Research Article

The Comparison of the Cultural Industry Inheritance Views of Ethnic Groups under Graph-Based Intelligence Analysis and IoT

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Culture has largely benefited from the invention and use of the Internet. With the change of society and lifestyle, the culture with its characteristics created by Chinese peoples, especially the traditional culture of some ethnic groups, has gradually disappeared, especially the emergence of the Internet of Things has exacerbated the phenomenon of cultural disappearance. This study investigates the cultural inheritance concepts of Yao junior high school students in the context of the Internet through a questionnaire survey of Yao and Han junior high school students in six dimensions: ethnic quality, family environment, ethnic traditional history, ethnic activities, and ethnic identity. The study found that respondents were generally interested in minority culture, but they lacked effective communication with their elders, and traditional minority culture was not well passed on between the two generations. The study suggests that fathers, as the leading cultural transmitters, should be more open to new things to maintain good communication with their offspring to ensure the effective transmission of traditional minority cultures. Secondly, information building among government departments, families, and schools to inherit and promote traditional culture will effectively promote the transmission of Yao ethnic culture.

1. Introduction

The Yao ethnic group is the 13th minority ethnic among the 56 ethnic groups in China, mainly distributed in the mountainous areas of southern China [1, 2]. The Yao people in Guangdong Province are one of the main gathering places in China. The Yao people in Guangdong are mainly distributed in the Ru Yuan Yao region, Lian Nan Yao region, and Lian Shan Yao region [3]. Ru Yuan Yao region is located in the northern part of Guangdong Province and the western part of Shao Guan City. Ru Yuan Yao region is also the ancestral home of the ethnic Chinese living in Laos, Thailand, Vietnam, and other Southeast Asian countries, as well as the United States, France, and other European and American Yao ethnic groups [4].

The Chinese nation has a long cultural history. In the long historical process, people of all ethnic groups have created culture and art with their national characteristics. With social changes and changes in lifestyles, some ethnic traditional cultures have gradually disappeared. In recent years, with the government’s promulgation of policies for the protection of excellent traditional culture, scholars have begun to attach importance to the work of excavating, protecting, and inheriting traditional culture.

The rapid development of the Internet of Things (IoT) has brought people and objects together in a close relationship [5]. Scholars have found that in cultural transmission, relying on human-to-human verbal or written transmission does not achieve effective transmission, but using objects with relevant historical backgrounds increases the efficiency of cultural transmission [6, 7]. The current research on the concept of cultural transmission is more focused on the family and the school, and not much research has been done on the use of new technologies, such as the IoT [8, 9]. In
addition, the effective combination of various look related/unrelated events in the age of IoT has emerged as a great drawback. In terms of cultural heritage, IoT has facilitated the integration of different cultures, especially the disadvantaged cultures of ethnic minorities, which have become more aligned with the mainstream culture of developed economies [7]. This has led to the gradual extinction of minority cultures that are difficult to pass on effectively and the lack of cultural diversity in society. Especially for the new generation living in the digital world, the IoT has a greater impact on them than their parents, but it is still unknown whether the culture will be effectively passed on in these two generations with different social influences.

Young people are the future of the nation and the new force for the inheritance of national culture. Compared with the previous generation, Gen-Y and Z are more deeply influenced by the Internet [10, 11]. To explore the current status of the Yao cultural inheritance of young people affected by the IoT, this study takes Yao and Han young students as the research object to explore the differences in their understanding, attitudes, and behavioural performance of ethnic cultural inheritance.

2. Methodology

This research draws up a questionnaire based on six dimensions: ethnic quality, family environment, ethnic traditional history, ethnic activities, and ethnic identity. In December 2019, a questionnaire survey was conducted among 549 junior high school students (274 from Yao nationality and 275 from Han nationality), and interviews were conducted in M school. The data were analyzed and sorted using Nvivo 12 and SPSS software.

3. Results and Discussion

3.1. Results

3.1.1. Yao National Tradition Quality and Employment Intention. Research results show that 81.8% of Yao students and 84.4% of Han students believe that their parents and grandparents are hardworking. Diligence is the virtue of the Chinese nation, which enables the Yao people and the Han people’s community development.

