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AN INVESTIGATION OF TEACHING HOW TO CREATE STRING INSTRUMENTS OF THE ZHUANG NATIONALITY IN GUANGXI CHINA

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Abstract

This study uses the qualitative research method to interview of key informants on the field work and collect a lot of data, which is then sorted and analyzed. The objectives were to 1) Investigation of teaching how to create stringed instruments of Zhuang nationality in Guangxi, China. 2) Examine the role and function of the stringed instruments of Zhuang nationality in Guangxi, China. There are 6 Key informant. The research process is literature research, field investigation method, observation method, interview method and questionnaire method. The research result are as follows: 1) The teaching how to create, it is the production methods and improvement ideas of Zhuang stringed instruments are all derived from the basic concepts of musical instrument production, and these concepts are also the core concepts gradually summarized in the long history of musical instrument development. When these circumstances change, the core philosophy of instrument making is bound to change with it. 2) In the part of the role and function from different angles, the cultural and entertainment functions, folk ritual functions, stage art functions, and ethnic cultural exchanges of Zhuang stringed instruments and also a tool for the performer to entertain. The musical instruments become the medium of communication between people and gods have the function of folk rituals. These functions and roles of Zhuang stringed instruments do not exist in isolation in many cases but coexist.

Keywords: Investigation, String instruments, Zhuang nationality, Guangxi China

1. Introduction

Guangxi is in the south of China, bordering on Vietnam and adjacent to Guangdong, Yunnan, Guizhou, Hunan, and other provinces. Guangxi is an autonomous region inhabited by many ethnic groups, among which Zhuang nationality is the largest minority in Guangxi. They mainly live in Nanning, Liuzhou, Chongzuo, Baise, Hechi and Laibin in the central and western regions of Guangxi Province.

Zhuang nationality is a nation that is good at singing and dancing. The national musical instruments they use have a long history, and some of them have developed to a very high



level. Especially, there are many kinds of stringed instruments with high production skills, which are widely used in Zhuang music, mainly including Maguhu, Tuhu, Huluhu, Jiaohu, etc. These instruments are usually used by Zhuang Opera band (Zhuang Opera refers to Zhuang Folk Opera) and Bayin band (Bayin band refers to a Zhuang folk instrumental combination), so they are mainly distributed in the popular places of Zhuang Opera in Western Guangxi. Among these instruments, Maguhu occupies the most important position. It has a high level of development, and it is also the most widely used in music, and it is also the most popular among people, because Maguhu is the only string instrument of Zhuang nationality that can be played alone. In addition, other string instruments can only play accompaniment roles in Zhuang Opera or Zhuang Bayin band. There are few records about when the string instruments popular in Guangxi Zhuang area began. However, there is a noteworthy situation, that is, among the existing musical instruments used by the Zhuang people in Guangxi, there are not only stringed instruments in a relatively primitive state, but also relatively perfect varieties in the degree of development and evolution. From this, we can directly see the development process of string instruments from simple to complex, from rough to perfect (Chapman, 1984; Xiuzhao et al, 1989; Stock, 1993; Liu et al., 2020; Zhong et al., 2021).

From July to September 2019, the talent training course of Guangxi characteristic musical instrument production, a project of China National Art Fund, was held in Nanning, and I was lucky to be admitted as a student. During the three months of study, we went to folk music collection for many times to learn the production and performance technology of Zhuang stringed instruments from folk artists and inheritors, and successfully held instrument exhibitions and concerts, with great gains. While feeling the great artistic charm of Zhuang stringed instruments, it also stimulated my interest in further study and research of Zhuang stringed instruments (Zhang et al., 2015; Shi, 2015).

Unfortunately, these stringed instruments have not attracted the attention of academia for a long time because they have been popular in the countryside and lack comprehensive and systematic research (Lubar, 1997; Imfeld et al., 2009). In the process of its inheritance and development, there are still some prominent problems, such as a single inheritance structure, insufficient resources, fragile inheritance system, weak implementation of intangible cultural heritage protection projects, etc. Although it has received more attention than in the past, it has not changed the practical dilemma of its lost fault. (Tengteng, 2020)

Although with the support of the intangible cultural heritage project, the local management department has taken some protective measures, such as organizations related to the spread of string music and the opening of String playing courses in some primary and secondary schools, the development status of stringed instruments of Zhuang has not changed substantially. Because the development of musical instrument culture is the result of the joint action of many links, such as the inheritance of production technology, performance techniques, music creation, dissemination and promotion, theoretical research and so on. The lack of any link in this cultural ecological chain will bring difficulties to the cultural inheritance of Zhuang stringed instruments (Zhang et al., 2021; Yu et al., 2021; Yige, 2022).

