

Analysis of the Path of Art Education in Township Primary Schools Based on ARCS Motivation Model: Example of Yangchun Root-Carving Intangible Cultural Heritage in Guangdong Province

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Abstract

This study cites the ARCS motivation model theory framework and takes the Second Primary School in Chuncheng Street, Yangchun, Guangdong Province, as the research object. The root-carving of intangible cultural heritage is integrated into the art classroom of township primary schools for experimental teaching, supplemented by a questionnaire survey method for sampling investigation. Research has found that current students have a limited understanding of the roots of intangible cultural heritage. However, creating root-carving art works in the form of calligraphy, allowing students to use clay instead of carving and shaping methods, and experiencing the charm of root-carving intangible cultural heritage can effectively increase learning interest, improve hands-on production ability, and improve creative expression ability. This study suggests that the integration of the root-carving of intangible cultural heritage calligraphy forms into art teaching methods still has certain limitations. Therefore, teaching optimization strategies are proposed, including improving teachers' knowledge and skills in root-carving intangible cultural heritage culture; carrying out resource sharing through O2O service models for schools and local cultural centers; adopting flexible and diverse teaching methods to cultivate students' interest in intangible cultural heritage; and expanding the content of primary school art textbooks.

Keywords— ARCS (Attention-Relevance-Confidence-Satisfaction) Motivation Model; Root-Carving Intangible Cultural Heritage; Township primary school; Art Education Path, Multivariate Cross Learning Motivation

I. INTRODUCTION

In December 2022, General Secretary Xi Jinping pointed out in the protection of intangible cultural

heritage that "it is necessary to do a solid job in the systematic protection of intangible cultural heritage, to better meet the people's growing spiritual and cultural

needs, and to promote cultural self-confidence and self-improvement. We must promote China's excellent traditional culture, creative transformation, and innovative development and continuously enhance the cohesion of the Chinese nation and the influence of Chinese culture (Chinese People's Political Consultative Conference Network, 2024). "Root-carving technique is not only a traditional folk craft, but also an excellent intangible cultural heritage of our country. Thus, carrying out creative classes on root-carving intangible cultural heritage is conducive to students' hands-on creative ability, experiencing the craftsmanship of intangible cultural heritage inheritors, and improving students' creative thinking. Root-carving of intangible cultural heritage is an important art in the history of the development of Eastern culture. It is famous for its ancient and unique art form.

At present, China is increasingly valuing traditional culture and art. As one of the important traditional arts, the root-carving of intangible cultural heritage culture cannot be delayed in promoting its inheritance and development (Li, 2020). At the third session of the 13th National People's Congress, a notice on carrying out intangible cultural heritage inheritance education activities in extracurricular activity venues for minors was issued. It pointed out that primary and secondary schools in various regions should actively organize and hold a series of activities on "Inheriting Chinese Excellent Traditional Virtues for Youth," fully combine local intangible cultural heritage resources, learn and experience intangible cultural heritage projects and products, and strive to become small inheritors of intangible cultural heritage (National Education Commission, 2024).

In recent years, the Ministry of Education has actively guided schools in various regions to carry out the "Intangible Cultural Heritage in Campus and Classroom" activity and achieved phased results. Yangchun, Guangdong, is located in the western region of Guangdong, where lush forests provide abundant material resources for root-carving art. In the 1940s and 1950s, Yangchun root-carving had already formed a variety of series. Yangchun root-carving can be divided into two categories: artistic and practical.

Artistic root-carving works need to go through steps such as washing, peeling, trimming, carving, polishing, oiling (waxing), etc. to be made. Practical root-carving works often use tree heads and tree stumps as raw materials, and the craftsmanship is roughly the same as that of artistic works. Calligraphy-based root-carving works require the use of flat, mesh-like dry branches that roughly resemble the shape of Chinese characters. Its carving techniques pay particular attention to root-based craftsmanship and flexible processing (Southern Magazine, 2024). The key to root-carving calligraphy works should be as little trimming and grinding as possible, which requires high temperatures, steaming, degreasing, sterilization, insect removal, peeling, air drying, and finally painting, waxing, mounting, and packaging.

