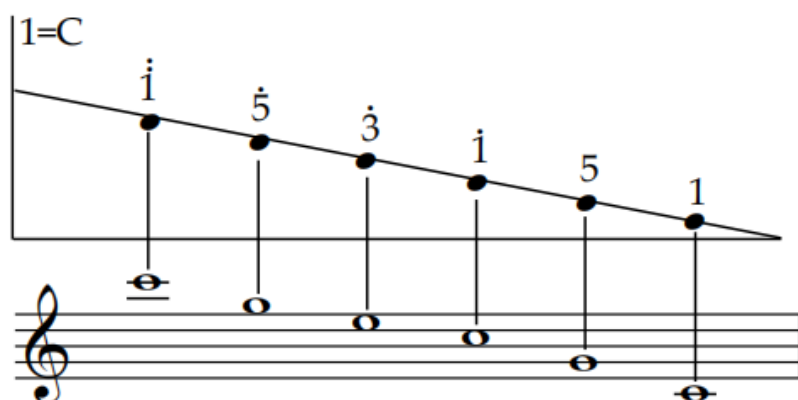


Figure 64. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

Table 6. "Shan Ge Hao Bi Chun Jiang Shui" musical structure

Ternary Form, ABA ¹	Section	Bar	Feature
	A	1-21	Main melody section
	B	22-44	Add decorative changes
	A ¹	45-73	Theme melody with variations

a. This song uses alternating 2/4 beats and 3/4 beats(As shown in the Figure: 65)

Shan Ge Hao Bi Chun Jiang Shui

The musical score for "Shan Ge Hao Bi Chun Jiang Shui" is presented on four staves. The time signature alternates between 2/4 and 3/4. Red boxes highlight these changes: 2/4 at the beginning, 3/4 at bar 8, 2/4 at bar 11, 3/4 at bar 14, 2/4 at bar 17, 3/4 at bar 20, 2/4 at bar 23, and 3/4 at bar 26. Roman numerals IV, IV, and II are placed above the first three staves.

Figure 65. Shan Ge Hao Bi Chun Jiang Shui (bars1-28)

Source: Xiaoxiao Wang (2024)

b. Quoting the melody of a song: “Shi Shang Na You Teng Chan Shu” (As shown in the Figure: 66)

“Shan Ge Hao Bi Chun Jiang Shui”

SHI SHANG NA YOU TENG CHAN SHU

1. Sun Zhong Zhi (a) Jian Teng Chan Shu a
2. (Zhu Zi) Dang (a) Shou Ni Bu Shou a

Figure 66. Shan Ge Hao Bi Chun Jiang Shui (bars43-55)

Source: Xiaoxiao Wang (2024)

c. Rich Grace Note: Enhance the decorative quality of the melody, making the music more lyrical. (As shown in the Figure: 67)

Shan Ge Hao Bi Chun Jiang Shui

SHI SHANG NA YOU TENG CHAN SHU

1. Sun Zhong Zhi (a) Jian Teng Chan Shu a
2. (Zhu Zi) Dang (a) Shou Ni Bu Shou a

Figure 67. Shan Ge Hao Bi Chun Jiang Shui (bars43-55)

Source: Xiaoxiao Wang (2024)

5.3.2 The rhythm

The music uses a variety of rhythms, such as eighth notes, acciaccatura, sixteenth note, appoggiatura, forty-six, eight before and sixteen after a variety of rhythms, makes the song in the auditory more colourful.

a. There are many eighth notes: forming a smooth and stable rhythmic foundation. (As shown in the Figure: 68)



Shan Ge Hao Bi Chun Jiang Shui



Figure 68. Shan Ge Hao Bi Chun Jiang Shui (bars10-17)

Source: Xiaoxiao Wang (2024)

b. Acciaccatura: the whole piece of music has many leaning notes, which are decorative notes in a Duxianqin, usually played quickly before the main note. It adds decoration and liveliness to the music. (As shown in the Figure: 69)

“Shan Ge Hao Bi Chun Jiang Shui”



Figure 69. Shan Ge Hao Bi Chun Jiang Shui (bars10-25)

Source: Xiaoxiao Wang (2024)

c. sixteenth note: The addition of sixteenth notes enhances the rhythm and jumps of the melody, making the music more vivid. (As shown in the Figure: 70)



Shan Ge Hao Bi Chun Jiang Shui

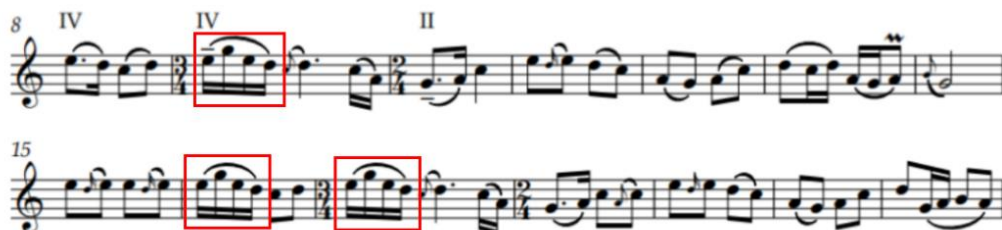


Figure 70. Shan Ge Hao Bi Chun Jiang Shui (bars 10-25)

Source: Xiaoxiao Wang (2024)

d. Dotted Rhythm: The rhythm presents a long short and long short rhythm, making the melody more dynamic. (As shown in the Figure: 71)



Shan Ge Hao Bi Chun Jiang Shui



Figure 71. Shan Ge Hao Bi Chun Jiang Shui (bars 10-25)

Source: Xiaoxiao Wang (2024)

5.3.3 The playing technique

The performance of "Guo Qiao Feng Chui" requires not only a solid musical background, but also a high level of technique and a keen sense of touch. Through the use of “Pengan” (碰杆) “La Gan” (拉杆) “Chan” (颤), "La Yao"拉摇.

a. “Pengan” (碰杆) : (As shown in the Figure: 72)

“Shan Ge Hao Bi Chun Jiang Shui”

The musical score for Figure 72 consists of two staves of music. The first staff starts at bar 10 and ends at bar 17. The second staff starts at bar 18 and ends at bar 25. Red boxes are drawn around specific notes in both staves to indicate the 'Pengan' technique.

Figure 72. Shan Ge Hao Bi Chun Jiang Shui (bars10-25)

Source: Xiaoxiao Wang (2024)

b. "La Gan" (拉杆) : (As shown in the Figure: 73)

Shan Ge Hao Bi Chun Jiang Shui

The musical score for Figure 73 consists of three staves of music. The first staff starts at bar 29 and ends at bar 36. The second staff starts at bar 37 and ends at bar 44. The third staff starts at bar 45 and ends at bar 52. Red boxes are drawn around specific notes in all three staves to indicate the 'La Gan' technique.

Figure 73. Shan Ge Hao Bi Chun Jiang Shui (bars29-31)

Source: Xiaoxiao Wang (2024)

c. “Chan” (颤) : (As shown in the Figure:74)

“Shan Ge Hao Bi Chun Jiang Shui”



Figure 74. Shan Ge Hao Bi Chun Jiang Shui (bars1-17)

Source: Xiaoxiao Wang (2024)

d." La Yao"拉摇: (As shown in the Figure: 75)



Figure 75. Shan Ge Hao Bi Chun Jiang Shui (bars1-17)

Source: Xiaoxiao Wang (2024)

5.4 A song (Zhi Yin)

"Zhi Yin" is adapted from the theme song of the movie, and its background is closely related to the plot of the movie "Zhi Yin". The musical style of the Duxianqin is in line with the emotion and artistic conception conveyed in the movie. Through the unique timbre and playing skills of the Duxianqin, it expresses the longing for the hard to find Zhi Yin and the cherishing of deep friendship. The adaptation of the Duxianqin piano music "Zhi Yins" not only embodies the artistic charm of the Duxianqin, but also a musical interpretation and extension of the emotional theme of the movie "Zhi Yin". Through the playing of the Duxianqin, the emotion in the film can be reproduced and sublimated in the music, so that the listeners can feel in the music that crosses the time and space deep affection and the infinite yearning for the Zhi Yin.

5.4.1 The melody

This piece of music is set in bE tuning (as shown in the figure :76)

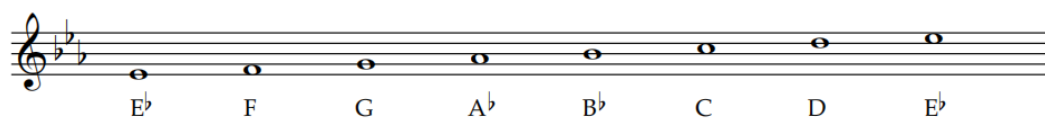


Figure 76. E tuning

Source: Xiaoxiao Wang (2024)

The Duxianqin instrument are defined the pitch as follows(as shown in the figure :77)

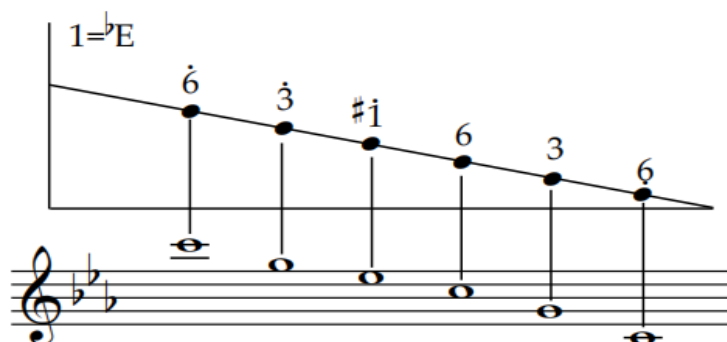


Figure 77. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

Table 7. "Zhi Yin" musical structure

Ternary Form, A B	Section	Bar	Feature
	A	1-9	Main melody sectionn
	B	10-26	Expand

a. This song uses a E^b-down key, and two B-down keys (E^b A^b and B^b) can be seen from the score, this piece of music uses 4/4 beats (four beats per bar, each beat is a quarter note), speed marked as ♩ =86.(as shown in the figure: 78)

Zhi Yin



Figure 78. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

b. Melody Motivation in Section A.(as shown in the figure: 79)



Figure 79. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

c. B-segment melody motivation.(as shown in the figure: 80)



Figure 80. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

d. There are duplicate marks ,appearing repeatedly from section 25 onwards.(as shown in the figure: 81)

Zhi Yin



Figure 81. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

e. The melody mostly consists of three degree jumps, with pitch intervals of three levels.(as shown in the figure: 82)

Zhi Yin



Figure 82. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

f. Rich decorative sounds enhance melodic expression:(Grace Notes, Trill, Fan "泛".(as shown in the figure: 83)

Zhi Yin

Figure 83. Zhi Yin (bars1-11)
Source: Xiaoxiao Wang (2024)

5.4.2 The rhythm

a. There are many eighth notes in the music, and the rhythm is smooth.(as shown in the figure: 84)



Figure 84. Zhi Yin (bars1-8)

Source: Xiaoxiao Wang (2024)

b. Each sentence ends with a full note rhythm, making the music more melodious. (as shown in the figure:85)

Zhi Yin



Figure 85. Zhi Yin (bars5-16)

Source: Xiaoxiao Wang (2024)

c. A small amount of Small dotted rhythm add a touch of rhythm to a gentle rhythm.(As shown in the Figure: 86)



Figure 86. Zhi Yin (bars1-16)
Source: Xiaoxiao Wang (2024)

5.4.3 The playing technique

The performance of "Guo Qiao Feng Chui" requires not only a solid musical background, but also a high level of technique and a keen sense of touch. Through the use of "Fan" (泛) "Penggan" (碰杆) "Chan" (颤) "La Gan" (拉杆) "La Yao" 拉摇.

a. "Fan" (泛) : (As shown in the Figure: 87)

Zhi Yin



Figure 87. Zhi Yin (bars1-8)
Source: Xiaoxiao Wang (2024)

b. "Chan" (颤) : (As shown in the Figure: 88)

Zhi Yin

Figure 88. Zhi Yin (bars1-8)

Source: Xiaoxiao Wang (2024)

c. "La Gan" (拉杆) : (As shown in the Figure: 90)

Zhi Yin

Figure 89. Zhi Yin (bars1-8)

Source: Xiaoxiao Wang (2024)

d. "La Yao"拉摇: (As shown in the Figure: 91)



Figure 90. Zhi Yin (bars1-8)

Source: Xiaoxiao Wang (2024)

5.5 A song (Huan Le De Jing Jia Nv)

The Happy Jing ethnic group Girl is a classic song of the Jing ethnic group Duxianqin zither. It shows the life interest and cultural characteristics of the people of the Jing ethnic group through the unique playing way of the Duxianqin zither. With its soft and beautiful timbre, clear treble, bright midrange and full bass, this piece of music expresses the joy and vitality of Jing ethnic group women in their daily life, as well as their yearning for and pursuit of a better life.