Based on the foregoing, this paper will concentrate on the issues that have arisen in the development of Zhuang stringed instruments and will offer suggestions and solutions to these issues so that these instruments can better inherit and develop in the future and produce more distinctive music.

2. Research objectives

2.1 To investigate of teaching how to create stringed instruments of Zhuang nationality in Guangxi, China.

2.2 To examine the role and function of the stringed instruments of Zhuang nationality in Guangxi, China.

3. Review literature

3.1 The Development History of Zhuang String Musical Instruments

Yang Xiuzhao and Lu Kegang pointed out in their book "textual research on musical instruments of ethnic minorities in Guangxi" that there are many Zhuang musical instruments with relatively complete categories, especially string instruments, which have many kinds, fine production, and wide application. The main musical instruments are: Maguhu, Tuhu, Qing Hu, Zhutonghu, etc. All ethnic minorities in Guangxi have no standardized and unified writing in history and lack relevant historical records of various musical instruments of their own. In this case, the exploration of the origin of Guangxi minority musical instruments can only be inferred from the shape, structure, performance, playing mode, playing repertoire and other aspects of the existing musical instruments. Overall, Zhuang stringed instruments were produced later than other kinds of instruments, and there was no record of Guangxi minority stringed instruments in the literature before the Tang Dynasty and Song Dynasty. Although string instruments, which are now popular among ethnic minorities in Guangxi, have their own characteristics in shape, structure and use methods, they have many similarities with similar instruments recorded in ancient Chinese documents. Judging from the above basis, the string instrument of Zhuang nationality may be a modified imitation instrument. Zhuang's Maguhu, Qing Hu, Tu Hu, Zhutonghu, Huluhu, Maguhu and other musical instruments all originated from Xi Qin in ancient China, but their evolution and development degree are very different, which can be said to be a microcosm of the development history of musical instruments of ethnic minorities in Southern China. (Xiuzhao et al, 1989; Yuming et al., 2004; Rees, 2010).

The bow string instrument first appeared in the late Tang Dynasty in ancient China. It was named Xi Qin. It was used by the Xi nationality, a minority nationality living in the north of China at that time. The Tang Dynasty documents only mention Xi Qin but do not make detailed records. Therefore, the understanding of Xi Qin's shape and characteristics can only be based on the images and words in the "Yueshu" compiled by Chen Yang in the Song Dynasty. According to Chen Yang's Book: Xi Qin is an ethnic instrument in the north. It originated from a plucked musical instrument named Xiantao. When playing, it uses bamboo pieces to clip between the two strings to make sounds. In the Song Dynasty, a bow made of horsetail appeared. The bow made of horsetail gradually replaced the bamboo piece, which was regarded as a real string instrument. Since the late Ming and early Qing Dynasties, string instruments have flourished and developed along with opera, quyi and instrumental ensemble, and gradually differentiated, with many derivative string instruments emerging. First, in order to match the localization characteristics of opera singing style, Banhu with bright voice and high-pitched voice appeared in all parts of the north. And Jinghu, which accompanies Beijing Opera. At the end of the Qing Dynasty, Zhuihu appeared as an accompaniment to Henan Zhuizi. In addition, there are living fossils of music culture -- the string instrument Erxian used by Fujian Nanyin. During this period, String instruments were not only widely used in Han areas, but also spread to minority areas. For example, in the Tibetan region in western Sichuan Province, local folk artists made Jiaohu from a tube made of ox horn, which later spread to Qinghai, Gansu and other regions. In the late Qing Dynasty, based on the stringed instruments of the Han nationality, the accompaniment instrument of the Yi nationality, the Sanxian, also derived from the Maguhu of the Zhuang nationality, which uses the thigh bone of a horse as its tube. (Mackerras, 1992; Ding, 2017; Xiaolan, 2020)

Mr. Yang Yinliu, a music historian, also discussed the history and evolution of Chinese stringed instruments. He said: "In the Qing Dynasty, in addition to the original traditional stringed instrument, Erhu, there appeared Sihou and Jinghu, which were specially used to accompany Beijing Opera. Many stringed instruments also appeared in ethnic minority areas, such as Maguhu of Zhuang nationality in Guangxi." This shows that Chinese stringed instruments are growing based on their typical Erhu. If the Chinese string instruments were counted from Xiqin in the Tang and Song Dynasties, a variety of string instruments have been gradually derived over thousands of years to meet the needs of the development of local folk music and opera music. In addition to the typical Erhu shape, there are also Zhonghu, Gaohu, Banhu, Jinghu, Jingerhu, Yuehu, Qinhu, etc., as well as the derivative string instruments of Chinese minority music, such as Maguhu, Jiaohu, Huluhu, etc., thus forming hundreds of Chinese string instrument families (Xin, 2015).