Among them, artistic root-carving themes include characters, animals, landscapes, and root-painting wall decorations. Practical works mainly focus on furniture items such as tables and coffee tables, as well as daily necessities such as pen holders and smokestacks. Most of the works are finely carved, mainly depicting propositional paintings and mythological stories, giving some good meaning or life philosophy. In the past decade or so, Yangchun root-carving has emerged as an emerging type. Chinese calligraphy root-carving is created by combining it with calligraphy fonts. Chinese characters with complex fonts and strokes are given priority in creation and are widely loved and collected by the people. The root-carving works in the form of calligraphy are usually one character after another, with continuous strokes and one stroke at a time. It achieves a state of harmony between heaven and man and a vivid charm.

This study conducted research work in the Yangchun area of Guangdong Province. Although the local government vigorously promoted the development of root-carving intangible cultural heritage and established root-carving museums in rural areas, the number of primary and secondary school students who visited was relatively small, and professional artists were mainly used for inspection. In the context of vigorously promoting the integration of intangible cultural heritage into teaching classrooms in

our country, there are still poor primary school resource conditions in rural areas, which leads to the inability of root-carving intangible cultural heritage to effectively integrate into school classrooms and achieve substantive dissemination, causing the inheritance and development of root-carving intangible cultural heritage to be in a dilemma for a time. A survey shows that currently, in primary school art classes in rural areas, appreciation and simple painting courses are mainly used, and there are basically no extracurricular practical classes. Students are unable to understand local intangible cultural heritage knowledge and experience intangible cultural heritage creation firsthand, resulting in a lack of knowledge about root-carving intangible cultural heritage.

This study takes the Second Primary School in Chuncheng Street, Yangchun City, as the research object and conducts preliminary research on the problems faced by integrating root-carving intangible cultural heritage into the inheritance of art education in township primary schools. The investigation found that the research object currently has the following problems: First, there is a lack of teaching resources and a relatively backward art education. Insufficient equipment conditions cannot meet teaching needs, making it difficult for students to utilize their strengths in painting for creative purposes. Secondly, art teachers are generally older and unable to keep up with the development laws of art education at the time. Thirdly, there are almost no practical art courses in primary schools in the township, which leads to inadequate popularization of extracurricular art knowledge among students. Fourthly, parents in rural primary schools do not attach great importance to their children's art education, resulting in a weak awareness of art learning among students. How to develop a suitable teaching model for students, integrate innovative

teaching methods, and stimulate their interest in learning are all the main issues of awareness. Therefore, this study aims to integrate root-carving intangible cultural heritage culture into primary school art classrooms through questionnaire surveys and experimental teaching methods, promoting students to understand the importance of inheriting and developing root-carving intangible cultural heritage through learning art classrooms.

II. LITERATURE REVIEW AND THEORETICAL EXPLORATION

2.1 Literature Review

Through the CNKI database, a total of 266 search results were displayed with the theme keyword "root-carving culture." Among them, there are 507 academic journals, 42 doctoral and master's theses, and 10 conference papers. Subsequently, a search was conducted with the theme keyword "root-carving education," displaying a total of 115 search results. Among them, there are 40 academic journals and 22 doctoral and master's theses. Next, a search was conducted using the keyword "root-carving calligraphy," and a total of 46 articles were displayed, including 38 academic journals and 1 doctoral thesis. Finally, a search was conducted using the keyword "Root-Carving Classroom and a total of 12 results were displayed, including 4 academic journals and 3 doctoral and master's theses.

From the literature search on "root-carving culture research," it can be seen that the root-carving culture showed an upward trend from 2010 to 2013 and a downward trend from 2014 to 2017, as shown in Figure 1.1. Overall, research on root-carving culture is showing a downward trend, indicating that root-carving culture needs more strength to be inherited and developed.