5.5.1 The melody

This piece of music is set in F tuning (as shown in the figure :92)



Figure 91. F tuning

Source: Xiaoxiao Wang (2024)

The Duxianqin instrument are defined the pitch as follows(as shown in the figure :93)

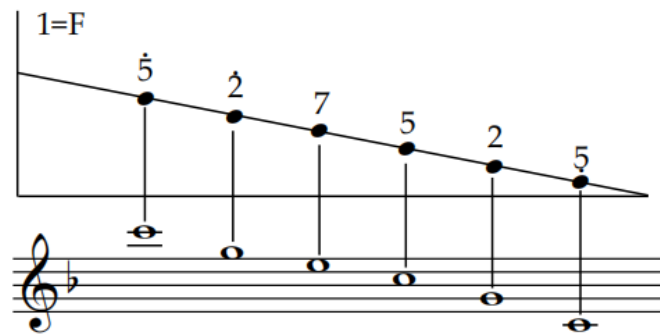


Figure 92. The pitch of Duxianqin position

Source: Xiaoxiao Wang (2024)

Table 8. " Huan Le De Jing Jia Nv" musical structure

Rondo Form	Section	Bar	Feature
Huanledejingjianv	introduction	1-4	freedom
	A	5-16	Main melody section
	B	17-25	Melody fragments of Part A
	A ¹	26-33	Repetitive changes
	Interlude	34-37	freedom
	C	38-49	freedom
	A	50-57	Reproduce the main melody
	Interlude	58-63	rhythm
	Coda	64-79	Fien

a. This piece is in F major (1=F),the melody range is concentrated within 20 degrees, from the lowest note group g to the highest note group f3. (as shown in the figure:94)

Huan Le De Jing Jia Nv



Figure 93. Huan Le De Jing Jia Nv (bars1-17)

Source: Xiaoxiao Wang (2024)

b. The combination of progression and jumping, with many sudden jumps in the melody. (as shown in the figure:95)

Huan Le De Jing Jia Nv



Figure 94. Huan Le De Jing Jia Nv (bars18-42)

Source: Xiaoxiao Wang (2024)

c. This song has a clear sense of hierarchy in terms of intensity, combining different degrees of intensity such as Forte (f) , Piano (p) , Crescendo (cres.) ,

Decrescendo (decresc.) to enhance the expressiveness of the music.(as shown in the figure:96)

Table 9. " Huan Le De Jing Jia Nv" musical Strong weak chart

Italian terminology	English terminology
Forte (f)	Loud
Piano (p)	Soft
Pianissimo (pp)	Very soft
Crescendo (cres.)	Gradually louder
Decrescendo (decresc.)	Gradually softer

Huan Le De Jing Jia Nv

The musical score consists of six staves of music in treble clef, 3/4 time signature. The key signature has one flat (B-flat). The score includes the following dynamic markings highlighted in red boxes:

- Staff 1 (bar 31): *f* (Forte)
- Staff 2 (bar 36): *p* (Piano)
- Staff 3 (bar 43): *p* (Piano) and *pp* (Pianissimo)
- Staff 6 (bar 72): *f* (Forte)

Figure 95. Huan Le De Jing Jia Nv (bars31-80)

Source: Xiaoxiao Wang (2024)



d. The progression and jump of melody (as shown in the figure:97)

Huan Le De Jing Jia Nv



Figure 96. Huan Le De Jing Jia Nv (bars19-37)

Source: Xiaoxiao Wang (2024)

e. At the junction of the seventy-seven and seventy-eight bars, the maximum jump reaches nine degrees, Let the music stay on the C of the F key and perform a Decrescendo performance, leaving a lasting impression. (as shown in the figure:98)

Huan Le De Jing Jia Nv



Figure 97. Huan Le De Jing Jia Nv (bars38-47)

Source: Xiaoxiao Wang (2024)

5.5.2 The rhythm

a. The musical beat of the whole song starts with free scatter beats, and then alternates between 2/4, 3/4 and 4/4 beats. (as shown in the figure:99)

Huan Le De Jing Jia Nv

Musical score for Huan Le De Jing Jia Nv (bars 1-39). The score is in 2/4 time and features a melody with various ornaments and dynamics. Red boxes highlight specific notes: bar 1 (first note), bar 2 (second measure), bar 31 (fourth measure), and bar 36 (first measure). A QR code is located to the right of the score.

Figure 98. Huan Le De Jing Jia Nv (bars1-39)

Source: Xiaoxiao Wang (2024)

b. The use of numerous stress marks in the music enhances its sense of rhythm and expressiveness. (As shown in Figure: 100)

Such as: >>

Musical score for Huan Le De Jing Jia Nv (bars 6-19). The score is in 2/4 time and features a melody with various ornaments and dynamics. Red boxes highlight specific notes: bar 6 (first measure), bar 7 (second measure), bar 15 (fourth measure), and bar 16 (second measure). A QR code is located to the right of the score.

Figure 99. Huan Le De Jing Jia Nv (bars6-19)

Source: Xiaoxiao Wang (2024)

c. The melody uses a lot of syncopation to enhance the sense of jumping in the music.(As shown in the Figure: 101)

Such as:

Figure 100. Huan Le De Jing Jia Nv (bars6-19)

Source: Xiaoxiao Wang (2024)

5.5.3 The playing technique

The performance of "Huan Le De Jing Jia Nv" requires not only a solid musical background, but also a high level of technique and a keen sense of touch. Through the use of "Chan" (颤) "Penggan" (碰杆) "Ya Gan" (压杆) , "La Gan"(拉杆) .

a. "Chan" (颤音): (As shown in the Figure: 102)

Huan Le De Jing Jia Nv

Figure 101. Huan Le De Jing Jia Nv (bars6-19)

Source: Xiaoxiao Wang (2024)

b. Penggan (碰杆) : (As shown in the Figure: 103)

Huan Le De Jing Jia Nv

31

36

39



Figure 102. Huan Le De Jing Jia Nv (bars31-42)

Source: Xiaoxiao Wang (2024)

c. "Ya Gan" (压杆) : (As shown in the Figure: 104)

Huan Le De Jing Jia Nv

48

56

31



Figure 103. Huan Le De Jing Jia Nv (bars48-68)

Source: Xiaoxiao Wang (2024)

d. "La Gan"(拉杆) (As shown in the Figure: 105)

Huan Le De Jing Jia Nv



Figure 104. Huan Le De Jing Jia Nv (bars1-4)

Source: Xiaoxiao Wang (2024)

5.6 Summary

Through in-depth analysis of the five classic works of the Guangxi Jing ethnic group Duxianqin, (Chuan Zhen Yin Xian) (Guo Qiao Feng Chui) (Shan Ge Hao Bi Chun Jiang Shui) (Zhi Yin) and (Huan Le De Jing Jia Nv), we not only appreciate the unique charm of this ancient instrument, but also deeply appreciate the rich connotation and profound heritage of the Jing ethnic music culture.

Table 10. Comparison of Melody, Rhythm, Form Structure, and playing technique of Three Music Pieces

	(Chuan Zhen Yin Xian)	(Guo Qiao Feng Chui)	(Shan Ge Hao Bi Chun Jiang Shui)	(Zhi Yin)	(Huan Le De Jing Jia Nv)
Melody	The legal lines take on a distinctive	Five degree and seven degree jumps	Joyful melody	Expressing emotions slowly	The melody is light

	jagged shape, like a needle and thread through fabric.				and lively, with rich emotions
rhythm	The beat is 3/4,2/4 alternating beat. Teighth note, Syncopation and Dotted Rhythm, Ornamentation	The beat is 2/4 and the rhythm is eighth notes, Syncopation, sixteenth notes, Dotted Rhythm	The beat is 3/4,2/4 alternating beats. Rich Grace Note, eighth notes, Acciatura, Dotted Rhythm	The beat is 2/4 using eighth note, Small dotted rhythm, full note rhythms	eighth notes, full note rhythm, Small dotted
Playing technique	"Ya Gan" (压杆), "Pai Gan" (拍杆), "Chan" (颤), "La Gan" (拉杆)	"Chan" (颤) "Chan Yao" (颤摇), "Pai Gan" (拍杆), "La Gan" (拉杆)	"Penggan" (碰杆) "La Gan" (拉杆) "Chan" (颤), "La Yao" (拉摇)	"Ya Gan" (压杆), "Penggan" (碰杆) "Chan" (颤)	"Fan" (泛) "Penggan" (碰杆) "Chan" (颤) "La Gan" (拉杆) "La Yao" (拉摇)

CHAPTER VI

The guideline of transmission of Duxianqin of Jing ethnic group in Guangxi, China

This chapter mainly discusses the preservation process and transmission process of Duxianqin of the Jing ethnic group in Guangxi, China, and obtains relevant measures in the discussion.

6.1 The preservation process of Duxianqin of Jing ethnic group in Guangxi, China.

6.2 The transmission process of Duxianqin of Jing ethnic group in Guangxi, China.

6.3 The guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China.

6.4 Summary

6.1 The preservation process of Duxianqin of Jing ethnic group in Guangxi, China

The Jing ethnic group Duxianqin is a treasure of our national culture, carrying the history, emotions, and wisdom of the Jing ethnic group. As the inheritor of the Jing ethnic group, I deeply understand the importance of protecting and inheriting the Duxianqin. It is not only a representative of our traditional music, but also a symbol of our cultural identity. With the changing times, many traditional arts are facing the risk of disappearing. Therefore, we must pass on this unique musical heritage to the younger generation through continuous learning, performance, and promotion. I hope that through my efforts, more people can understand the Jing ethnic group Duxianqin and feel its profound and unique musical charm. Only in this way can our culture maintain vitality and continue to flourish in the wave of globalization. (Xia Zhao, interview 2024) (As shown in the Figure: 106)



Figure 105. Interview with inheritors of the Jing ethnic group

Source: Xiaoxiao Wang (2024)

The protection of the Jing ethnic group Duxianqin faces many challenges. Firstly, playing this instrument requires strict learning and teaching, and modern society has a fast pace, and many people have begun to ignore traditional art. Secondly, the number of performers of the Jing ethnic group Duxianqin is becoming increasingly scarce, and the inheritors are relatively limited. To protect this tradition, we need more investment and support. From the government to all sectors of society, we should increase attention to this traditional culture. (Neng Wang, interview 2023)

The Dongxing Jing ethnic group is a minority ethnic group distributed in Jiangping Town, Dongxing City, Guangxi Province. It is the only oceanic ethnic group in China, with a long history and culture, as well as a unique language and script called "N ô". At the same time, it also has unique characteristics in literature, art, lifestyle customs, and religious beliefs. Against the backdrop of the country's continuous efforts to protect and inherit traditional culture, strengthening the protection and transmission of the traditional culture of the Dongxing Jing ethnic group has become an urgent task at present. (Wei Qian, 2024)

In order to meet the development needs of the market, the development of Guangxi Jing ethnic group Duxianqin sometimes becomes overly commercialized. What is needed to preserve the artistic value of the Jing ethnic group Duxianqin is its unique regional culture and style. From the development process of the Jing ethnic group Duxianqin, we should adhere to the traditional form as the center and then integrate it into modern music. Therefore, in the protection work, we should call for the

help of the local government to establish and improve the materials for playing the Duxianqin, so as to make the protection system of Guangxi Jing ethnic group Duxianqin three-dimensional, comprehensive, and ecological. Only by effectively protecting the original flavor of the Jing ethnic group Duxianqin can the eternal vitality of the Jing ethnic group Duxianqin be maintained. (Su Haizhen, 2023)

The protection of the Guangxi Jing ethnic group Duxianqin is essentially the protection of artistic diversity. From the perspective of art dissemination and evolution, protecting artistic diversity is crucial. The Guangxi Jing ethnic group Duxianqin, as the most important part of Jing culture, is currently in a dilemma. Its protection and development will also help promote and maintain artistic diversity. (Yin Ming, 2012)

As music educators in the new era, we should not only focus on teaching theoretical knowledge and professional music skills, but also pay attention to the transmission of traditional music culture. According to the survey, many universities currently lack the dissemination of traditional music in their music education and place more emphasis on teaching modern music. This will obviously mean the loss of traditional music of the Jing ethnic group. Therefore, we must pay attention to the dissemination of traditional music and promote the essence of China. (Wang Neng, 2006)

The Duxianqin has been listed in the Guangxi Intangible Cultural Heritage Protection List, which provides legal and policy support for the protection of its cultural heritage. Relevant government departments and cultural institutions are also actively promoting the protection of this heritage. Various cultural activities, such as special performances of the Duxianqin, art festivals, and performances by inheritors, can effectively convey this traditional culture to a wider audience, especially the younger generation, and stimulate their interest and participation. (Yin Ming, 2012)

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Table 11. The literature mentions transmission guidelines for preservation and transmission.

Opinion of transmission	Wei Qian	Su Haizhen	Zhao Xia	Wang Neng	Yin Ming
Protecting traditional music	√	√		√	
Maintain the diversity of art.		√		√	√
Improve social influence	√				
School support		√	√	√	
Government Support				√	
Market promotion			√		
Support by new media			√		

6.2 The transmission process of Duxianqin of Jing ethnic group in Guangxi, China.

6.2.1 Family transmission

The spread of Duxianqin has changed with the development of the times and has different forms of dissemination. The art of Duxianqin is mainly passed down through family transmission, and it was originally mainly passed down orally between fathers and sons. Family transmission is one of the important ways to spread Duxianqin

culture. In many families of the Jing ethnic group, the playing skills and related cultural knowledge of Duxianqin are often passed down from generation to generation through oral transmission. This way of transmission not only includes the production and tuning skills of the instrument, but also covers various traditional repertoires played by Duxianqin, as well as related folk stories, legends and customs. (As shown in the Figure: 107)



Figure 106. Family transmission

Source: <https://chinafolio.com/provinces/>, (2023)

1) Advantages:

The transmission method within the family can better preserve the original flavor of Duxianqin art and avoid the influence of foreign culture. The father-son transmission method makes the teaching process more personalized, and the father can provide targeted guidance based on his son's interests and talents. Through the transmission of art, the relationship between family members becomes closer, enhancing the family's cohesion and cultural identity. (Li Keliang, Su Haizhen, 2023)

In the villages of the Jing ethnic group, the art of playing Duxianqin is usually passed down within the family. As the master of Duxianqin art, the father teaches his skills to his son. This way of transmission ensures the confidentiality and purity of the skills. The method of teaching within the family allows Duxianqin skills to be protected in a relatively closed environment, preventing external influences from changing the traditional skills.