3.2 The musical characteristics of Zhuang stringed instruments

Qin Dachuan took the performance of "early spring in Zhuang township" as an example in his paper "a preliminary study on the performance style of Maguhu ", "Early spring in Zhuang township" It is a model of the perfect combination of music creativity in Nanlu Zhuang opera and Beilu Zhuang opera. The first paragraph is based on Nanlu Zhuang Opera, which is a typical opera music. The musical feature is to emphasize the second half of each beat, and the left hand should be widely used on all the second half beats when playing. Through the flexible use of decorative sound and the ingenious combination of 'small bow', the music is vivid, humorous, and enthusiastic, and reflects the vigorous and steady musical style of Nanlu Zhuang Opera at the same time. The middle part of the lyric is based on Beilu Zhuang Opera, which draws lessons from the playing techniques of erhu, the use of longbow and string kneading, and the continuous and fluctuating music processing, which absorbs the singing and lyricism of Erhu performance, making the soft and beautiful musical style of Beilu Zhuang Opera perfect "; "Among a large number of practical decorative sounds, the big second leaning tone and the small third downward sliding tone are a highlight of its unique performance style, forming a strong southern Xinjiang charm. This charm comes from the charm of the tunes and aria in traditional Zhuang dramas" (Dachuan, 2009).

Tan Yong, Xi Lingling and Sun Xiaoli's paper "The Traditional Connotation and Modern Interpretation of Minority Musical Instruments - Analysis of the Works of "Pretty Gillian by the Beilun River" pointed out: "The use of a large number of portamento, vibrato and microphonics in the Maguhu voice is similar to The tactful and tortuous rhythm of Peking music, coupled with its high-pitched and clear timbre and lively and jumping rhythm, form a personal contrast with the solo stringed qin." It has achieved great development through mutual reference and integration"; "greatly enriched the timbre change and performance space of Maguhu" (Yong et al, 2013).

Chen Liming's thesis "Young Loud Voice, Hydrangea Fell - Analysis of the Performance of the Horse Gu Hu Duo "Hydrangea" pointed out: "The music combines the familiar Nanlu and Beilu Zhuang Opera tunes and Zhuang folk songs with minor music and modern music expression techniques. Organically combined, it is a unique innovation to Maguhu's playing style and technique" (Liming, 2015).

Through the above sorting and classification of existing research results, we can clearly see the characteristics and prominent problems of research results in this field. These research results provide direct experience and data reference for my topic and make me more clear about my research problems and objectives.

4. Methodology

This research content includes: the idea to create stringed instruments; the role and function of the stringed instruments; and the way to inherit and protect stringed instruments of Zhuang nationality in Guangxi, China.

4.1 Key informants

The interviewees were chosen in strict accordance with the standards and divided into three groups based on the research requirements: folk artists (inheritors), performers, and theorists. The following are the interviewee selection criteria: Folk artists, inheritors, theoretical research experts, and so on with at least 30 years of experience; the performer has at least 20 years of professional experience and has some clout in the community.

Table 1. The basic information of the key informants

Name	Address	Profession	Age
Huang Yige	Debao County, Baise City, Guangxi Province	representative inheritor of Guangxi Maguhu art	65
Li Xike	Jingxi County, Baise City, Guangxi Province	representative inheritor of Guangxi Zhuang Ba Yin	72
Zeng Dan	Jingxi County, Baise City, Guangxi Province	Folk artist of Maguhu making	58
Chen Kunpeng	Nanning, Guangxi	Performer, theorist, educator	61
Chen Chuncheng	Hezhou City, Guangxi	Maguhu performer, Director of the Opera and Quyi Creation Center of Hezhou Mass Art Museum	38
Xu Yanqin	Jingxi County, Baise City, Guangxi Province	Undergraduate student of music department of Wuzhou University, Zhuang nationality	22

4.2 Research process

The research process is literature research, field investigation method, observation method, interview method.