Comparing the employment options of Yao and Han students can reflect that they have different views of the family. From the data in Table 1, Yao students prefer to choose to work close to their parents, even if they stay in small mountainous cities, and they are more likely to find employment and entrepreneurship in the township. The majority of Han students’ employment choices are focused on the job rather than parents’ distance. Choose to work in Beijing and Shanghai and freelance jobs by 4% more than Yao students. In addition, the sum of the number of people who choose to go to the company and the civil servants is more than 50%, and the proportion of Yao Han students is the same. The data in Table 1 also reflects that freelance and company employees are the main career choices for Yao and Han junior high school students.

Figure 1 shows the statistical results of the questionnaire on the career choices of Yao-Han students. Among them, doctors, civil servants, teachers, and entrepreneurs showed obvious differences in the career choices of Yao students and Han students. Yao students mostly chose doctors and civil servants, and Han students chose teachers and entrepreneurs.

3.1.2. Yao Traditional Culture and History Knowledge. Table 2 shows the statistical results of the questionnaire data of Yao and Han students’ mastery of the Yao nationality’s cultural and historical knowledge. Affected by Internet information, most Yao and Han students are not clear about the traditional stories of the Yao, but Han students do not understand the traditional culture of the Yao people better than the Yao students.

Figure 2 reflects the situation of Yao and Han’s students reciting Yao songs. More Han students cannot even know a single Yao song, there are more Yao students than Han students who know Yao songs.

3.1.3. Ways to Learn About Yao Culture. Table 4 shows the statistical results of the questionnaire on the ways Yao and Han students learn about the Yao culture. The main approach for Yao students to understand Yao culture is through parent or family life, followed by school publicity activities. The most important way for Han students to understand Yao culture is through school publicity activities, followed by classroom teaching, social celebrations, and television broadcasting. School publicity activities are the main way for Yao and Han students to learn about the common Yao culture. Giving full play to the function of school cultural inheritance and unblocking its channels are undoubtedly a must for the implementation of excellent national cultural inheritance education.

Table 5 shows the statistical results of the questionnaire data of Yao and Han students’ hope that schools could offer
courses related to Yao culture. The data reflects that Yao students hope that the school could offer the most courses on all the culture and customs of the Yao, and the second-highest is that they want to offer courses on Yao language and writing and Yao singing and dancing. Nearly 40% of Han students do not want to learn courses related to Yao culture. They hope that the school could offer courses on Yao culture in the order of the number of people; they are Yao embroidery, Yao song and dance, Yao culture and customs, Yao language and writing, and Yao sports.

3.1.4. National Identity. Yao students have a strong sense of national pride. 58.3% are proud of themselves as Yao people, 4.9% are inferior, and 36.7% are not too much.

Figure 3 shows the statistical results of questionnaires that Yao students are more talented than Han students in learning songs and dances. Those who agree with the gifted Yao students account for the majority; those who disagree that the Han students who are not gifted account for the majority.

Table 6 shows the statistical results of the questionnaire on Yao and Han students’ acceptance of Yao costumes. The data in the table shows that 72.4% of Yao students think Yao costumes are good-looking and very good-looking, Han students account for 41.8%, and Han students think Yao costumes are generally good-looking and not good-looking Yao students account for 58.2%. Yao students who like and like wearing Yao costumes account for 52%, Han students account for 24.9%, Yao students who dislike wearing Yao costumes account for 5.2%, and Han students account for 16.5%.

3.1.5. Yao Family Environment. Only 8.9% of Yao students are required by their parents to speak the Yao language at home. The parents of most Yao students do not require their children to speak the Yao language. The percentage of Yao students whose family members can communicate in other languages freely is 91.1%. The Yao family undoubtedly provides a favourable environment for the acquisition of the Yao language, but the way of inheriting the Yao language is becoming narrower and even being blocked.

Figure 4 shows the statistical results of the questionnaire data of the parents of Yao and Han telling their children stories of the Yao stories. As shown in Figure 4, in Yao families, 63.9% of the parents tell their children more or less Yao stories, and more than one-third of the parents have never told their children Yao stories, perhaps they do not know or understand. In the families of Han students in the Yao region, 16.6% of parents tell their children Yao stories to their children, but 83.4% of them have never told their children Yao stories.