The transmission includes not only the playing techniques of Duxianqin, but also the making and maintenance of the instrument, the playing of traditional music, the posture and etiquette during playing, etc. The teaching method is mainly oral

transmission, where the father demonstrates the performance and gradually guides his son to imitate and practice. This face-to-face teaching method helps to ensure the accuracy and completeness of the teaching.

The transmission of Duxianqin is often carried out in the daily life of the family, without fixed time and occasion. The father will teach his son in his spare time or during family gatherings. Especially during important festivals such as the Ha Festival, the father will lead his son to participate in the performance through actual performance demonstration, so that he can learn and feel the essence of Duxianqin art in practice.

The families of the Jing ethnic group ethnic group will hold various music and dance activities with Duxianqin as the center. These activities are not only celebrations within the family, but also important opportunities to show and pass on Duxianqin culture to other members of the village tribe. In this way, the younger generation naturally absorbs the cultural connotation of Duxianqin while participating in and watching these activities, and continues this transmission when they grow up.

2) shortcoming:

As the family transmission method is too single, it is passed down and developed from father to son. Chinese folk artists are generally conservative and stubborn, making it difficult for them to communicate with each other. As a result, the development of this art form is relatively loose. Up to now, all Duxianqin art has not been summarized and edited, and it is difficult to form a unified musical score. It is difficult for ordinary people to get a glimpse of its true appearance, and thus it is difficult to learn and inherit it.

The transmission is mainly carried out within the family, so the transmission is relatively narrow, which makes it difficult to promote and popularize the art of Duxianqin on a large scale. The traditional way of passing on the art from father to son is relatively conservative, and there is a lack of communication and cooperation between artists, which is not conducive to the innovation and development of the art. If a family has no descendants willing to inherit Duxianqin art, or there is a gap in the transmission of the art, it will gradually face the dilemma of being lost.

3) Solution:

Conduct systematic research and compilation of the art of Duxianqin, form unified teaching materials and music scores, and disseminate them through publications, video tutorials, etc. Organize cultural activities and workshops, invite Duxianqin artists to perform and teach publicly, and expand the influence of transmission. Encourage exchanges and cooperation between Duxianqin artists, and promote the exchange and innovation of skills through cultural exchange activities and competitions. Support the cooperation of Duxianqin artists with other music forms to explore new forms of expression and development paths. Carry out Duxianqin art education in schools and communities to cultivate more young people's interest and love for the art of Duxianqin. Provide transmitter training and support programs to help young transmitters systematically learn and master the skills of Duxianqin.

Through these measures, we can effectively protect and inherit the one-stringed Duxianqin art of the Jing ethnic group in Dongxing, Guangxi, and give this precious cultural heritage new vitality in modern society.

6.2.2 School education and training

The introduction of Duxianqin art into schools not only helps cultural transmission, but also enriches students' art education and promotes the protection and development of national culture. By teaching Duxianqin in schools, students can gain a deeper understanding of and experience the traditional culture of their own nation, and enhance their sense of identity and pride in their own culture.(Wei Qian ,2022) (As shown in the Figure: 108)



Figure 107. School education and training

Source: Xiaoxiao Wang (2024)

1) Advantages:

It has greatly increased the cultural transmission and popularization, and increased the exposure of Duxianqin art. Through campus education, more students can be exposed to and understand Duxianqin art, increasing its popularity. Cultivating a new generation of transmitters and teaching Duxianqin in schools can cultivate the younger generation's interest and love for this instrument and ensure the continuity of its transmission. As an educational platform, the school can provide a relatively stable learning environment and resources, which is conducive to systematic teaching. The opening of Duxianqin course in universities can promote academic research and compilation of this art form and form systematic teaching materials and teaching methods.

School education provides a systematic platform for the transmission of Duxianqin art, which helps to protect this traditional art form that is on the verge of extinction. As a unique national musical instrument, Duxianqin can provide students with a musical experience different from that of Western instruments and enrich their art education content. Learning Duxianqin can not only cultivate students' interest in music, but also help them master a special performance skill and improve their musical literacy. By promoting Duxianqin course in schools of different ethnic groups, it can promote students' understanding and respect for other ethnic cultures and enhance national unity.

The spread of Duxianqin can be used as a carrier of cultural exchange to promote exchanges and cooperation among students of different nationalities. In the process of learning Duxianqin, students may be inspired to create music and promote the development and innovation of Duxianqin art. The study of Duxianqin can be combined with other subjects, such as history and literature, to form an interdisciplinary education model and promote more extensive artistic innovation. It can not only add unique cultural elements to the school and enrich the cultural atmosphere of the campus. It can also become a major feature of the school, attracting students and parents who are interested in national culture and enhancing the reputation and influence of the school. It can attract social attention to this art form and drive more people to participate in the protection and dissemination of traditional culture. Through school education, it can not only provide a way to protect and inherit this precious traditional culture, but

also enrich students' art education and promote social respect and attention to national culture.

Although there are many benefits to the introduction of Duxianqin art into campus, there are also some potential disadvantages and challenges. These disadvantages are mainly related to resource allocation, teaching effectiveness, cultural protection and other aspects.

2) Disadvantages:

Since Duxianqin is a relatively niche art form, there are few professional teachers. Insufficient teaching staff may lead to low teaching quality and make it difficult for students to master this course in depth. Moreover, the training speed and number of existing teachers are far from meeting the teaching needs, resulting in uneven teaching quality. The limited number of teaching equipment such as Duxianqin cannot meet the learning needs of students and affect the opportunities for actual operation. Many schools lack dedicated music classrooms and practice venues, which is not conducive to students' learning and practice.

There is a lack of teaching equipment and resources. Many schools may lack enough Duxianqins and their supporting equipment, which affects the implementation of teaching and students' learning effects. Duxianqin courses are usually offered as elective courses or non-main courses. Students have limited learning time and it is difficult to achieve a high level of playing skills. Not all students are interested in Duxianqin. Including it in the curriculum may lead to insufficient learning motivation for some students, affecting the overall teaching effect. In the teaching process, in order to adapt to teaching needs, the art of Duxianqin may be overly simplified or standardized, losing its diversity and uniqueness. Duxianqin learning on campus may be mainly theoretical, lacking opportunities for field performances or community participation, limiting students' actual playing experience and cultural understanding. Due to the high teacher-student ratio, it is difficult for teachers to provide personalized guidance to each student, affecting the in-depth learning and personalized development.

3) Solution:

Strengthen teacher training and resource investment. The government and schools can jointly carry out a Duxianqin teacher training program to improve the teaching ability of existing teachers. At the same time, increase investment in teaching

equipment to ensure sufficient teaching resources so that every student has a Duxianqin. Combine Duxianqin course with other music courses or cultural courses to enhance interest and practicality and attract more students to participate. At the same time, design a flexible teaching model to meet the interests and needs of different students. Organize Duxianqin clubs, social activities and stage performances to provide students with more opportunities for field performances, competitions and cultural exchanges, so that they can consolidate and develop their Duxianqin skills in practice.(Huang Zhihao, 2008)

Strive for funding from society and enterprises to purchase more Duxianqins and related teaching resources to ensure the smooth development of teaching activities. Design Duxianqin course to be more diverse and interesting, and combine it with other music courses or cultural courses to enhance the attractiveness of the course. Design courses of different difficulty and content according to students' interests and levels to meet the needs of different students. Use flexible teaching methods such as group teaching and individual guidance to provide more personalized learning support to ensure that each student can receive adequate attention and guidance. Pay attention to the traditional skills and cultural background education of Duxianqin in teaching to ensure that students not only master the playing skills, but also understand the cultural connotations behind it. Invite Duxianqin transmitters or folk artists to come to the campus to explain and demonstrate traditional culture, so that students can have a deeper understanding of the history and cultural value of Duxianqin art.

Through campus media, local media and social platforms, we will increase the publicity of Duxianqin courses and cultural activities to enhance the public's attention to the art of Duxianqin. We will organize public performances, cultural festivals and educational exhibitions to show the public the charm of Duxianqin art and attract more students and families to participate. We will apply for policy support and funding from local governments and cultural departments to promote the development of Duxianqin art education.

6.2.3 Internet communication

The advent of the Internet era has updated the way to spread the art of Duxianqin. Through online teaching, video sharing platforms (such as YouTube, Bilibili, etc.) and social media (such as WeChat, Weibo, etc.), more and more

Duxianqin players and enthusiasts share performance videos, tutorials and experiences. This allows more people to understand and learn this instrument. In 2011, Duxianqin was officially included in the national intangible cultural heritage list. Later, many series of promotional films focusing on Duxianqin were launched one after another, such as "China's Video Gazette-Dongxing Chapter-Music Records", "Chinese Nation- Jingdao Qinyin", "The Passionate Jing ethnic group's Three Islands", "The Qin of the Sea", "Meeting on March 3rd Intangible Cultural Heritage Records : Can a One-String Qin Also Play Colorful Music?" and other influential promotional films were broadcast on television media, which in a subtle way made people connect the two niche things of Duxianqin and the Guangxi Jing ethnic group.

Duxianqin has been promoted in various ways to allow more people to see this instrument. For example, the Jing ethnic group ethnic group "Ha Mei" recorded programs on variety shows . In entertainment variety shows such as "Day Day Up", "Good Luck", and "Golden 100 Seconds", people got to know the Jing ethnic group ethnic group's national instrument, Duxianqin, in a more interesting and relaxed way, and became interested in it. In 2019, the Jing ethnic group ethnic girl Ruan Meixia participated in the recording of CCTV 's entertainment program "Good Luck". Ruan Meixia and her partner sang the traditional Jing ethnic group ethnic music "Guo Qiao Feng Chui". The unique appearance and graceful music of Duxianqin, as well as the girls' beautiful and lyrical singing, received loud applause from the audience. After the performance, Ruan Meixia explained everyone's questions, introduced the Jing ethnic group ethnic group and its instrument, Duxianqin, and stated that as a Jing ethnic group ethnic group "Ha Mei" , she hoped that more children would be able to discover the fun of Duxianqin and learn it, so that Duxianqin would have successors. This was her original intention to participate in the program. (As shown in the Figure: 109)



Figure 108. Map of Dongxing

Source:<https://tv.cctv.com/2019/03/11/VIDEgkyBNYBUmDR5ObXbnyt190311.shtm> (2023)

Afterwards, Zhao Xia, the transmitter of the intangible cultural heritage of the Guangxi Autonomous Region, participated in the variety show "Golden 100 Seconds" on CCTV. This time, her Jingyue Orchestra also came with her. After three years, they performed the classic piece "Guo Qiao Feng Chui". Unlike the last time, they integrated the sounds of the guzheng, bamboo sail harp and coconut drum in the show, making the performance richer and more exciting. Zhao Xia used the one-stringed harp as a Ruyiqin to greet the audience across the country on behalf of the Jing ethnic group. As an intangible cultural heritage transmitter, she always keeps in mind to carry forward the art of the one-stringed harp of the Jing ethnic group and let more people join the ranks of learning and inheriting this national musical instrument. (As shown in the Figure : 110)



Figure 109. Map of Dongxing

Source:<https://www.ixigua.com/6985320206998438437>, (2024)

Today, Zhao Xia has not stopped her steps. Since 2021, Zhao Xia has used the Internet platform to expand the influence of Duxianqin, and has promoted Duxianqin to the outside world by releasing short videos, live performances, and recording courses. Today, in addition to being a district-level intangible cultural heritage transmitter of Duxianqin, Zhao Xia also serves as a director of the Guangxi National Orchestra Association and a representative of the 13th National Congress of Chinese Women, and is committed to promoting the culture of the Jing ethnic group. The Dongxing City Duxianqin transmission Base where she is located has made significant contributions to the training of Duxianqin players and transmitters. She bluntly stated that most of the current funding for the transmission base comes from live broadcast income. The Internet provides an effective platform for the survival and development of Duxianqin art, and the economic value of Duxianqin art is being explored.

In addition to her, searching for terms such as "Duxianqin", "Duxianqin culture", and "Duxianqin performance" on the Internet can provide a series of information related to Duxianqin. Many related consultations can also be retrieved on new media platforms.

On the official WeChat public platform of Fangchenggang Culture and Tourism, in the series of classes "Our Chinese Dream - Culture into Thousands of Homes", you can see the teaching of the playing methods and skills of Duxianqin in Fangchenggang's universal art popularization courses, as well as the appreciation of the songs such as "Guo Qiao Feng Chui" and "Meeting at the Aobao". Other official media such as China Youth Daily, China.com, Sina Guangxi, Guangxi Satellite TV, etc. have content specifically introducing Duxianqin culture and multiple Duxianqin playing videos. Short video network social platforms such as Douyin, Bilibili, Kuaishou, etc., have many Duxianqin players. On Douyin, the transmitter Zhao Xia (platform account "Jingwei Tianren") has 504,000 fans and has accumulated 4.212 million likes; Duxianqin player Wei Qingbing has released more than 290 performance videos, including classics such as "Mountain Songs Are Like Spring River Water", "Guo Qiao Feng Chui", and "Chuan Zhen Yin Xian", as well as the well-known theme song of "Journey to the West", etc., which is a good fusion of Duxianqin and popular songs.