4.3 Data collecting

4.3.1 Obtained relevant books and materials from Wuzhou University's library and book market, as well as researched relevant documents and data on the Internet.

4.3.2 The Guangxi National Music Museum collected photographs and audio-visual materials of Zhuang nationality stringed instruments and related objects.

4.3.3 The researcher went to Jingxi City, Guangxi, to study the production of stringed instruments of Zhuang nationality and collected stringed instrument production data throughout the learning process.

4.3.4 The researcher went to Debao County and Baise City to interview Mr. Huang Yige, the Guangxi horse-bone art's heir. Following that, I went to Jingxi City, Guangxi, to interview Mr. Li Sike, the inheritor of the Zhuang nationality octave and stringed instruments. Mr. Zeng Dan, the producer During this time, I also conducted telephone interviews with renowned scholar Professor Chen Kunpeng and young performer Ms. Chen Chuncheng, resulting in a wealth of research data.

5. Results

5.1 The teaching how to create stringed instruments

Maguhu, Huluhu, Tuhu, Zutonghu, and Jiaohu are the most common string instruments of Zhuang nationality in Guangxi. These five instruments differ in shape and timbre. This difference is determined by the following materials and production methods:

5.1.1 Development methods of Zhuang stringed instruments Stringed instruments of the Zhuang nationality have been ingrained in the Zhuang people's national culture for generations, and their production and transformation are inextricably linked to the local culture and products. Wood, bamboo, snakeskin, bones, horns, gourd shells, and other accessories are the primary raw materials used to make these five Zhuang stringed instruments. The luthier's selection of raw materials is an early stage of the musical instrument production process, including the conception of the instrument's shape and the preliminary assumption of the sound color, which is the main factor in the formation of the external and dominant characteristics of the stringed instruments of the Zhuang nationality.



Figure 1. Flowchart of making stringed instruments

5.1.2 The concept of making Zhuang ethnicity stringed instruments entails the role and function of the stringed instruments. Every musical instrument has its own personality and characteristics; otherwise, their existence would be meaningless. The most distinguishing feature of Zhuang stringed instruments is their distinct timbre, which is unique, irreplaceable, and instantly recognizable for each Zhuang musical instrument. The key to preserving the instrument's timbre characteristics is found in the manufacturing materials and process. The timbre of various instruments is determined by various materials, particularly those used for sounding devices. The Maguhu resonator, for example, is made of cow or horse femur bones. The sound of the Maguhu is crisp and bright, and it penetrates powerfully, due to the high density of bones and the smaller diameter than other stringed instruments. The diaphragm of both high-pitched instruments, the Jiaohu and the Maguhu, is snakeskin, but the Jiaohu uses ox horn as the resonator, and the texture of the horn is relatively hard, but the shape of the horn

is curved, and the length of the resonator is shorter. It is also longer than the Maguhu, so its timbre is stronger and thicker than the Maguhu's. Huluhu's pronunciation device is more distinct than the previous two. The vibration panel is a wooden board with a thickness of about 0.5 cm. The panel must be made of low-density sycamore or fir, and the resonator is made from the shell of a gourd. The calabash has a deep and thick tone because of the large resonance cavity and the large diameter of the vibrating panel, and it is a Chinese musical instrument of the Zhuang nationality. Tuhu's pronunciation device is made of wood from the vibration panel to the resonator, and both the resonance cavity and the vibration panel are larger in diameter, making it a bass instrument. The Zhutonghu pronunciation device is entirely made of bamboo, as is the vibration panel, which is made of thinner bamboo shoot shells. The sound is deep but powerful (Yige, 2022).

5.1.3 Investigation into the development of Zhuang stringed instruments The following are the reasons: First, China's musical instrument manufacturing industry grew rapidly in the 1950s, and the production level of the traditional stringed instrument Erhu was greatly improved. Erhu and alto erhu are not only of high quality and beauty, but they are also reasonably priced. Because the timbre of the Zhuang stringed instruments is very similar to that of the Erhu, and the timbre of the Zhutonghu, Huluhu, and Tuhu is very similar to that of the alto Erhu, many orchestras and Zhuang opera troupes use the Erhu instead. This dealt a severe blow to local stringed instrument production, and no one was willing to make these Zhuang stringed instruments anymore. The evolution of these four Zhuang stringed instruments was halted, and they gradually faded from people's lives. Mr. Li Xike, the inheritor of the Zhuang Eight Music Troupe, did not restore these musical instruments until the 1990s. Because these four-stringed instruments have been lost for decades, their production level is even lower than that of the Maguhu.