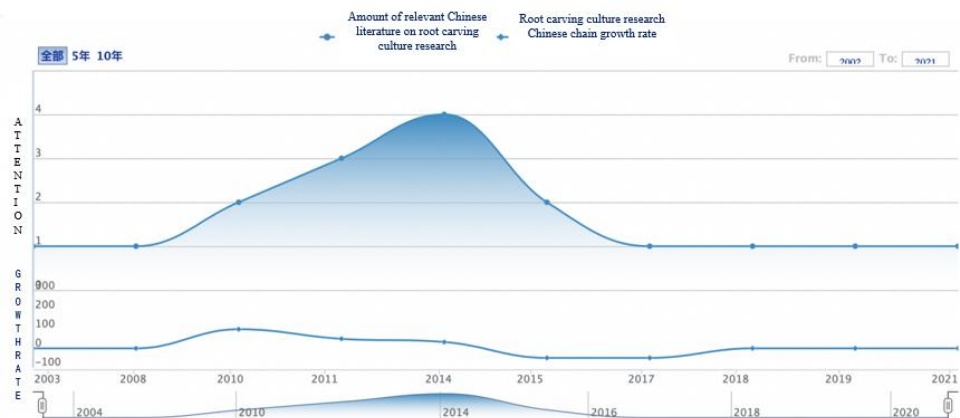


Fig.1 Overall trend of research and release on root-carving culture

This study focuses on the current research status of the inheritance and development of root-carving intangible cultural heritage. The related research mainly focuses on the topic of root-carving, while domestic research is still the main focus. After summarizing and sorting, the research categories can be roughly divided into two aspects:

2.1.1 Related Research on the Theme of "Root-Carving Culture"

Li (2023) analyzed the results of a survey on the manual labor of root-carving artists in Guangxi from the perspective of folklore, focusing on the rise and existing forms of Guilin wood root-carving. She summarized that wood root-carving tools have distinct regional characteristics, and handicrafts gain multiple meanings, such as a sense of achievement, creativity, and identity, through the process of root-carving art creation. Starting from the three dimensions of tradition and modernity, technology and production, emotion, and experience, this study comprehensively explores the overall evolution and subsequent development and application of its root-carving culture. Wang (2023) and Qin (2023) both analyzed the historical evolution and current development of root-carving culture and explored its overall characteristics, forms of expression, techniques, and other creative applications. They also proposed relevant suggestions for the subsequent development of root-carving culture in art. Yu (2022) focuses on

bamboo root-carving as the main research object, exploring its historical and cultural development, sorting out the current development status and artistic expression forms of root-carving, as well as exploring modes of protection and utilization such as artistic innovation.

2.1.2 Related Research on the Theme of "Root-Carving Classroom"

Lu (2018) pointed out in school-based education that teachers can use root-carving resources to enrich the content of characteristic classrooms. In the specific design of root-carving teaching, a suitable way for students to participate should be adopted, emphasizing the unity of interactivity, practicality, fun, and scientificity, in order to achieve the effect of root-carving art education. Qin (2018) pointed out that in order to inspire students' innovative thinking and cultivate their innovative abilities in comprehensive practical activities in primary schools, schools use traditional root-carving as a carrier and "bird paradise" as the theme in comprehensive practical activities, exploring the problem of root-carving combination innovation in the form of student small projects. After repeated exploration, the activity created many exquisite root-carving themed works, which had a good educational effect and produced good social effects, attracting widespread attention from society and leaders at all levels. It was concluded that introducing root-carving courses into primary school classrooms is

feasible, and achieving combination innovation on the basis of traditional root-carving is feasible. Zhou (2016) summarized that root-carving culture is not only a work of aesthetic value but also a manifestation of ancestors' reverence for nature and their pursuit of harmonious coexistence with nature. Through the analysis of the process of root-carving creation, it is concluded that the integration of root-carving culture into the classroom can effectively stimulate students' imagination and aesthetic cultivation.

In summary, at present, research on the topic of "root-carving culture" in China mostly discusses the characteristics, aesthetic value, and expression forms of root-carving resources for theoretical analysis. The teaching method of root-carving in the classroom tends to be traditional, and there is less innovation in teaching through practical application and improvement. This is the foundation for this study to strengthen innovation in teaching. It is hoped that innovative experimental teaching designs can be used. Providing a more diversified dissemination effect for root-carving culture in the classroom, as well as a richer learning experience for students, is a phased value contribution of this study to the topic selection of root-carving culture in the classroom. It provides more effective art education support for the current inheritance, revival, and development of root-carving culture in order to promote intangible cultural heritage and the development of rural art education.