In order to meet the demands of modern music, many artists of the Jing ethnic group have begun to integrate the traditional performance techniques of the Duxianqin

with modern music elements, such as ensemble playing with other instruments and the creation of modern music styles, thus giving this instrument new vitality.(As shown in the Figure:111)

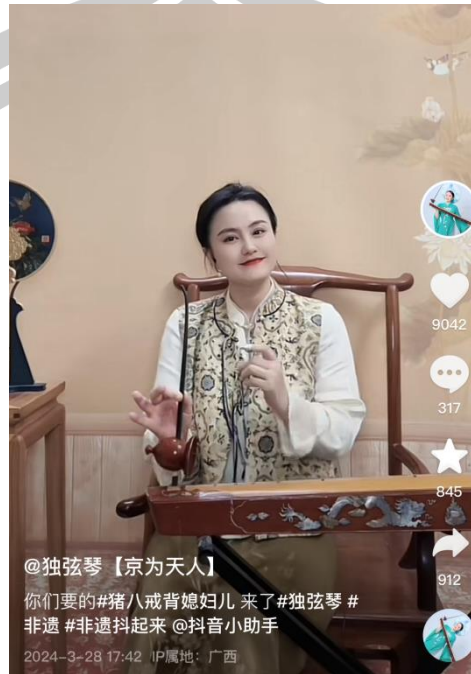


Figure 110. Map of Dongxing

Source:<https://www.speed2.net/soft/734.html>, (2023)

1) advantage:

The Internet provides a broad and lasting platform for the dissemination of the Jing ethnic group Duxianqin. Through digital preservation and online dissemination, the traditional skills and cultural background of Duxianqin can be preserved, providing a guarantee for future transmission. This is particularly important when facing the challenge of the gradual oblivion of traditional culture. Traditional musical instruments are often limited to regional dissemination, but the Internet breaks this limitation and allows more people to access the Jing ethnic group Duxianqin. Not only in China, but also music lovers around the world can learn about and learn this unique instrument through the Internet. The Internet platform promotes the exchange of the Jing ethnic group Duxianqin with other cultures. Through interaction with musicians and audiences from different cultural backgrounds, Duxianqin can be integrated into diversified music creation , enriching its forms of expression and

increasing the international influence of Jing ethnic group culture. For the Jing ethnic group and other ethnic minorities, seeing their culture gain attention and spread through the Internet can enhance their cultural identity and pride. This also helps the wider society respect and understand the Jing ethnic culture. Through the Internet, Duxianqin players can be exposed to other musical genres and creative techniques, which inspires innovative inspiration. This exchange promotes the application of traditional instruments in modern music and promotes the modernization and diversification of the Jing ethnic group Duxianqin.

Through Internet teaching, students can access learning resources through the Internet anytime and anywhere, no longer restricted by geographical location or schedule. No matter where they are, as long as there is an Internet connection, learners can access teaching videos, music scores, and other related materials. Traditional music teaching may require high tuition or transportation costs. Internet teaching is usually more economical, and some resources are even free. Students can learn Duxianqin at a low cost through online courses, tutorial videos, etc. The Internet provides a large number of learning resources, including tutorials of different levels, performance demonstrations of various styles, and guidance from professional teachers. Learners can choose the most suitable resources for their own learning according to their needs and interests.

Internet teaching allows students to learn at their own pace and comprehension. They can watch teaching videos repeatedly until they master the skills. In addition, learners can choose teaching content that suits their learning style and customize the learning process. Through the Internet, learners can join various online communities and communicate with Duxianqin enthusiasts and experts around the world. Such interactions help share experiences, solve problems in learning, and gain support and encouragement from other learners. Many Internet teaching platforms provide real-time interactive functions, where learners can ask questions to teachers in live classes and get instant feedback. In addition, some online teaching platforms also provide one-on-one tutoring to help students progress faster. Internet teaching usually incorporates multimedia elements such as animations, interactive exercises, and musical accompaniment, which makes learning more interesting and attractive. This multi-sensory learning experience helps to stimulate students' interest and lasting

motivation to learn. Internet teaching not only helps more people learn the Jing ethnic group Duxianqin, but also encourages them to incorporate this traditional instrument into modern music, thereby promoting cultural transmission and innovation. At the same time, it also helps Duxianqin playing skills to be passed on among the younger generation.

The Jing ethnic group Duxianqin is also widely displayed in various online concerts, competitions and cultural performances. Many cultural organizations and individuals use live broadcast platforms to hold performances or competitions to attract more audiences to participate and appreciate. The Internet has enabled the Jing ethnic group Duxianqin to transcend geographical restrictions and spread internationally. Foreign musicians and enthusiasts have also begun to take an interest in this unique instrument and even incorporate it into modern music creation. Researchers and cultural protectors use the Internet platform to collect, organize and publish information about the history, music scores and playing techniques of the Jing ethnic group Duxianqin. This not only contributes to the transmission of traditional culture, but also provides rich resources for academic research. In these ways, the Jing ethnic group Duxianqin has gained wider attention around the world and has inspired a new generation of musicians and cultural enthusiasts to be interested in this traditional instrument.

Through Internet teaching, the Jing ethnic group's one-stringed harp has been able to be understood and learned by more people, which has not only promoted cultural transmission but also brought new development opportunities for this traditional musical instrument.

2) Disadvantages:

The Internet era has indeed brought many new opportunities for the spread of Duxianqin art. Teaching videos and performance sharing on the Internet often do not have strict quality control. Some unprofessional people can also act as teachers, which may lead to the spread of unprofessional or erroneous teaching content, thus affecting the progress of learners. Secondly, Duxianqin is a traditional instrument. Its performance and learning often need to be carried out in a specific cultural atmosphere. Online teaching and social media sharing are difficult to convey this atmosphere. Traditional face-to-face teaching can provide personalized guidance based on the actual

situation of students, but it is difficult to achieve this in online teaching, and students may not be able to get timely and effective feedback.

Although the Internet allows more people to learn about and study Duxianqin, the lack of face-to-face interaction may limit communication between players. Without face-to-face supervision, students may not be able to maintain a stable learning progress due to lack of self-discipline, or lack timely communication when encountering difficulties.

3) Solution:

In view of the inequality in teaching levels on the Internet, a professional certification mechanism should be established, and a special Duxianqin education certification platform should be set up. Only certified teachers and teaching content can be published on the platform. This can ensure the professionalism and accuracy of the teaching content and avoid misleading learners. It is also possible to use a combination of artificial intelligence and expert review to review online teaching videos and performance sharing, and recommend and promote high-quality content. A user rating system should be established to help learners identify high-quality teaching resources.

As for the cultural atmosphere that is difficult to convey through Internet teaching, teachers can add explanations of the cultural background to the teaching content, combining knowledge from various aspects such as history, culture and art to help learners understand the cultural significance of Duxianqin more comprehensively.

Internet teaching is difficult to communicate. Small-scale online tutoring classes or one-on-one teaching services can be provided to ensure that students can receive personalized guidance and timely feedback. Through regular video conferences, teachers can observe students' performances in real time and give specific suggestions. Combine online teaching with offline activities, organize workshops, concerts or seminars regularly, provide learners with opportunities for face-to-face communication, strengthen interaction and community building. Create a dedicated online community for learners to encourage mutual learning, problem discussion and experience sharing among members to make up for the lack of face-to-face interaction. Use social media groups, forums or applications to promote communication between learners and teachers.

6.3 The guideline of preservation and transmission of Duxianqin of Jing ethnic group in Guangxi, China

The Duxianqin of the Jing ethnic group in Guangxi Zhuang Autonomous Region of China, as a unique intangible cultural heritage, bears profound ethnic history and cultural connotations. In recent years, with the continuous advancement of intangible cultural heritage protection policies, the issue of the transmission and development of the Duxianqin of the Jing ethnic group has increasingly attracted the attention of the academic community. This paper synthesizes recent research findings on the preservation and transmission of the Duxianqin of the Jing ethnic group, aiming to propose a set of scientific guidelines for its preservation and transmission. The implementation of intangible cultural heritage policies has provided a strong guarantee for the transmission of the Duxianqin of the Jing ethnic group. Through policy guidance, the Duxianqin has been widely disseminated in schools, communities, and other venues. At the same time, the establishment of the transmitter system has also stimulated the enthusiasm of transmitters. However, authors have also pointed out that issues such as uneven resource allocation and monotonous transmission methods exist during the policy implementation process, requiring further improvement of the policy system (Wei Qian, 2022).

As a unique cultural heritage of the Jing ethnic group in Guangxi Zhuang Autonomous Region, the Duxianqin of the Jing ethnic group indeed carries rich historical and cultural connotations. With the continuous promotion of policies for the protection of intangible cultural heritage, the inheritance and protection of the Jing ethnic Duxianqin have received increasing attention. In the process of policy implementation, there are differences in resource allocation between different regions. Remote areas may not receive sufficient funding and support, leading to difficulties in the inheritance of Duxianqin. The government should increase its support for remote areas to ensure that cultural heritage activities can be carried out in a balanced manner across different regions.

In a survey on the preservation and transmission process of the Jing ethnic group Duxianqin in primary and secondary schools in Dongxing City, Guangxi, a total of 300 teachers and students participated in the questionnaire survey.

Table 12. Save and disseminate questionnaire surveys during the process.

The transmission route of Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	School curriculum teaching	66	22.0	22.0	22.0
	Government promotion	47	15.7	15.7	37.7
	online platform	50	16.7	16.7	54.3
	Theatrical performance	48	16.0	16.0	70.3
	Community activities	41	13.7	13.7	84.0
	festival	48	16.0	16.0	100.0
	(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the transmission channels of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that different transmission channels have different contributions to the respondents' understanding of Duxianqin:

- School curriculum teaching is the main way of dissemination, with 66 respondents stating that they have "effectively learned" about Duxianqin through this method, accounting for 22.0% of the total respondents and a cumulative percentage of 22.0%.

- Government promotion activities also have a significant impact, with 47 respondents indicating that they learned about Duxianqin through government promotion, accounting for 15.7% and a cumulative percentage of 37.7%.

- As a modern communication tool, 50 respondents stated that they learned about Duxianqin through online platforms, accounting for 16.7% and a cumulative percentage of 54.3%.

- Theater performances are also an important means of dissemination, with 48 respondents indicating that they learned about Duxianqin through watching theater performances, accounting for 16.0% and a cumulative percentage of 70.3%.

- Community activities have also played a certain role in the dissemination of Duxianqin. 41 respondents reported that they learned about her through community activities, accounting for 13.7% and a cumulative percentage of 84.0%.

- As a part of traditional cultural activities, 48 respondents reported learning about Duxianqin through festival celebrations, accounting for 16.0% and a cumulative percentage of 100%.

Overall, school curriculum teaching and theater performances are the main ways for respondents to learn about Duxianqin, while government promotion, online platforms, community activities, and festival celebrations have also played a positive role in spreading Duxianqin. These data are of great significance for understanding the dissemination efficiency and influence of the Jing ethnic group Duxianqin, which will help relevant institutions pay more attention to these effective dissemination channels in future cultural dissemination strategies. At the same time, it also suggests the need to strengthen work on other potential dissemination channels to enhance public understanding and interest in the Jing ethnic group Duxianqin.

In-depth research on the Duxianqin of the Jing ethnic group has been conducted from the perspectives of organology and oral history. Authors believe that organological research helps to reveal the physical attributes of the Duxianqin, such as its structure and playing techniques, while oral history research can uncover the cultural significance and social functions behind the Duxianqin. The combination of the two provides a more comprehensive perspective for the preservation and transmission of the Duxianqin of the Jing ethnic group.

Table 13. Save and disseminate questionnaire surveys during the process.

Are you willing to participate in the preservation and transmission activities of Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	willing	196	53.0	53.0	53.0
	unwilling	104	47.0	47.0	100.0
	(grand total)	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the willingness to participate in the preservation and transmission activities of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

- 196 respondents expressed their willingness to participate in the preservation and transmission activities of Duxianqin, accounting for 53.0% of the total respondents, with an effective percentage of 53.0%.

- 104 respondents expressed unwillingness to participate, accounting for 47.0% of the total respondents, with an effective percentage of 47.0%.

The cumulative percentage shows that the attitudes of the respondents towards participating in the preservation and transmission activities of Duxianqin are roughly divided into two halves, with slightly more respondents willing to participate than unwilling to participate. This indicates that more than half of the people hold a positive attitude towards protecting and inheriting this traditional musical instrument, which is a positive signal that there is a certain foundation and potential among the public to support and promote the preservation of the Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the level of public support for the preservation and transmission activities of the Jing ethnic group Duxianqin, which will help relevant institutions to pay more attention to mobilizing and utilizing public participation willingness in future preservation and

transmission strategies. At the same time, it also suggests the need to make more efforts to improve public participation and enthusiasm.

Currently, the Duxianqin of the Jing ethnic group faces issues such as a narrow audience and limited transmission channels. It is suggested to expand the scope of dissemination through new media platforms and strengthen the integration with other cultural arts (Xiaoxiao Wang, 2021).

It is also necessary to construct a cultural ecosystem for the Duxianqin of the Jing ethnic group to promote its coordinated development with the local economy and society (Liu Chunying, 2019).

With the rapid development of society, the traditional master-apprentice transmission model has been unable to meet the needs of modern society. More flexible and diverse transmission methods should be explored, such as community education and online education. At the same time, attention should be paid to cultivating the transmission awareness of young people and stimulating their love for traditional culture (Zhou Ru, 2021).

Table 14. Save and disseminate questionnaire surveys during the process

The challenges faced by the transmission of Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	Cultural influence	58	19.3	19.3	19.3
	Shortage of teaching staff	71	23.7	23.7	43.0
	Lack of publicity	58	19.3	19.3	62.3
	shortage of capital	54	18.0	18.0	80.3
	Few students	59	19.7	19.7	100.0
	(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the challenges faced by the transmission of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that respondents believe that the main challenges facing the transmission of Duxianqin include:

-Cultural influence: 58 respondents believe that cultural influence is a challenge for the transmission of Duxianqin, accounting for 19.3% of the total respondents, with a cumulative percentage of 19.3%.