5.2 The role and function of the stringed instruments

In the section "The Role and Function of Zhuang Stringed Instruments," we observed and researched Zhuang stringed instruments in various application fields, and we analyzed the cultural and entertainment functions, folk ritual functions, stage art functions, and ethnic cultural exchanges of Zhuang stringed instruments from various perspectives. A comprehensive overview of communication and communication functions confirms the versatility of Zhuang stringed instruments. When the performer is the object of art communication and he entertains himself by playing the instrument, the Zhuang stringed instrument is not only a musical instrument but also a tool for the performer to entertain himself. It has a function for entertainment. When the ancestors or gods of the Zhuang nationality are the object of art communication, musical instruments become the medium of communication between people and gods, as well as the common psychological sustenance of the entire ethnic group. Mysterious power exists, at least in the minds of the Zhuang people, and musical instruments now serve as folk rituals. When a stringed instrument is displayed on stage as art, the audience or listeners, who are the objects of art acceptance, seek to appreciate the music performance in order to gain an artistic aesthetic experience. Currently, the instrument returns to its fundamental attribute, the instrument itself. At the moment, it serves as stage art. Unlike in previous cases, when the stringed instruments of the Zhuang nationality serve as a medium for cultural exchange and dissemination within the ethnic group or between the Zhuang nationality and the outside world, the cultural transmission chain exhibits diversity. When Zhuang stringed instruments take on new functions, their roles frequently shift. When used in a folk ritual, it functions as both a musical instrument and a magical weapon. When it serves as a vehicle for ethnic cultural exchange and dissemination, it is not only a musical instrument but also a historical artifact, a handicraft, or a representative cultural symbol of the



Zhuang nationality. However, it should be noted that in many cases, these functions and roles of Zhuang stringed instruments do not exist in isolation, but rather coexist.

6. Discussion

There are still some controversies in academic circles about some specific issues as this topic is being researched. The question of whether the production process of Zhuang stringed instruments should be standardized and reformatted is being debated. According to a well-known Chinese pipa production expert, mass production of Chinese national musical instruments is hampered by a variety of factors (Sabattini, 2021). The materials differ, the shape varies, and the performance varies significantly. Each batch is "non-standard," which is a common occurrence. The degree of "standardization" of the shape and sound of national musical instruments at the time reminded practitioners that the "natural" state of national musical instruments had produced a huge gap with the "modernization" of society. The difficulty of standardizing Chinese and Western musical instruments is reflected in the issue of production materials, prompting the musical instrument industry to gradually recognize that while the personality and vocabulary of local musical instruments are naturally valuable, industry development and applied research require a "universal language." Musicologists with high academic standing, as well as front-line musicians in production, performance, and creation, are among the advocates who lead these discussions. The Central Conservatory of Music's Institute of Ethnic Music was founded in 1954. (Draper et al., 2011). The first person in charge at the time, Li Yuanqing, published a series of articles guiding the development of Chinese musical instruments, specifically proposing that "the musical instruments produced by the decentralized musical instrument workshops should reach the It is still very difficult to unify the specifications at the moment, but some preparatory work should be done now to create the necessary conditions for the standardization of musical instrument specifications" (Ferguson et al., 2010).

In response to this issue, Chen Kunpeng, a Zhuang nationality Maguhu performer and musicologist, believes that it is difficult to standardize the production process for Zhuang nationality stringed instruments and that it does not meet the actual situation. The first question raised is, "Who will set this standard?" What is your point of view? Is it the standard of the author or the standard of the performer? Or musicology experts' and scholars' standards? It may be difficult to define and unite this. The second question is, how will the standard be implemented? The special production materials of Zhuang stringed instruments themselves have a high degree of uncertainty and randomness, which is directly contrary to standard implementation (Zhang et al., 2014).

The above two points of view each have their own set of reasons and arguments. Do Zhuang stringed instruments, then, require standardization and reform? I believe it is feasible, but the "standard" I mentioned is a limited one; that is, some controllable links in the production of Zhuang stringed instruments can be standardized. Stringed instrument effective chord length, resonator length, production specifications of the piano bracket, piano shaft, piano head, piano rod, and other components, for example, can be completely standardized, whereas uncontrollable links, such as the size of the horse bone and gourd shell and shape, are difficult to achieve complete unity. A certain amount of leeway in material selection can be allowed in this case. The unique personality of the Zhuang stringed instruments can thus be preserved, and the instruments' performance and parameters can be unified to the greatest extent possible.

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