2.2 Theoretical Exploration: Analysis of Learning Motivation Theory

The ARCS Motivation Model Theory (Keller, J. M., 1987a) was proposed by Professor J. Keller of the University of Florida in 1979, who proposed that there is a lack of attention to learning motivation in instructional design literature. He introduced the method of integrating motivation and learning environment design patterns and extended it in 1983 to propose an instructional design model that stimulates student learning motivation, performance, and teaching impact. He believed that traditional instructional design could not attract learners' interest or attention. The learning effect is greatly reduced. If the ARCS motivation model can be used by a teaching

scholar to promote the generation of motivational needs for students, attract attention and interest, enhance students' understanding of the significant relationship between learning tasks and themselves, thereby generating confidence, stimulating students to complete learning tasks, and obtaining satisfaction, it can effectively improve students' learning effectiveness. The ARCS motivation pattern mainly has four strategic directions: attention, relevance, confidence building, and satisfaction, as shown in Table 1.

Table 1 ARCS Motivation Model Theory

Model elements	Purpose
Attention	Strategies for generating interest in learning Stimulate the demand for knowledge seeking and learning Using changes to maintain interest
Relevance	Establishing learner needs goals Suitable learner interest style Related to the learner's past experience
Confidence	Helping learners have positive and positive expectations Guide learners to master their own abilities and beliefs Learners master self-learning and successfully achieve learning goals
Satisfaction	Guiding learners to learn intrinsic motivation Provide learners with appropriate rewards for success Maintaining fair assessment and mechanisms for learners

As shown in Table 1, "Attention" aims to motivate learners to enhance their learning motivation and focus their attention on the learning classroom; "Relevance" refers to the need for learners to associate their learning content with themselves and enhance their learning comprehension; "Confidence" is to help learners learn and improve their own performance, believing that as long as they put in effort, they can reap rewards and complete learning tasks; "Satisfaction" is to guide learners to feel a sense of

achievement after learning and attract their interest in further learning, thereby forming intrinsic learning motivation. Therefore, the ARCS Motivation Mode aims to encourage learners to develop and actively anticipate their intrinsic motivation for learning, effectively stimulating their autonomous learning state.

In addition, other scholars have also put forward different views on theories related to learning motivation. Wigfield and Eccles (2000) believe that learning motivation is composed of three important components: homework value, ability belief, and success expectation. Pinrich and DeGroot (1990) believe that learning motivation should have three dimensions: "value component," "expectation component," and "emotional component," and the high and low components of these three motivations will affect the learning effectiveness of learners. Zhang (1996) believes that motivation, as an internal psychological process, can stimulate learners to engage

in learning activities, maintain learning activities, and continue to move forward with the goal orientation of activity interest. Maehr and Meyer (1997) argue that motivation is an internal state that enables learners to engage in energetic, directional behavior and sustain learning activities. Both Dulay and Burt (1977) believe that the stronger a student's learning motivation and the more positive their learning attitude, the more they will strive to learn and are more likely to make significant progress.

From this, it can be seen that the author believes that the design of art education experimental teaching from the perspective of learning motivation theory should focus on the issue of learners' learning motivation. Based on the four strategic directions of the ARCS motivation model, the so-called "value," "belief," and "emotion" components should be additionally extended to form a diverse and intersecting learning motivation theoretical framework (Figure 2).

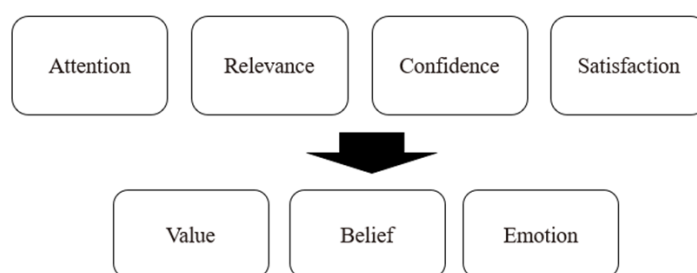


Fig.2: Theoretical Framework of Multivariate Cross learning Motivation

III. THE TEACHING PATH

This article takes the students of the Second Primary School in Chuncheng Street, Yangchun City, as the survey population and extracts all students from Class 5 and Class 6 of the fourth grade of the school as the distribution objects of the questionnaire. Students in this age group are in the middle of primary school and have a certain understanding of art knowledge. The number of classes in art courses is relatively high. It is appropriate to summarize the overall education level of the school by exploring students in this age group. Conduct a survey and teach practice by sampling two classes from different grades. The questionnaire distribution for this survey was mainly conducted offline in the classroom. The distribution of the survey questionnaire is aimed at all students in Classes 5 and 6

of Grade 4. A total of 120 questionnaires were distributed, with 120 collected and 120 valid, for an effective response rate of 100%.