-Teacher shortage: 71 respondents believe that teacher shortage is the main challenge for transmission, accounting for 23.7% of the total respondents, with a cumulative percentage of 43.0%.

-Insufficient publicity: 58 respondents believe that insufficient publicity is a problem, accounting for 19.3% of the total respondents, with a cumulative percentage of 62.3%.

-Shortage of funds: 54 respondents believe that shortage of funds is a barrier to transmission, accounting for 18.0% of the total respondents, with a cumulative percentage of 80.3%.

-Lack of students: 59 respondents believe that a small number of students is a problem of transmission, accounting for 19.7% of the total respondents, with a cumulative percentage of 100%.

From these data, it can be seen that teacher shortage is considered the most prominent challenge in the transmission of Duxianqin, followed by insufficient publicity and cultural influence. Shortage of funds and a small number of students are also considered to pose challenges to transmission activities. These challenges are interrelated and jointly affect the transmission and development of Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the problems encountered in the transmission process of the Jing ethnic group Duxianqin, and will help relevant institutions to pay more attention to solving problems such as teacher qualifications, funding, publicity, and cultural adaptability in future preservation and transmission strategies. At the same time, this information may also

suggest that cultural institutions and educators need to take action in these key areas to ensure the continuity and strengthening of the transmission of Duxianqin.

Table 15. Save and disseminate questionnaire surveys during the process

How to improve the transmission of Duxianqin				
	frequency	per cent	Effective percentage	Cumulative percentage
Education Promotion	63	21.0	21.0	21.0
Government Support	56	18.7	18.7	39.7
internet communication	69	23.0	23.0	62.7
Community activities	43	14.3	14.3	77.0
Festival Celebration	69	23.0	23.0	100.0
(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on improving the transmission effect of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that respondents believe that the following methods can effectively improve the transmission of Duxianqin:

1. Education Promotion: 63 respondents believe that education promotion can effectively improve the transmission of Duxianqin, accounting for 21.0% of the total respondents, with a cumulative percentage of 21.0%.

2. Government support: 56 respondents believe that government support is crucial for the transmission of Duxianqin, accounting for 18.7% of the total respondents, with a cumulative percentage of 39.7%.

3. Internet communication: 69 respondents believe that using the Internet for communication and communication is an effective way to improve the transmission of Duxianqin, accounting for 23.0% of the total respondents, with a cumulative percentage of 62.7%.

4. Community activities: 43 respondents believe that community activities contribute to the transmission of Duxianqin, accounting for 14.3% of the total respondents and a cumulative percentage of 77.0%.

5. Festival Celebration: Similarly, 69 respondents believe that showcasing the culture of Duxianqin during festival celebrations can enhance its transmission effect, accounting for 23.0% of the total respondents, with a cumulative percentage of 100%.

It can be seen from these data that respondents generally believe that education promotion, government support, Internet communication, community activities and festivals are the five main ways to improve the transmission effect of Duxianqin. Among them, Internet communication and festival celebrations have been recognized by many respondents, which indicates that the combination of modern technology and traditional cultural activities may be an effective strategy to improve the transmission effect of Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the public's views on improving the transmission effect of the Jing ethnic group Duxianqin, which will help relevant institutions pay more attention to these effective transmission methods in future transmission strategies. At the same time, it also suggests the need to make more efforts in improving public participation and enthusiasm.

From the perspective of rural revitalization, the important role of the Duxianqin of the Jing ethnic group in rural revitalization has been discussed. The Duxianqin of the Jing ethnic group is not only a cultural heritage but also an important resource for rural cultural revitalization. However, the current transmission of the Duxianqin of the Jing ethnic group faces difficulties such as funding shortages and brain drain. It is suggested to provide strong support for the transmission and development of the Duxianqin of the Jing ethnic group through government support and the introduction of social capital. (Fu Qiumei & He Lingling, 2021)

There are several suggestions for the preservation and transmission of the Guangxi Jing ethnic group Duxianqin:

- 1) Strive for policy support and funding from the government and relevant departments, continue to promote education on the art of Duxianqin instrument in primary and secondary schools as well as local universities, and cultivate more

transmitters and enthusiasts. By establishing more training and learning bases, as well as regularly organizing public welfare training and competition activities, more people can be attracted to participate in the learning and transmission of Duxianqin. And continue to improve Duxianqin, such as developing a multifunctional Duxianqin to meet the needs of modern music performance. Through technological innovation, such as adding electric amplification devices to increase volume and sound quality, the art of Duxianqin is made more suitable for modern stages.

2) Combining the art of Duxianqin instrument with the tourism industry, developing cultural tourism products with Duxianqin instrument as the theme, attracting tourists to experience and learn Duxianqin instrument, thereby enhancing its popularity and influence. Use the "the Belt and Road" initiative to strengthen cultural exchanges with Southeast Asia and other countries and regions, and promote Duxianqin art to the international stage through international performances, competitions, exhibitions and other forms.

3) By utilizing modern communication technology and online platforms such as social media and video sharing platforms, we aim to expand the dissemination of the art of the zither, encourage community participation in the protection and dissemination of the art, and make it a part of the cultural life of the community through organizing community activities, festivals, and celebrations. Attract more young audiences.

The preservation and transmission of the Duxianqin of the Jing ethnic group is a systematic project that requires the joint efforts of the government, society, transmitters, and other parties. Under the guidance of intangible cultural heritage policies, we should focus on the teaching and learning of traditional skills, strengthen cultural promotion, explore innovative transmission models, and improve protection mechanisms and policy support. Through the implementation of these measures, we are confident that the unique cultural heritage of the Duxianqin of the Jing ethnic group will shine more brightly in the new era.

6.4 Summary

Through literature review and investigation, we can see that the protection and dissemination mode of Guangxi Jing ethnic group Duxianqin has been gradually developing and improving from the past to the present. A literature review and

questionnaire survey were conducted on 300 teachers and students in primary and secondary schools of the Jing ethnic group to collect information on the existing protection measures for the Duxianqin, and to analyze the effectiveness and potential room for improvement of these measures. I have come to the following conclusion:

1) In the past, the protection and dissemination of the Guangxi Jing ethnic group Duxianqin focused on the collection of Jing ethnic group documents, as well as the collection and recording of Jing ethnic group museums.

2) Now, with policy support and funding investment, the continuous promotion, improvement, protection, and dissemination of the Guangxi Jing ethnic group Duxianqin have made it a key force in promoting the infiltration and influence of Duxianqin culture into schools.

3) After being listed as a national intangible cultural heritage in 2011, the "Jing ethnic group Duxianqin" has played an increasingly important role in protection by government departments, from the formulation of laws and regulations to the dissemination guidelines at all levels.

4) Mobilize the social role, organize cultural and artistic festivals, traditional media, new media, live performances, cultural exchange activities, etc. of the Jing ethnic group, and further expand its influence.

5) In the process of dissemination, family transmission, school education and training, and online communication all play important roles. The Internet provides a broad platform for the spread of Duxianqin, but there are also problems such as non-standard teaching content. Establishing a professional certification mechanism and strengthening the dissemination of cultural atmosphere are crucial.

To improve the transmission of Duxianqin, education promotion, government support, Internet communication, community activities, and festival celebrations are all important methods. We should combine modern technology with traditional cultural activities to enhance the transmission effect. From the perspective of rural revitalization, the Duxianqin of the Jing ethnic group is an important resource, and government support and the introduction of social capital are needed to address the difficulties in its transmission.

Overall, the preservation and transmission of the Jing ethnic group Duxianqin is a systematic project that requires joint efforts from the government, society,

transmitters, and other parties. We should continue to strengthen the protection and transmission of this precious cultural heritage, promote its integration with modern society, and give it new vitality in the new era. We need to pay attention to the balance between commercial development and cultural protection, ensuring that Duxianqin can maintain its original flavor and cultural connotation while meeting market demand. In the future, we can expect more innovative methods and measures to emerge.

Table 16. Summary of preservation process, transmission process and guideline of preservation

preservation process	Establishing a museum and a training base for the single string instrument in Dongxing, Guangxi
	Establishment of transmission System and Teacher Team
transmission process	Public welfare training, festival celebrations, cultural exchange activities
	Education and publicity, government support, traditional media, and new media communication
guideline of preservation	Strengthen the integration of education and training, improvement and innovation, culture and tourism
	Utilizing modern media to promote international artistic exchange

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CHAPTER VII

Conclusion Discussion and Suggestion

This paper takes the Guangxi Jing ethnic group Duxianqin as the research object, focusing on the analysis of the development and music characteristics of the Guangxi Jing ethnic group Duxianqin, and puts forward the guideline of preservation and transmission, especially from the three aspects of government, school and Internet communication. After in-depth research, the following conclusions have been drawn:

7.1 Conclusion

7.2 Discussion

7.3 Suggestion

7.1 Conclusion

7.1.1 Study on the development of Duxianqin of Jing ethnic group in Guangxi, China.

Based on historical documents and field investigations, researchers have discussed that the Duxianqin of the Jing ethnic group in Guangxi can be divided into three parts:

1) The development of Duxianqin of Jing ethnic group in ancient period (202 BC-1800)

During this period, Duxianqin was mainly used in religious ceremonies and folk festivals, and was an important part of social life. It integrates elements of Han and Zhuang music culture in its development, reflecting cultural exchanges between ethnic groups. Craftsmen do not have strict standards for the selection, processing, assembly, and tuning of musical instruments, and the quality and tone of each instrument are difficult to achieve the ideal state. Not only is the efficiency of the production process low, but it is also difficult to determine the accuracy and sound quality of the Duxianqin. Although the form of ancient Duxianqin music may be somewhat monotonous, it fully demonstrates the musical wisdom and artistic creativity of the Jing ethnic group people. Duxianqin performers from the Jing ethnic group in Guangxi played an important role

in ancient society, culture, and religion. They expressed emotions, told stories, and conveyed national culture and historical memory through music.

2) The development of Duxianqin of Jing ethnic group in modern period (1801-1960)

Modern period (1801-1960) was a period of significant social change in China, during which the economic structure of the Jing ethnic group in Guangxi underwent a transformation from traditional agriculture and fisheries to a diversified economy. This transformation has had a profound impact on the traditional culture of the Jing ethnic group, especially the art of Duxianqin. With the influx of foreign cultures and the advancement of modernization, the performance form, cultural connotation, score, and performance occasions of Duxianqin have undergone significant changes.

3) The development of Duxianqin of Jing ethnic group in contemporary period (1961-2025)

contemporary period (1961-2025), Duxianqin has further expanded its international influence and diversity through international stage performances and cultural exchanges in the context of globalisation and diversification. With the further modernisation of Chinese society and the acceleration of globalisation, the Duxianqin as a traditional musical instrument has faced new challenges and opportunities. These changes are mainly reflected in the improvement of instruments' materials, the optimisation of structure, the enrichment of playing techniques, and the dissemination of the instrument.

7.1.2 Study on Music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

According to the second research objective, Researchers conducted a study on the five most famous pieces of music for the Duxianqin of the Jing ethnic group in Guangxi. two of them are traditional Duxianqin pieces, two have been rearranged, and one is a modern piece.

1) The melody: The playing rhythm of the Jing ethnic group Duxianqin does not emphasize a fixed beat, and is often performed in a free flowing manner. There

may be relatively casual pushing, pulling, and pausing in the rhythm, which enhances the uniqueness of the music and the flexibility of expression.

2) Although the melody of the Duxianqin instrument is relatively simple, it emphasizes emotional expression, and through playing techniques, the melody of Duxianqin instrument is filled with emotions and art.

3) Duxianqin is a overtone playing instrument that can play both overtones and fundamental notes simultaneously on Duxianqin. The interpretation of musical works relies entirely on Duxianqin and a joystick, achieved through various techniques such as “Ya Gan” (压杆), “Pai Gan”拍杆 “Chan” (颤) and penggan(碰杆).

7.1.3 The guideline of transmission of Duxianqin of Jing ethnic group in Guangxi, China.

The Duxianqin of the Jing ethnic group in Guangxi Zhuang Autonomous Region of China, as a unique intangible cultural heritage, bears profound ethnic history and cultural connotations. In recent years, with the continuous advancement of intangible cultural heritage protection policies, the issue of the transmission and development of the Duxianqin of the Jing ethnic group has increasingly attracted the attention of the academic community. This paper synthesizes recent research findings on the preservation and transmission of the Duxianqin of the Jing ethnic group, aiming to propose a set of scientific guidelines for its preservation and transmission. The implementation of intangible cultural heritage policies has provided a strong guarantee for the transmission of the Duxianqin of the Jing ethnic group. Through policy guidance, the Duxianqin has been widely disseminated in schools, communities, and other venues. At the same time, the establishment of the transmitter system has also stimulated the enthusiasm of transmitters.

7.2 Discussion

7.2.1 Discussion on development of Duxianqin of Jing ethnic group in Guangxi, China.

Through literature analysis and field investigation, researchers found that:

In ancient period (202 BC-1800), the Duxianqin was mainly used in religious ceremonies and folk festivals, and was an important part of social life. The art of

Duxianqin of the Jing ethnic group in Guangxi has absorbed the music culture and elements of the Han and Zhuang ethnic groups in its development process. Through continuous exchange with other ethnic elements, the art of Duxianqin has been further developed. Craftsmen do not have strict standards for the selection, processing, assembly, and tuning of musical instruments, and the quality and tone of each instrument are difficult to achieve the ideal state. Not only is the efficiency of the production process low, but it is also difficult to determine the accuracy and sound quality of the Duxianqin. Ancient Duxianqin music, although slightly monotonous in form, fully demonstrates the musical wisdom and artistic creativity of the Jing ethnic group people. Guangxi Jing ethnic group Duxianqin players in the ancient period played an important role in society, culture and religion. They expressed their emotions and told stories through music, conveying national culture and historical memory.