Table 7 The statistical results of the questionnaire data of Yao and Han students expecting the elders to impart knowledge of the Yao ethnic group. The data in the table shows that Yao students hope that their parents and elders could teach the culture and customs of the Yao, followed by the daily customs of the Yao people and the embroidery of the Yao people. Nearly half of Han students do not want to learn Yao knowledge. Besides, the Yao knowledge that they most hope their parents and elders impart is Yao embroidery.

4. Discussion

4.1. Yao Students in Ethnic Activities Reflect Their Sense of National Identity. Yao students have a strong sense of national pride. Our survey results show that 58.4% of Yao students are proud of being Yao people. They actively participate in Yao cultural inheritance activities and Yao dance training classes and choose a place close to home for employment, which reflects their ethnic identity. About 4.9% of Yao students feel inferior to themselves because they are Yao people, and 36.7% "do not feel much." This means that the content and form of Yao cultural inheritance activities must be innovated. Ethnic schools, Yao students’
parents, and the Yao autonomous county government must work together to create an atmosphere for inheriting the excellent traditional culture of the Yao ethnic group.

4.2. Family Is the Main Way to Inherit the Yao Culture. Our result shows that most Yao students believe that the main way of Yao culture inheritance is learning from family, not school education, while most Han students think that the main way to pass on Yao culture is school propaganda. Therefore, to inherit the excellent Yao culture, the most important thing is to enhance the awareness of Yao students’ parents to inherit the Yao culture. The society and the government should pay attention to creating the Yao cultural environment and make the traditional ethnic festivals, and the school system imparts the excellent traditional cultural knowledge of the nation through parent meetings. Special lectures, parent schools, parent associations, etc. enhance the inheritance ability of Yao parents.

Relevant research reveals that the main way of inheriting Yao embroidery is family education [12, 13]. Girls in the Yao region are influenced by the inheritance of Yao embroidery from their elders in their family members. Therefore, strengthening Yao family inheritance education is one of the key measures for Yao embroidery.

Early education must be implemented to develop Yao songs. Children are the inheritors of national cultural bloodlines and the carriers of cultural genes. Children’s knowledge of cultural inheritance begins with the family. For a nation that has a language but no written language, cultural inheritance must rely on word of mouth, precepts, and deeds to develop early education of Yao songs, so that children can receive the influence of Yao culture from birth. Let children come into contact with the music culture of their nation from an early age and integrate their music into their lives as a habit. Parents can use these resources to learn Yao folk songs, and let Yao songs cultivate their sentiment.

4.3. Ethnic Schools Shoulder the Mission of Inheriting Ethnic Culture. This research found that although Yao students have more knowledge of Yao traditional culture and history than Han students, the junior high school students still lack the knowledge of Yao traditional culture and history. The content and form of excellent ethnic culture and traditional education should be set up according to the age characteristics and knowledge structure of students to form a system and system. For example, according to the actual situation of the region, choose to offer courses of Yao traditional culture, classroom teaching needs to have rigorous and systematic teaching materials as the medium, and it is necessary to compile local teaching materials or school-based teaching materials of Yao culture to impart excellent traditional Yao knowledge to students and train-related ones. Skills: to carry out Yao cultural inheritance education in various forms, it is

### Table 3: Attitudes towards the Yao song and Yao dance.

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Yao student</th>
<th>Han student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Want to Yao song training class</td>
<td>23.7%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Do not want to Yao song training class</td>
<td>31.8%</td>
<td>53.0%</td>
</tr>
<tr>
<td>Want to Yao dance training class</td>
<td>30.2%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Do not want to Yao dance training class</td>
<td>34.9%</td>
<td>50.8%</td>
</tr>
</tbody>
</table>

### Table 4: The ways Yao Han students understand the Yao culture.

<table>
<thead>
<tr>
<th>Ways</th>
<th>Yao student %</th>
<th>Han student %</th>
</tr>
</thead>
<tbody>
<tr>
<td>School promotion</td>
<td>31.39</td>
<td>60.15</td>
</tr>
<tr>
<td>Classroom teaching</td>
<td>15.69</td>
<td>36.63</td>
</tr>
<tr>
<td>Parents or family life</td>
<td>63.14</td>
<td>8.42</td>
</tr>
<tr>
<td>TV broadcast</td>
<td>11.68</td>
<td>27.11</td>
</tr>
<tr>
<td>Social celebration</td>
<td>14.96</td>
<td>31.50</td>
</tr>
</tbody>
</table>