3.1 Pre Class Investigation and Analysis

According to the questionnaire survey, there are 70 males, accounting for 58%, and there are 50 women, accounting for 42%. Regarding the level of understanding of root-carving, the current proportion of people who understand root-carving culture is relatively low, only 19.17%, and the proportion of people who do not understand root-carving culture is 11.67%, which is also relatively low. Overall, the level of understanding of root-carving culture is relatively average. Although 48.33% of people expressed a general understanding, indicating that a considerable number of people have some understanding of

root-carving culture, it is not very in-depth. Meanwhile, 14.17% of people expressed a lack of understanding, indicating that there is still a portion of people who have a low level of understanding of root-carving culture. Students have a limited understanding of root-carving culture, and there is a lack of promotion in the local area. Therefore, efforts should be made to increase publicity.

Regarding the theme of root-carving creation, students have a preference for furniture, accounting for 26.67%; flowers account for 19.17%; calligraphy accounts for 58.33%; animals account for 40%; and character categories account for 27.5%. Research has shown that calligraphy is the most popular subject of root-carving intangible cultural heritage, so incorporating root-carving calligraphy into art classrooms can be more popular among students.

As for the recognition of root-carving as a traditional culture, the majority of students identify with "traditional culture" as their understanding of root-carving intangible cultural heritage, accounting for 57.5%; The other few are also understood as "old-fashioned" or "unattractive", accounting for 13.33%; 52.5% of students believe that incorporating intangible cultural heritage themes into art classrooms can broaden their artistic horizons; 38.33% believe that they can learn new knowledge; 9.17% of students believe that it can only be used as extracurricular expansion, indicating that the majority of students believe that learning intangible cultural heritage has certain value for art courses. In addition, 60.83% of students hope that art courses can increase their interest in learning; 61.37% can increase the learning of art knowledge points. Art classes are not only a process of learning painting skills and appreciating art, but also an important way to enrich the inner world. This study suggests that the art curriculum of the school is mostly based on the perspective of textbook teaching, neglecting the self-development of students and limiting their thirst for learning art knowledge. Therefore, the school should strengthen its investment in practical courses so that students can broaden their horizons and be exposed to more art knowledge.

On the other hand, the results of integrating root-carving intangible cultural heritage into art courses show that the school only has one art class per grade, class, and week, and each art teacher must undertake 15 classes of art courses per week. Most teachers prepare their lessons according to the textbook. If the art tools provided in the textbook are insufficient, they will switch to a student independent creation mode. This study found that the school has a weak emphasis on art education, mainly developing subjects such as Chinese, mathematics, and English. Regarding the integration of root-carving intangible cultural heritage into art curriculum practice, only one person, accounting for 0.83%, stated that they had been exposed to the root-carving intangible cultural heritage practice unit in art courses, while 119 people, accounting for 99.17%, indicated that they had not attended the practice unit and had almost no knowledge of courses related to the dissemination of intangible cultural heritage.

3.2 Teaching Path of Multivariate Cross Learning Motivation

In order to expand the coverage of traditional root-carving teaching in rural primary school art classrooms and enhance students' understanding and learning interest in the traditional culture of root-carving intangible cultural heritage, this study uses the ARCS motivation model as theoretical support and integrates the components of "value," "belief," and "emotion" to form a multi-dimensional cross learning motivation theoretical framework. An experimental teaching design scheme is carried out to integrate the "calligraphy form." Integrating root-carving intangible cultural heritage into the teaching path of art classrooms through "autonomous" learning and thinking; imaginative creative design; alternative media applications; As an extension of the experimental teaching path, the four dimensions of "sculptural" creation and expression are used to construct an innovative teaching model that integrates root-carving intangible cultural heritage into the art classroom (Figure 3).