In modern period (1801-1960), Chinese society underwent significant changes. During this period, with the influx of foreign cultures and the advancement of modernization, the social economy of the Jing ethnic group in Guangxi gradually diversified from traditional agriculture and fishing. In this context, the playing style and cultural significance of Duxianqin have also undergone significant changes. Specifically, the Duxianqin exhibits new characteristics that are different from the past in terms of its system, score, performance form, and performance occasions.

Contemporary period (1961-2025), with the continuous advancement of globalization and cultural diversity, Duxianqin's international influence and cultural diversity have been significantly enhanced in its performances and cultural exchanges on the international stage. Against the backdrop of the acceleration of modernization and globalization in Chinese society, this traditional musical instrument is also facing new challenges and opportunities. These changes are mainly reflected in the following aspects: improvement of instrument materials, optimization of structural design, innovation of playing techniques, and diversification of instrument dissemination methods.

These research results are consistent with the following scholars:

- 1) The Duxianqin player plays an important role in religious ceremonies and rituals. The sound of Duxianqin is believed to have a sacred power to communicate with the gods, and therefore the players have a high status in these ceremonies. They

need to be highly skilled and have a deep understanding of religious music in order to effectively communicate the will of the gods and ensure the smooth conduct of the rituals. This role requires performers who are not only skilled in their craft, but also have deep religious beliefs and cultural literacy.(Zhou Wenjuan, 2004)

2) Despite the dramatic changes in social structure and economic development, the Duxianqin, as a instruments' material culture, is still alive in the lives of the Jing ethnic group people, and its importance in ceremonies such as weddings and rituals remains undiminished. It is worth noting that the way of transmission has gradually shifted from traditional oral teaching to school education, and the music scores have been textualised from oral teaching. The repertoire of Duxianqin has gradually been enriched with new musical elements in addition to traditional folk music, which is undoubtedly of great significance for the transmission and development of the art of Duxianqin.(Yuan Jingfang, 1992)

3) Music education for the Duxianqin has gradually emerged in modern times, with the establishment of music education institutions and the preparation of music textbooks providing a systematic and standardised approach to the transmission and development of Duxianqin music. Music education not only teaches performance skills, but also focuses on the cultivation of music theory and creative ability. This systematic music education has not only improved the skills of Duxianqin players, but also promoted the professional and academic development of Duxianqin music.(Xiao Wenpu&Wan Rong ,2020)

4) In the modern period, Duxianqin players not only performed domestically, but also actively participated in international cultural exchange activities. Through cooperation with foreign musicians, they have demonstrated the unique charm of Duxianqin music and promoted the exchange and fusion of Chinese and foreign cultures. Such cross-cultural exchanges not only enriched the expressive power of Duxianqin music, but also broadened the scope of influence of Duxianqin music, injecting a new impetus into the development of Duxianqin music.(Li Keliang. Su Haizhen ,2023)

7.2.2 Discussion on analyze Music characteristic of Duxianqin of Jing ethnic group in Guangxi, China.

Researchers have found through field investigations and literature research that :

The Jing ethnic group in Guangxi is the only maritime ethnic group in China, and their lives are closely connected to the ocean. The music of the Duxianqin deeply expresses the emotions and lives of the Jing ethnic group people. As an important part of the Jing culture, the music of the Duxianqin not only demonstrates the Jing ethnic group people's dependence and reverence for the ocean, but also expresses their attachment to their hometown, praise for labor, and love for life.

The unique circular body of Duxianqin is equipped with a natural resonance box inside. As long as a joystick is inserted into the body of Duxianqin, the strings are tied, and the desired pitch is adjusted, it can be played easily. This type of instrument does not require special production skills, so in the folk culture of the Jing ethnic group in China, Duxianqin is deeply loved by the general public. When playing a Duxianqin, a small bamboo piece is usually used as a plucking tool (also known as a bamboo plucker). This playing method makes the sound of Duxianqin gentle and melodious, like a heavenly melody. However, the resonance effect of Duxianqin body made of bamboo and wood is not ideal, and the sound is relatively small. With the advancement of technology, entering the electronic age, the interior of a Duxianqin is usually equipped with electronic sound equipment such as a pickup, amplifier, and power supply.

Duxianqin can even be equipped with external amplification speakers, making the sound louder when playing. Nowadays, most of Duxianqin Duxianqins seen on the market are electronic Duxianqin. The sound production and resonance of the electronic single stringed Duxianqin are mainly completed by the sound system, no longer relying on the pronunciation of Duxianqin body itself. Simply install a suitable pickup and connecting jack on the original Duxianqin body, connect it to the speaker through a connecting cable, and you can play beautiful music. Compared to traditional bamboo and wooden Duxianqin, electric Duxianqin is not only convenient to carry, but also has a more stable sound quality, which is becoming more and more popular among people.

The production process of Duxianqin has gradually been standardised. Craftsmen have set strict standards for the selection of instruments' materials,

processing, assembly and tuning to ensure that the quality and tone of each and every one of these instruments reaches an ideal state. The introduction of new technologies such as machining and modern measuring tools has not only improved the efficiency of the production process, but also significantly enhanced the precision and sound quality of Duxianqin. The introduction of modern technology has also had a positive impact on the production process of Duxianqin, but the transmission of manual skills remains an important part of Duxianqin production. The craftsmen continue to innovate and improve the production of Duxianqin by combining the traditional handcraft skills with modern technology through masters and apprenticeships.

These research results are consistent with the following scholars:

1) The introduction of metal instruments' materials was an important innovation in the production of modern single string Duxianqins. Especially in the production of strings, there has been a gradual shift from traditional silk strings to steel wire strings. The use of steel wire strings increases the tension and durability of the strings, making the tone of Duxianqin brighter and clearer. Metal instruments' materials are also used for the decoration and support structure of Duxianqin body, enhancing the overall stability and aesthetics of Duxianqin. (Yan Hongfang, 1993)

2) From the late 19th century to the mid-20th century, the instruments' materials and techniques used in the production of the Guangxi Jing ethnic Duxianqin underwent significant changes and developments. The diversification and quality improvement of wood selection, the improvement and standardization of qin making technology, as well as the introduction of new instruments' materials and composite instruments' materials, have jointly promoted the technological progress and artistic expression of the Duxianqin. The changes during this period not only improved the sound quality and durability of the Duxianqin, but also enriched its cultural connotations and forms of expression. (Zhang Can, 2012)

3) The introduction of metal instruments' materials was an important innovation in the production of modern single string Duxianqins. Especially in the production of strings, there has been a gradual shift from traditional silk strings to steel wire strings. The use of steel wire strings increases the tension and durability of the strings, making the tone of Duxianqin brighter and clearer. Metal instruments' materials

are also used for the decoration and support structure of Duxianqin body, enhancing the overall stability and aesthetics of Duxianqin.(Yan Hongfang ,1993)

7.3.1 Discussion on examine the guideline of transmission of Duxianqin of Jing ethnic group in Guangxi, China.

Through literature review, field investigation, and questionnaire survey, researchers found that:the art of the Duxianqin of the Jing ethnic group in Guangxi, as a national intangible cultural heritage, has evolved from relying mainly on document collection and museum records in its early stages to a diversified stage of promotion and protection today. With the support of policies and funding, the promotion, improvement, protection, and dissemination of the art of the single string instrument have been continuously strengthened, becoming a key force in promoting the transmission and development of this art form in the field of education.

Since being listed as a national intangible cultural heritage in 2011, the Jing ethnic group Duxianqin has played an increasingly important role under the protection of the government. From the formulation of laws and regulations to the dissemination guidelines at all levels, it reflects the importance attached to this traditional art form. By organizing cultural and artistic festivals, utilizing traditional and new media, hosting live performances, and participating in cultural exchange activities, the influence of the Jing ethnic group Duxianqin has been further expanded.

In the process of dissemination, family transmission, school education and training, and online communication all play important roles. The Internet provides a broad platform for the spread of solo art, but there are also problems such as non-standard teaching content. Therefore, establishing a professional certification mechanism and strengthening the dissemination of cultural atmosphere are particularly important.

These research results are consistent with the following scholars:

1) In order to meet the development needs of the market, the development of Guangxi ing ethnic group Duxianqin sometimes becomes overly commercialized. What is needed to preserve the artistic value of the Jing ethnic group Duxianqin is its unique regional culture and style. From the development process of the Jing ethnic group Duxianqin, we should adhere to the traditional form as the center and then integrate it into modern music. Therefore, in the protection work, we should call for the

help of the local government to establish and improve the materials for playing the Duxianqin, so as to make the protection system of Guangxi Jing ethnic group Duxianqin three-dimensional, comprehensive, and ecological. Only by effectively protecting the original flavor of the Jing ethnic group Duxianqin can the eternal vitality of the Jing ethnic group Duxianqin be maintained. (Su Haizhen, 2023)

2) The protection of the Guangxi Jing ethnic group Duxianqin is essentially the protection of artistic diversity. From the perspective of art dissemination and evolution, protecting artistic diversity is crucial. The Guangxi Jing ethnic group Duxianqin, as the most important part of Jing culture, is currently in a dilemma. Its protection and development will also help promote and maintain artistic diversity. (Yin Ming, 2012)

3) The introduction of Duxianqin art into schools not only helps cultural transmission, but also enriches students' art education and promotes the protection and development of national culture. By teaching Duxianqin in schools, students can gain a deeper understanding of and experience the traditional culture of their own nation, and enhance their sense of identity and pride in their own culture. (Wei Qian, 2022)

7.3 Suggestion

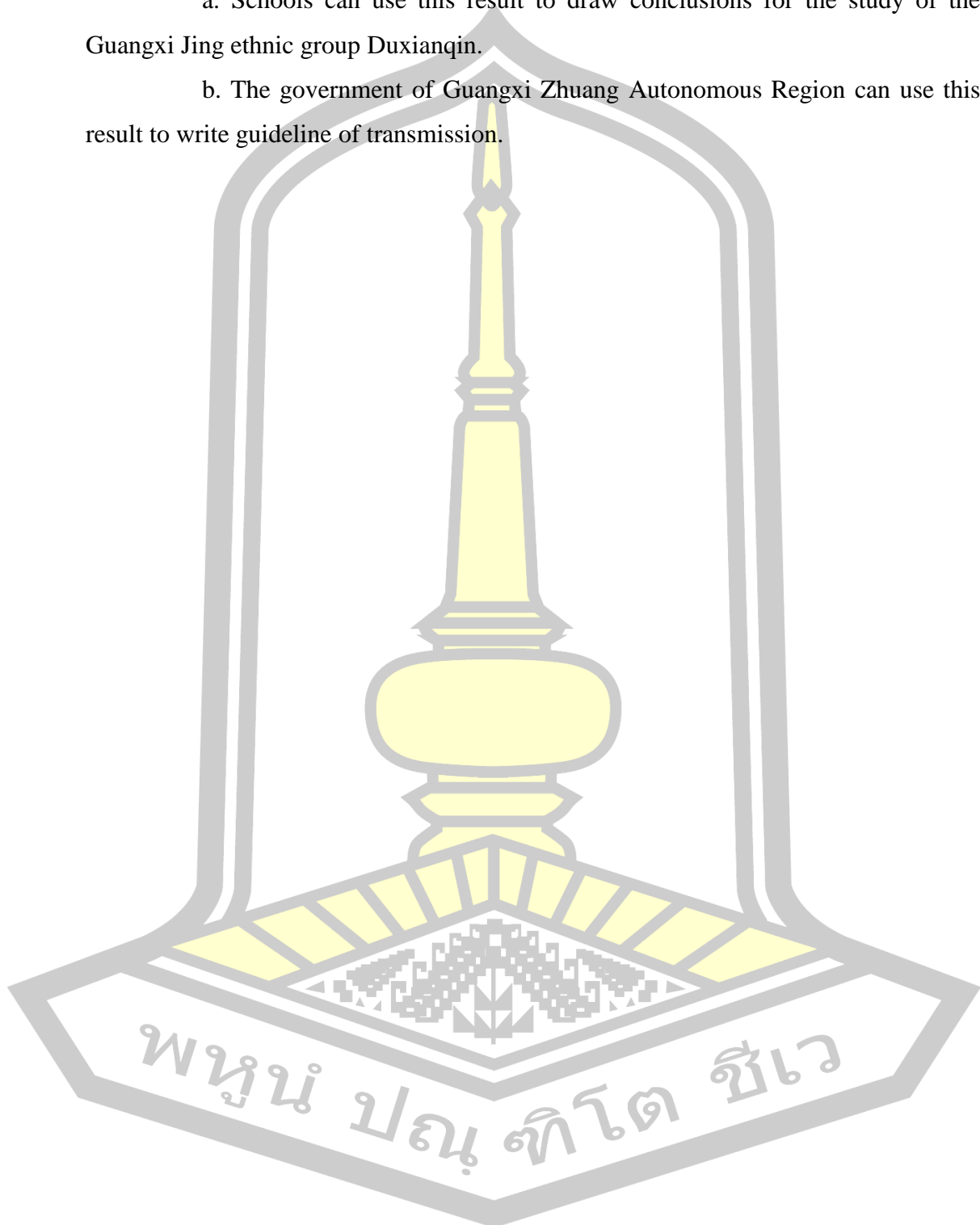
This article provides a systematic analysis of analysis of the development, musical characteristics, protection, and dissemination of the Guangxi Jing ethnic group Duxianqin. The researchers propose the following suggestions for further research and application:

1) Suggestion for the further research:

- a. Transforming the mindset of school management and teacher groups, strengthening and expanding the training of single string instrument teachers.
- b. Further analysis can be conducted on the forms of large-scale ensemble performances in Guangxi Jing ethnic group Duxianqin music, as well as joint performances with other instruments or Jing ethnic group dances.
- c. Further analysis can be conducted on the difficulties encountered in the protection and dissemination of the Guangxi Jing ethnic group Duxianqin.