### Table 5: Students hope that the school offer content about Yao culture courses.

<table>
<thead>
<tr>
<th>Course content</th>
<th>Yao student %</th>
<th>Han student %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yao culture and customs</td>
<td>35.04</td>
<td>18.96</td>
</tr>
<tr>
<td>Yao language and writing</td>
<td>28.47</td>
<td>17.41</td>
</tr>
<tr>
<td>Yao nationality song and dance</td>
<td>26.64</td>
<td>22.22</td>
</tr>
<tr>
<td>Yao embroidery</td>
<td>21.17</td>
<td>27.41</td>
</tr>
<tr>
<td>Yao nationality sports</td>
<td>17.88</td>
<td>17.41</td>
</tr>
<tr>
<td>None</td>
<td>17.15</td>
<td>38.52</td>
</tr>
</tbody>
</table>

![Figure 2: Yao-Han students understand Yao song.](image-url)
necessary to correctly handle the relationship between the national curriculum and school-based curriculum, ensure the quality of students’ national curriculum learning, formulate a teaching plan for the Yao cultural heritage education from elementary school to high school, and earnestly carry on the Yao cultural heritage education. In the form of school-based curriculum, it is effectively integrated into the national curriculum and implemented in a planned manner, such as integrating Yao folk literature, history, songs, and sports into the curriculum. We can also use the second classroom to start independently, offering courses such as Yao embroidery and Yao dance. The school can carry out Yao ethnic embroidery, Yao folk song, Yao dance, and other community activities to carry out Yao cultural heritage education.

Ethnic schools may periodically organize cultural heritage activities, such as undertaking activities of Yao cultural festivals to implement the education of Yao cultural heritage and promote the educational inheritance of Yao cultural festivals. Also, participate in Yao cultural exchange activities, such as participation in large-scale events, and exhibition of Yao embroidery works by teachers and students. Ethnic schools can also broaden the heritage of Yao culture, positioning the excellent culture of the Yao nationality as the excellent culture of the Chinese nation and transforming the inheritance of the Yao nationality culture within the Yao nationality into the common inheritance of the Yao nationality and other ethnic groups outside the Yao nationality, allowing the children of all ethnic groups to learn and inherit together, forming a situation of external inheritance.

Ethnic schools should pay attention to improving teachers’ ability and level of national cultural heritage education. Teachers play a leading role in school education and teaching activities, and their ability and level to inherit Yao culture directly affect the effectiveness of Yao cultural inheritance in ethnic schools. Efforts to expand the capacity of teachers capable of teaching Yao ethnic culture are not limited to teachers of Yao ethnic group, but include all teachers participating in Yao ethnic culture inheritance education and even strive for policy support to recruit a group of qualified teachers who are good at Yao ethnic embroidery, Yao ethnic dance, and Yao ethnicity. Folk songs and other inheritors of Yao culture are part-time teachers, and they attach importance to the training and improvement of teachers for Yao cultural heritage education.

The evaluation index of ethnic schools by the education management department cannot be the same as that of ordinary schools. It must highlight the characteristics of schools in ethnic areas and have ethnic characteristics. The government should increase investment in the education of the cultural heritage of the Yao ethnic group and formulate rules and regulations for the protection and inheritance of Yao ethnic culture. Lack of funding leads to a shortage of teachers and talents, which directly affects teachers who are hired for cultural inheritance. The teaching team fluctuates greatly. Once the layout is adjusted, those teachers who master Yao culture are likely to be transferred, making it more difficult to guarantee the original lack of teachers. At present, most of the Yao culture is mastered by the elderly Yao people, and the number of young- and middle-aged people is very small. Among the teachers, few can master the Yao culture, which is not convenient for inheriting education.