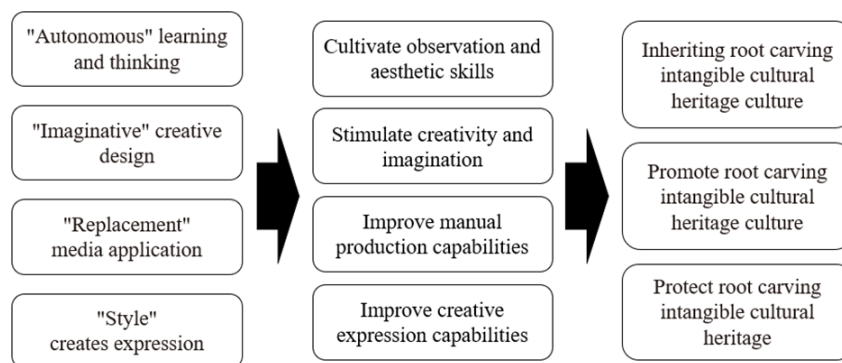


Fig.3 Innovative teaching mode path of integrating root-carving intangible cultural heritage into art classrooms

A: "Autonomous" learning and thinking

By introducing and playing root-carving videos before class, students can understand the development process, product types, production process, and expression forms of root-carving intangible cultural heritage. Introducing the history and cultural background of root-carving calligraphy, students will understand the origin, development process, status, and significance in the traditional culture of root-carving and intangible cultural heritage calligraphy. This will strengthen their observation and analysis of the lines, structures, forms, and other characteristics of root-carving intangible cultural heritage calligraphy, as well as the emotions and artistic conception it conveys.

R: "Imaginative" creative design

Students use natural roots to create and engage in targeted learning based on their roots. This study introduces students to the concept and characteristics of root-carving calligraphy, explaining that root-carving is an art form that uses natural materials such as tree roots for carving, while calligraphy is an art form that mainly expresses writing Chinese characters. The two can be creatively redesigned through integration. At the same time, lead students to observe representative root-carving calligraphy works of Yangchun City's root-carving intangible cultural heritage inheritors, so that students can understand their form, structure, and expression techniques, such as engraving Chinese characters on tree roots, and stimulate their imagination through questioning, image display, and other methods. From the setting question, "If you have

a tree root, what kind of Chinese character would you design on it?" to the classroom discussion, "Show some root-carving calligraphy design works and let students discuss related topics." Then, in the interactive teaching section, "Let students with ideas go to the blackboard to create calligraphy fonts, and other students use pencils to sketch root-carving calligraphy designs under the stage." Encourage students to freely exercise their imagination. Through such teaching activities, students can not only cultivate creativity and imagination but also increase their experience of the artistic charm of root-carving calligraphy.

C: "Replacement" media application

Firstly, introduce the characteristics and uses of clay to students. Explain that clay is a material with strong plasticity and easy shaping. Using clay instead of traditional woodworking materials enhances the environmental and safety aspects of teaching and implementation. Furthermore, students design sketches based on their initial ideas, using clay as a medium for shaping and freely unleashing their designs. They shape clay into dots and stripes and then shape them into Chinese characters. They use tools such as pencils and rulers to create shapes. Finally, complete the root-carving calligraphy design, and then conduct excellent work reviews, add interactive discussion sessions, guide students to evaluate aesthetic works with each other, and share learning experiences of root-carving calligraphy works. The cultivation mode of promoting students to expand their creativity and imagination through interactive comments can enhance the learning effectiveness of root-carving calligraphy

art creation.

S: "Style" creates expression

Based on the methods of the first three dimensions for creation, guiding students participating in the root-carving intangible cultural heritage art course and subsequently improving the root-carving calligraphy art works enhances their aesthetic perspective and handcrafting ability in creative expression while also achieving high course satisfaction. From the perspective of student learning effectiveness, the main gains of this course are reflected in four aspects: Firstly, 36.67% of people believe that this course can help them recognize the importance of traditional culture. Secondly, 26.67% of people have strengthened their ability to cultivate aesthetic perspectives; thirdly, 19.17% of people aspire to become inheritors of root-carving intangible cultural heritage in the future; and finally, 16.67% of people reported improving their daily beautification skills.

This study believes that the course gains of this experimental teaching are mainly reflected in demonstrating students' understanding of traditional culture and improving their ability to appreciate art. The students have a good preference and emphasis on the calligraphy form of the root-carving intangible cultural heritage course, with 46.67% of them believing that the teaching activities are more diverse; 25.83% of people believe that the teaching content is more interesting; 16.67% of people believe that teaching methods are innovative; and 10.83% of people believe that it can improve their time for independent thinking.