2) Suggestion for the applying:

- a. Schools can use this result to draw conclusions for the study of the Guangxi Jing ethnic group Duxianqin.
- b. The government of Guangxi Zhuang Autonomous Region can use this result to write guideline of transmission.



REFERENCES

- Bai Aiping. (2023). The Social Rhythm and Social Order Construction of the Jing ethnic group Ha Festival in Guangxi Guixue Research (02), 86-95.
- Bian Jiang. (2000). Duxianqin string harp of the Jing ethnic group, China Nature Press.
- Borderland (2000). The Duxianqin of the Jing ethnic group Chinese Nationalities (09), 51
- Chen Liqin A Study on the Art Ecology of the Jing ethnic group Duxianqin [J] Journal of Guangxi University for Nationalities (Philosophy and Social Sciences Edition), 2013, 35 (02): 84-89
- Chen Liqin A Study on the Art Ecology of the Jing ethnic group Duxianqin [J] Journal of Guangxi University for Nationalities (Philosophy and Social Sciences Edition), 2013, 35 (02): 84-89
- Doker Baba website. (2012). Melody on a string-the principle of Duxianqin, from the Dobaba website.
- Hao Shijie, Liu Xueying, Jiang Yunle&Zhang Chunyan. (2023). Research and teaching development of traditional ethnic clothing culture of the Jing ethnic group Western Leather (09), 61-63
- Hou Xinru. (2021). The Traditional Ethnic Musical Instruments of the Jing ethnic group- -The Encyclopedia of China. The Encyclopedia of China Publishing House.
- Hua Wei&Zhong Hai. (2022). timbre analysis and sound source design of the Jing ethnic group Duxianqin - an experiment based on computer music technology Music and Art (Journal of Shanghai Conservatory of Music) (01), 109-121+5
- Huang Feifei. (2023). Research on the Translation and Introduction of Jing Ethnic "Ha Festival" Culture from the Perspective of Language Services Comparative Study on Cultural Innovation (32), 166-169+188
- Huang Quan. (1998). Manufacturing and playing of the Jing ethnic group nationality Duxianqin, Art Exploration Press.
- Huang Yu. (2021). Research on Musical Instruments to oral history, The Art Discovery Press.
- Huang Zhihao. (2008). The Form and Improvement of Duxianqin Art Exploration (06), 54-56
- Lai Shijuan. (2013). Analysis of the "Three Uniquenesses" of Duxianqin Ethnic Music (02), 61-62.

- Lan Ying&Wei Yuying. (2023). Analysis of the transmission of Intangible Cultural Heritage of the Jing ethnic group in Guangxi from the Perspective of Cultural Ecology Journal of Wuxi Vocational and technical College of Commerce (03), 76-80 Doi: 10.13659/j.cnki.wxsy.2023.03.007
- Li Jiahui. (2020). Research on the Cultural Communication of Jing ethnic group (Master's Thesis, Guangxi University for Nationalities) https://kns.cnki.net/kcms2/article/abstract?v=bnuN6dG7iIAijG0F-22MLW5Jp1UhK2ucK_5W4PoSxVNjYOz4xc0C7gnZRb6eqLrxbILB5bSlMousjHUoBlntMwdLFD92YI-UjX7paEO-A3wVkunRauehE-cNmZdB8DCKIQkeffCy0=&uniplatform=NZKPT&language=CHS
- Li JunMing.(2017).Economic Development and Cultural Change in Beijing, Huazhong University of Science and Technology Press.
- Li Keliang. Su Haizhen. (2023). Build national consensus and strengthen the protection and transmission of national cultural heritage,Culture Monthly Press.
- Li Lingwei, Wen Beilei, Liu Jingyi, Xiang Jing. (2018). On the living transmission of cross-border national Musical Instruments,Communication and Copyright Press.
- Li Tong. (2021). Research on Traditional Clothing Culture of the Jing Ethnic Group in Guangxi Textile Report (07), 109-110
- Li WenRong.(2020).Ancient and modern Musical Instruments of the same name (15) - Duxianqin, Philosophy and Humanities journal issue
- Liao Mingjun. (2009). Jing ethnic group Gehai (06), 131+129-130
- Liu Yiwen. (2021). The Past and Present Life of the Duxianqin: A Study on the Origin and transmission Strategies of Jing Ethnic Characteristic Musical Instruments Drama Film Monthly (03), 57-60
- Lolita. (2022). The Cultural Connotation and Generative Mechanism of Dietary Customs in Chinese and Vietnamese Jing ethnic group Folk Songs Journal of Baise University (05), 61-68 Doi: 10.16726/j.cnki.bsxb.2022.05.006
- Lu Kegang, Yang Xiuzhao&He Hong. (1984). The Pronunciation Principle of Solo and Exploration of Two Tones Instruments (03), 7-8
- Luo Qin. (2011). Introduction to the Theory and Methods of Music Anthropology [M]. Shanghai Conservatory of Music Press, 2011 (pages 68-80)

- Mi SongHua.(2008).ing ethnic group Duxianqin performance technique and its unique charm come from the Ethnic Art Institute of Guangxi University of Arts.
- Pan JiangNing .(2010).Application of basic performance method in the left hand pitch of single string instrument. The Grand Stage Press.
- Qi Jianling. (2019). Rebuilding Cultural Confidence and Inspiring National Spirit - The Process and Effect of Cross Cultural Communication of the Jing Ethnic Group in 70 Years Journal of Nanning Normal University (Philosophy and Social Sciences Edition) (05), 8-13 DataType: 1
- Shen Qia. (1986). Introduction to Research Methods in Ethnomusicology [Part 1] [J] Chinese Musicology, 1986, (01): 62-77 DOI: 10.14113/j.cnki.cn11-1316/j.1986.01.009
- Shi Heng. (2016). Research and Identification of the Origins of the Jing Duxianqin Northern Music (21), 6-7+9
- Song Tang. (2007). Investigation and study of Jing ethnic group Duxianqin, Gehai Press.
- Song Xintai. (2013). Western Border Town - Dongxing, Guangxi Junior High School Student Counseling (Z3), 87-89
- Su Fan. (2002). Exploration of the art of Guangxi Jing ethnic group, Root ts Press.
- Sun Jin. (2020). Guarding and Changing: The Jing Ethnic in Cultural Changes [J]. Sichuan Drama, 2020 (09): 97-101. Data Type: 1
- Tian Yaonong. (2014). Introduction to Traditional Chinese Music Theory [M]. People's Music Publishing House, 2014
- Wang Neng. (2006). Writing and performance of Jing ethnic group Duxianqin music ,Gehai, Press.
- Wang Xuequn & Huang Ying. (2023). Creating a Model for Border Ethnic Areas to Strive for Common Prosperity. Guangxi Fangchenggang promotes high-quality development of the "three islands of the Jing ethnic group" Chinese Nationalities (09), 47-49
- Wei Qian. (2022). transmission and development of the art of Guangxi under the leadership of intangible cultural heritage policy ,Art View Press.
- Wu Guodong. (2012). Introduction to Ethnomusicology (Revised Edition) [J]. Music Research, 2012 (03): 99. DOI: CNKI: SUN: MUSI.0.2012-03-018
- Xiao Wenpu, Wan Rong. (2020). Research on network Communication of Jing ethnic group solo Opera Art under the initiative of "Belt and Road" , Gehai Press.

- Xu Pengcheng (2019). "transmission and Development of Jing Ethnic Songs under the Economic Tide" - An Analysis of the Example of Vernacular Mountain Songs Northern Music (23), 50-51
- Yan Hongfang. (1993). Duxianqin string harp of the Jing ethnic group,China Nature Press.
- Yan Hongfang. (1993). The Duxianqin of the Jing ethnic group Chinese Nationalities (05), 46
- Yang Dongyan. (2009). The oceanic characteristics and social significance of Jing ethnic dance Gehai (05), 68-70
- Yin Ming. (2012). Jing ethnic group Duxianqin harp art,Gehai Press.
- Zhang Can, Zhang Qianyun. (2016). Sound of Jing ethnic group color music on the China-Vietnam border ,The Northern Music Press.
- Zhang Can. (2009). Analysis of Duxianqin, and Duxianqin Art Exploration (06), 43-45
- Zhang Can. (2012). Jing ethnic group alone in the source of the new examination,Gehai Press.
- Zhao Minglong. (2019). The Origin and Formation of the Jing Ethnic Group in Vietnam - Part Seven of the Luo Yue Culture Research Series Journal of Guangxi Socialist University (04), 93-10.
- Zhao Yangjun. (2023). Cultural Embedding and Dissemination in a Multiethnic Settlement. 223. Guangxi University, MA Thesis
- Zheng Yan. (2019). Research on the Education and transmission of Jing Ethnic Folk Songs in the Information Age (2019) Digital World (03), 106-107
- Zhong ShiHua.(2023).The Guangxi Ethnic Minority Literature and the Construction of the Chinese National Community Consciousness,Guangxi National News Press.
- Zhou Ru. (2021). The transformation study of non-genetic transmission model, Journal of Guangxi Normal University of Science and Technology.
- Zhou Wenjuan. (2004). Exploring the Mysteries of Duxianqin Instrument (01), 50-51

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APPENDIX

In a survey on the preservation and transmission process of the Jing ethnic group Duxianqin in primary and secondary schools in Dongxing City, Guangxi, a total of 300 teachers and students participated in the questionnaire survey.

Table 17. Age segmentation

		Age groups			
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	6-9 years	26	15.3	15.3	15.3
	10-15 years	43	17.7	17.7	33.0
	15-19 years	54	17.7	17.7	50.7
	20-30 years	57	18.0	18.0	68.7
	31-40 years	53	15.7	15.7	84.3
	41+	67	15.7	15.7	100.0
	(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the age group survey on the level of understanding of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

-26 respondents in the 6-9 age group reported having an "effective understanding" of Duxianqin, accounting for 15.3% of this age group, with a cumulative percentage of 15.3%.

-43 respondents in the 10-15 age group expressed understanding, accounting for 17.7% of this age group, with a cumulative percentage of 33.0%.

-54 respondents in the 15-19 age group expressed understanding, accounting for 17.7% of this age group, with a cumulative percentage of 50.7%.

-57 respondents in the 20-30 age group expressed understanding, accounting for 18.0% of this age group, with a cumulative percentage of 68.7%.

-53 respondents in the age group of 31-40 expressed understanding, accounting for 15.7% of this age group, with a cumulative percentage of 84.3%.

-67 respondents in the age group of 41 and above expressed understanding, accounting for 15.7% of this age group, with a cumulative percentage of 100%.

From these data, it can be seen that as age increases, the number of respondents who "effectively understand" Duxianqin first increases to the highest point in the 20-30 age group, and then gradually decreases. This may indicate a higher level of understanding of the Jing ethnic group Duxianqin among younger age groups, which may be due to their exposure to more content about traditional culture in the education system or learning about this instrument through social media and other channels.

Overall, there were 300 respondents from all age groups, making up the entire sample for this survey. These data have reference value for understanding the cognition and interest of different age groups in the culture of the Jing ethnic group Duxianqin, which helps to design more targeted content in cultural promotion and educational activities, ensuring that different age groups can be attracted to participate. At the same time, this information may also suggest that cultural institutions and educators need to adopt different promotion strategies in different age groups to ensure that the transmission of the Jing ethnic group Duxianqin can cover all age groups and be effectively promoted.

Table 18. Distinguishing between the sexes

Distinguishing between the sexes					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	man	147	50.7	66.3.7	35.7
	women	153	49.3	33.7	64.3
(grand total)		300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In a gender specific survey on the level of understanding of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

-147 male respondents stated that they "effectively understood" Duxianqin, accounting for 50.7% of the total respondents, with an effective percentage of 66.3% (the value of the effective percentage may be incorrect here, as it should usually be the

same as the percentage, unless there is a specific calculation method, which may be due to data entry errors).

-153 female respondents reported having "effective understanding" of Duxianqin, accounting for 49.3% of the total respondents, with an effective percentage of 33.7% (similarly, the value of the effective percentage may be incorrect).

The cumulative percentage shows that male and female respondents have a similar level of understanding of Duxianqin, with slightly more males than females. This indicates that there is no significant gender difference in understanding of the Jing ethnic group Duxianqin, and both sexes have a certain understanding of this traditional instrument.

Overall, male and female respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the cognition and interest of different genders in the culture of the Jing ethnic group Duxianqin, which can help design more inclusive content in cultural promotion and educational activities, ensuring that different gender groups can be attracted to participate.

Table 19. A Survey on the Knowledge of the Duxianqin

Knowledge of the Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	Not really.	81	27.0	27.0	27.0
	realise	71	23.7	23.7	50.7
	understand	70	23.3	23.3	74.0
	something				
	Not at all.	78	26.0	26.0	100.0
(grand) total		300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the knowledge level of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

-81 respondents expressed "not very familiar" with Duxianqin, accounting for 27.0% of the total respondents, with a cumulative percentage of 27.0%.

-71 respondents expressed some understanding of Duxianqin, accounting for 23.7% of the total respondents, with a cumulative percentage of 50.7%.

-70 respondents expressed some understanding of Duxianqin, accounting for 23.3% of the total respondents, with a cumulative percentage of 74.0%.

-78 respondents stated that they have "no understanding" of Duxianqin, accounting for 26.0% of the total respondents, with a cumulative percentage of 100%.