### Table 6: Students’ acceptance of Yao costumes.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Yao student %</th>
<th>Han student %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yao costumes are very beautiful</td>
<td>30.15</td>
<td>6.23</td>
</tr>
<tr>
<td>Yao costumes are good</td>
<td>42.28</td>
<td>35.53</td>
</tr>
<tr>
<td>Yao costumes are not good</td>
<td>2.57</td>
<td>8.79</td>
</tr>
<tr>
<td>Like Yao costumes</td>
<td>30.86</td>
<td>19.05</td>
</tr>
<tr>
<td>Do not like Yao costumes</td>
<td>5.20</td>
<td>16.48</td>
</tr>
</tbody>
</table>

Figure 3: View of students on the talents of learning Yao song and Yao dance.
sustainable policy for the inheritance of ethnic culture, and ensure the inheritance of the excellent traditional Yao ethnic culture. Through the establishment of a system and mechanism, the government has incorporated the inheritance of Yao culture into the national economic and social development plan, included the key content of rural revitalization, and included the promotion and cultural performance evaluation projects for all towns and units.

Introduce tourism enterprises to develop and build a homestay tourism cluster area, construct Ru Yuan Yao intangible cultural heritage tourism experience project, build ethnic customs and local characteristic scenic spots with Yao culture as the connotation, and try to develop Yao cultural and ecological research tourism. In the context of the huge student stock and consumption transformation and upgrading, research studies as a new type of education are accepted by the majority of parents. Learn from the United Kingdom, the United States, South Korea, Japan, and other countries in the early implementation of the mature operation model of research tourism, strengthen cooperation with primary and secondary schools, create research pilots, and explore the Yao cultural and ecological research tourism model [14, 15].

The government can explore the protection and inheritance of Yao culture in all fields through research projects, hold academic conferences, etc., and promote the inheritance and innovation of Yao culture. Carry out special research, explore resources through multiple channels, collect scattered Yao cultural content that exists in literature, folk, and the Internet, and establish the collected literature on Yao history, Yao folk literature, Yao folk customs, sports art, etc. The Yao cultural resource library inherits the essence of the Yao culture and inherits and develops and innovates the excellent Yao culture.

Promote family inheritance of Yao culture by formulating incentive measures. Family education is the starting point for the inheritance of Yao culture and an important foundation for the inheritance of Yao culture. Children's knowledge of cultural inheritance starts from the family first, and cultural inheritance depends on word of mouth, words, and deeds. A harmonious Yao family is conducive to family members consciously and actively inheriting their own national culture. Government departments should increase support for family education in promoting the inheritance of Yao culture, play the basic role of family education in the inheritance of Yao culture, and enhance the ethnic self-confidence and awareness of ethnic cultural inheritance of Yao families, such as the establishment of family inheritance awards, commend, and rewards families with good Yao cultural inheritance. Family Yao cultural inheritance education should keep pace with the times. For example, in addition to word of mouth, modern technology should also be used to make family activities and heirlooms with ethnic characteristics into audio-visual films, which can be shared with family, relatives, and friends.

4.5. The Impact of IoT on Cultural Inheritance. Cultural transmission is based on the shared knowledge and understanding of the same culture between two generations and is initiated by the older generation. In this study, the new generation prefers to embrace traditional culture through the IoT, but the older generation has not changed with the times and still transmits minority culture through traditional-, family-, school-, and government-led primary methods. There is not an identical consensus between the two in terms of cultural transmission, e.g., the older generation wants to maintain their original culture by word of mouth, while the younger generation wants to use the new Internet mode of information transmission. The emergence of the IoT has improved social and life efficiency, but it has widened the distance between the two generations in terms of cultural transmission, making it more difficult for them to adapt to each other.

5. Conclusion

This study found that the efficiency of IoT Yao culture transmission is limited through a survey of Yao secondary school
students. Influenced by the Internet, Han students identified with Yao culture and were willing to learn about it, especially Yao embroidery, which they most wanted to learn. In this regard, Yao and Han secondary school students showed a high degree of consistency. This study found that the transmission of Yao traditional culture has been significantly effective in terms of curriculum, teacher provision, and activity development, and a more mature approach has been developed. With the emergence of new means such as the IoT, it is even more important for the older generation of ethnic minorities to take the initiative to communicate effectively with their descendants through new technological means, thus promoting cultural transmission. In addition, schools can cooperate more closely with government departments, and schools can independently form brands of traditional ethnic cultural activities that have a significant impact on society or even lead to further play a huge role in inheriting and promoting traditional culture, using Yao and Han students as an intermediary force in ethnic cultural activities, and cultivating their awareness and ability to become lovers and disseminators of ethnic culture. The glorious future of Chinese cultural heritage, including the culture of all ethnic groups, is just around the corner.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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