Overall, through data analysis, the proportion of students who learn the art course of root-carving intangible cultural heritage has improved in terms of hands-on ability, reaching 56.67%. Secondly, creative expression ability accounts for 51.67%. The observation ability and aesthetic ability are 30.83% and 35%, respectively, indicating a relatively low improvement in these two aspects. It can be explained that the integration of root-carving intangible cultural heritage into art classrooms is conducive to the improvement of students' "hands-on production ability" and "creative expression ability".

According to research, most students believe that

integrating root-carving intangible cultural heritage into art teaching can help them learn more about intangible cultural heritage and bring culture to life, which has significance for inheritance. On the other hand, the integration of root-carving intangible cultural heritage into the campus can also bring students more knowledge of intangible cultural heritage and promote the inheritance, protection, and development of traditional Chinese culture.

As shown above, this study conducts experimental teaching design based on the ARCS motivation model theory, integrating "calligraphy form" into the root-carving intangible cultural heritage and applying it in the art classroom through "autonomous" learning and thinking, imaginative creative design, alternative media applications, and empirical analysis of experimental teaching using four dimensions of "modeling" to create expression. Overall, students not only enhance their observation and aesthetic abilities in root-carving intangible cultural heritage through art classes, but also enhance their creativity and imagination, as well as their manual production and creative expression abilities through the integration of "calligraphy form" art creation. At the same time, they also extend their application based on "value," "belief," and "emotion" elements, truly realizing the importance of inheriting, promoting, and protecting root-carving intangible cultural heritage.

IV. OPTIMIZATION STRATEGIES FOR EXPERIMENTAL TEACHING

Through experimental teaching results, it has been found that it is urgent to promote the inheritance and popularization of root-carving intangible cultural heritage in rural primary school art education. Overall, incorporating root-carving intangible cultural heritage calligraphy into primary school art teaching design can effectively help students enhance their learning interests. However, there is still much room for improvement in the current teaching design plan. Based on the relevant issues and findings of the experimental survey results, this study proposes the following teaching optimization strategies:

4.1 Improve Teachers' Knowledge and Skills in Root-Carving Intangible Cultural Heritage

As an intangible cultural heritage of Yangchun City, the root-carving intangible cultural heritage needs more inheritance and development. The role of teachers is significant, and cultivating the next generation of inheritors of intangible cultural heritage requires their guidance. 1. Teachers in rural primary schools can enhance their knowledge reserves of intangible cultural heritage, and students can also provide answers when they encounter professional knowledge problems. Schools can invite inheritors of root carving intangible cultural heritage to provide training to teachers so that they can master the basic skills of root carving intangible cultural heritage. 2. There is a serious shortage of resources for art teachers in rural primary schools, with insufficient knowledge of intangible cultural heritage and limitations in improving professional skills. The introduction of root-carving intangible cultural heritage can broaden the teaching content and methods of primary school art education. Teachers can guide students to appreciate and understand the art of root carving by explaining the development process and production process of root carving and stimulating their interest and love for art. At the same time, teachers organize students to participate in root carving creation activities, allowing them to learn and experience root carving art in practice. The integration of root-carving intangible cultural heritage can improve teachers' teaching innovation ability. Teachers should develop root-carving teaching plans that are suitable for students based on their actual knowledge acquisition, which puts higher requirements on the teaching design and organizational ability of art teachers.

4.2 Carry out O2O Service Model Resource Sharing for Schools and Local Cultural Centers

1. Township primary schools can establish cooperative relationships with other schools, educational institutions, and intangible cultural heritage studios in the surrounding area, share experience in intangible cultural heritage resources, and achieve this through art teacher exchanges, root-carving intangible cultural heritage craft seminars,

and other means. Schools and local root-carving cultural centers can open up their own resources to each other, including venues, equipment, books, and materials. Schools can provide teaching venues for local cultural centers, and local cultural centers can provide exhibitions and cultural activities of root-carving intangible cultural heritage for schools. 2. Use information technology means, such as the Internet and remote education, to provide more extensive teaching resources and learning opportunities for township primary schools, which can be achieved by building an electronic library of root-carving intangible cultural heritage and carrying out online root-carving intangible cultural heritage courses. Through interactive classroom equipment, rural students can also experience the charm of root-carving intangible cultural heritage and understand the craftsmanship spirit of the inheritors of root-carving intangible cultural heritage. 3. Schools and local root-carving cultural centers can jointly organize intangible cultural heritage related activities, such as intangible cultural heritage exhibitions, traditional skill exhibitions, intangible cultural heritage festivals, etc. By organizing cooperative activities, we can better promote the culture of root-carving intangible cultural heritage and attract more students to learn about root-carving intangible cultural heritage craftsmanship.