From these data, it can be seen that there is a certain distribution of respondents' understanding of Duxianqin, with slightly more respondents indicating "not knowing at all", while the number of respondents indicating "knowing some" and "having some knowledge" is relatively small. This may indicate that although some respondents have some understanding of the Duxianqin, there is still a considerable number of respondents who lack knowledge of this traditional instrument.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the public's cognitive level of the Jing ethnic group Duxianqin, which will help relevant institutions pay more attention to improving public awareness and understanding of Duxianqin in future cultural education and promotion activities. At the same time, this information may also suggest that cultural institutions and educators need to make more efforts in popularizing knowledge of the Duxianqin, in order to ensure that this traditional art form can be more widely preservation and transmission.

Table 20. Investigation Results on the Historical Background of Duxianqin

Understanding the cultural and historical background of the Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	unknown	87	29.0	29.0	29.0
	learn about	115	38.3	38.3	67.3
	understand something	98	32.7	32.7	100.0
	(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the level of understanding of the culture and historical background of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

-87 respondents expressed a lack of understanding of the cultural and historical background of Duxianqin, accounting for 29.0% of the total respondents, with a cumulative percentage of 29.0%.

-115 respondents expressed some understanding of the cultural and historical background of Duxianqin, accounting for 38.3% of the total respondents, with a cumulative percentage of 67.3%.

-98 respondents expressed some understanding of the cultural and historical background of Duxianqin, accounting for 32.7% of the total respondents, with a cumulative percentage of 100%.

From these data, it can be seen that the respondents' understanding of Duxianqin's cultural and historical background is relatively evenly distributed, with slightly more respondents indicating "some understanding", while a considerable proportion of respondents indicating "no understanding" and "some understanding". This may indicate that although some respondents have a certain understanding of the cultural and historical background of the Duxianqin, there is still a considerable number of respondents who lack knowledge of the deep cultural significance of this traditional instrument.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the public's level of awareness of the culture and historical background of the Jing ethnic group Duxianqin, and will help relevant institutions to pay more attention to improving the public's understanding and knowledge of Duxianqin culture and historical background in future cultural education and promotion activities. At the same time, this information may also suggest that cultural institutions and educators need to make more efforts in deepening the cultural and historical knowledge of Duxianqin to ensure that this traditional art form can be more widely understood and protected.

Table 21. Investigation Results on the Transmission Channels of Duxianqin

		The transmission route of Duxianqin			
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	School curriculum teaching	66	22.0	22.0	22.0
	Government promotion	47	15.7	15.7	37.7
	online platform	50	16.7	16.7	54.3
	Theatrical performance	48	16.0	16.0	70.3
	Community activities	41	13.7	13.7	84.0
	festival	48	16.0	16.0	100.0
	(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the transmission channels of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that different transmission channels have different contributions to the respondents' understanding of Duxianqin:

-School curriculum teaching is the main way of dissemination, with 66 respondents stating that they have "effectively learned" about Duxianqin through this method, accounting for 22.0% of the total respondents and a cumulative percentage of 22.0%.

-Government promotion activities also have a significant impact, with 47 respondents indicating that they learned about Duxianqin through government promotion, accounting for 15.7% and a cumulative percentage of 37.7%.

-As a modern communication tool, 50 respondents stated that they learned about Duxianqin through online platforms, accounting for 16.7% and a cumulative percentage of 54.3%.

-Theater performances are also an important means of dissemination, with 48 respondents indicating that they learned about Duxianqin through watching theater performances, accounting for 16.0% and a cumulative percentage of 70.3%.

-Community activities have also played a certain role in the dissemination of Duxianqin. 41 respondents reported that they learned about her through community activities, accounting for 13.7% and a cumulative percentage of 84.0%.

-As a part of traditional cultural activities, 48 respondents reported learning about Duxianqin through festival celebrations, accounting for 16.0% and a cumulative percentage of 100%.

Overall, school curriculum teaching and theater performances are the main ways for respondents to learn about Duxianqin, while government promotion, online platforms, community activities, and festival celebrations have also played a positive role in spreading Duxianqin. These data are of great significance for understanding the dissemination efficiency and influence of the Jing ethnic group Duxianqin, which will help relevant institutions pay more attention to these effective dissemination channels in future cultural dissemination strategies. At the same time, it also suggests the need to strengthen work on other potential dissemination channels to enhance public understanding and interest in the Jing ethnic group Duxianqin.

Table 22. Survey results on whether 300 teachers and students are willing to participate in the preservation and inheritance activities of Duxianqin

Are you willing to participate in the preservation and transmission activities of Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	willing	196	53.0	53.0	53.0
	unwilling	104	47.0	47.0	100.0
	(grand total)	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the willingness to participate in the preservation and transmission activities of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that:

-196 respondents expressed their willingness to participate in the preservation and transmission activities of Duxianqin, accounting for 53.0% of the total respondents, with an effective percentage of 53.0%.

-104 respondents expressed unwillingness to participate, accounting for 47.0% of the total respondents, with an effective percentage of 47.0%.

The cumulative percentage shows that the attitudes of the respondents towards participating in the preservation and transmission activities of Duxianqin are roughly divided into two halves, with slightly more respondents willing to participate than unwilling to participate. This indicates that more than half of the people hold a positive attitude towards protecting and inheriting this traditional musical instrument, which is a positive signal that there is a certain foundation and potential among the public to support and promote the preservation of the Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the level of public support for the preservation and transmission activities of the Jing ethnic group Duxianqin, which will help relevant institutions to pay more attention to mobilizing and utilizing public participation willingness in future preservation and transmission strategies. At the same time, it also suggests the need to make more efforts to improve public participation and enthusiasm.

Table 23. Survey Results on the Challenges Faced by the Inheritance of Duxianqin

The challenges faced by the transmission of Duxianqin					
		frequency	per cent	Effective percentage	Cumulative percentage
efficiently	Cultural influence	58	19.3	19.3	19.3
	Shortage of teaching staff	71	23.7	23.7	43.0

Lack of publicity	58	19.3	19.3	62.3
shortage of capital	54	18.0	18.0	80.3
Few students	59	19.7	19.7	100.0
(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on the challenges faced by the transmission of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that respondents believe that the main challenges facing the transmission of Duxianqin include:

-Cultural influence: 58 respondents believe that cultural influence is a challenge for the transmission of Duxianqin, accounting for 19.3% of the total respondents, with a cumulative percentage of 19.3%.

-Teacher shortage: 71 respondents believe that teacher shortage is the main challenge for transmission, accounting for 23.7% of the total respondents, with a cumulative percentage of 43.0%.

-Insufficient publicity: 58 respondents believe that insufficient publicity is a problem, accounting for 19.3% of the total respondents, with a cumulative percentage of 62.3%.

-Shortage of funds: 54 respondents believe that shortage of funds is a barrier to transmission, accounting for 18.0% of the total respondents, with a cumulative percentage of 80.3%.

-Lack of students: 59 respondents believe that a small number of students is a problem of transmission, accounting for 19.7% of the total respondents, with a cumulative percentage of 100%.

From these data, it can be seen that teacher shortage is considered the most prominent challenge in the transmission of Duxianqin, followed by insufficient publicity and cultural influence. Shortage of funds and a small number of students are also considered to pose challenges to transmission activities. These challenges are interrelated and jointly affect the transmission and development of Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the problems encountered in the transmission process of the Jing ethnic group Duxianqin, and will help relevant institutions to pay more attention to solving problems such as teacher qualifications, funding, publicity, and cultural adaptability in future preservation and transmission strategies. At the same time, this information may also suggest that cultural institutions and educators need to take action in these key areas to ensure the continuity and strengthening of the transmission of Duxianqin.

Table 24. How to improve the dissemination survey results of Duxianqin

How to improve the transmission of Duxianqin				
	frequency	per cent	Effective percentage	Cumulative percentage
Education Promotion	63	21.0	21.0	21.0
Government Support	56	18.7	18.7	39.7
internet communication	69	23.0	23.0	62.7
Community activities	43	14.3	14.3	77.0
Festival Celebration	69	23.0	23.0	100.0
(grand) total	300	100.0	100.0	

Based on the provided data, we can summarize as follows:

In the survey on improving the transmission effect of the Jing ethnic group Duxianqin, a total of 300 respondents participated. The survey results show that respondents believe that the following methods can effectively improve the transmission of Duxianqin:

1. Education Promotion: 63 respondents believe that education promotion can effectively improve the transmission of Duxianqin, accounting for 21.0% of the total respondents, with a cumulative percentage of 21.0%.

2. Government support: 56 respondents believe that government support is crucial for the transmission of Duxianqin, accounting for 18.7% of the total respondents, with a cumulative percentage of 39.7%.

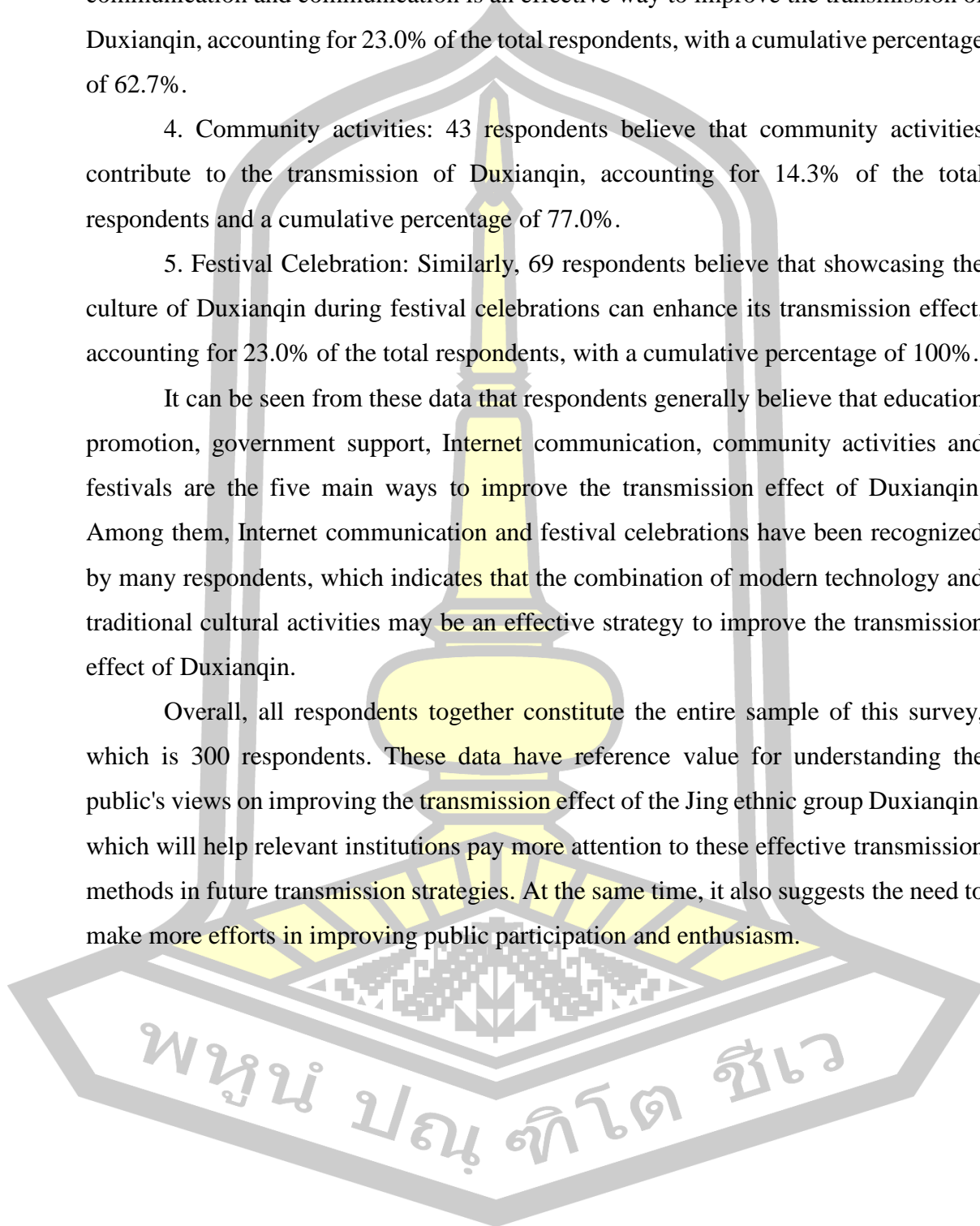
3. Internet communication: 69 respondents believe that using the Internet for communication and communication is an effective way to improve the transmission of Duxianqin, accounting for 23.0% of the total respondents, with a cumulative percentage of 62.7%.

4. Community activities: 43 respondents believe that community activities contribute to the transmission of Duxianqin, accounting for 14.3% of the total respondents and a cumulative percentage of 77.0%.

5. Festival Celebration: Similarly, 69 respondents believe that showcasing the culture of Duxianqin during festival celebrations can enhance its transmission effect, accounting for 23.0% of the total respondents, with a cumulative percentage of 100%.

It can be seen from these data that respondents generally believe that education promotion, government support, Internet communication, community activities and festivals are the five main ways to improve the transmission effect of Duxianqin. Among them, Internet communication and festival celebrations have been recognized by many respondents, which indicates that the combination of modern technology and traditional cultural activities may be an effective strategy to improve the transmission effect of Duxianqin.

Overall, all respondents together constitute the entire sample of this survey, which is 300 respondents. These data have reference value for understanding the public's views on improving the transmission effect of the Jing ethnic group Duxianqin, which will help relevant institutions pay more attention to these effective transmission methods in future transmission strategies. At the same time, it also suggests the need to make more efforts in improving public participation and enthusiasm.



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