4.3 Adopting Flexible and Diverse Teaching Methods to Cultivate Students' Interest in Intangible Cultural Heritage

1. Stimulate students' interest in learning by collecting stories of inheritors of root-carving intangible cultural heritage in Yangchun City. Through character experience, root-carving intangible cultural heritage craft performances can be organized, allowing students to immerse themselves. Students can also be led to visit the Root-Carving Intangible Cultural Heritage Museum for on-site inspections, allowing them to experience the cultural charm of root-carving firsthand. Diverse and flexible teaching methods can stimulate students' initiative in learning and improve their understanding of intangible cultural heritage. By introducing root-carving intangible cultural heritage into rural primary schools, students can have close

contact with and understanding of this traditional art form, improving their understanding and comprehension of intangible cultural heritage. The unique charm and rich connotation of root-carving art can stimulate students' interest in intangible cultural heritage and cultivate their love for traditional culture. 2. By conducting root-carving intangible cultural heritage education in rural primary school classrooms, a group of new talents can be cultivated for the inheritance of intangible cultural heritage, ensuring the sustainable development of root-carving intangible cultural heritage. The introduction of root-carving intangible cultural heritage can enrich the cultural connotation of schools, enhance the overall cultural atmosphere of schools, and enhance students' cultural confidence. Introducing root-carving intangible cultural heritage into campuses can not only protect and inherit intangible cultural heritage but also have a positive impact on the comprehensive development of students.

4.4 Expanding the Content of Art Textbooks for Township Primary Schools

Root-carving intangible cultural heritage is a unique technique that uses tree roots as materials and showcases various vivid images and stories through the skillful carving of intangible cultural heritage craftsmen. In rural primary schools, the materials in the art textbooks distributed are not complete, and students in class mainly use pencils to draw. The materials required for root-carving intangible cultural heritage originate from nature and are discovered in nature. Students can use local materials in school to depict images of tree roots. This hands-on process can improve students' hands-on and practical abilities and also enrich the knowledge range of the textbook content, allowing students to understand that root-carving intangible cultural heritage is an important component of traditional Chinese culture. By studying root-carving art, students can better understand and appreciate traditional Chinese culture. This allows students to have a deep understanding of and respect for nature in the process of creating root sculptures and to combine natural science with the content of art textbooks.

V. CONCLUSION

This paper aims to promote the inheritance and development of root-carving intangible cultural heritage through creative teaching of calligraphy forms in art classrooms and enhance students' understanding and identification with root-carving intangible cultural heritage. During this period, this study cited the ARCS motivation model theoretical framework for experimental teaching design, focusing on "autonomous" learning thinking, imaginative creative design, and alternative media applications. The four dimensions of modeling session are used as the teaching path plan, and questionnaire follow-up work is conducted after class through the four-stage learning method mentioned above.

The survey shows that innovative experimental teaching designs have indeed enhanced students' understanding of the historical origins and artistic characteristics of root-carving intangible cultural heritage. In terms of creative thinking, replacing traditional painting tools with clay media and transforming traditional classroom teaching methods into creative teaching classrooms can effectively attract students' interest in learning. There are various forms of root-carving, but at present, there are still relatively few creations that combine root-carving with calligraphy. Calligraphy is a key focus for cultivating primary and secondary school students. Using calligraphy design to enhance the integration and innovation of root-carving intangible cultural heritage can better enhance students' creative thinking, break the traditional teaching form of only using a pen to draw in the classroom, and use methods such as designing fonts, shaping shapes, and enriching textures to improve students' hands-on creative ability. Through the author's experimental teaching path, the protection and utilization of intangible cultural heritage have been successfully expanded.

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