

Exploration of the Path for Integrating Vocational Education into the Protection and Inheritance of Intangible Cultural Heritage

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Keywords: Vocational education; Intangible cultural heritage; Curriculum reconstruction; Integration of industry and education

Abstract: There is a deep structural alignment between vocational education and the protection and inheritance of intangible cultural heritage (ICH), but the current integration practice generally remains at the surface level, facing challenges such as the marginalization of course forms, the imbalance between teaching content and skills, and the virtualization of industry-education integration. This article conducts a systematic exploration from three dimensions: role positioning, curriculum reconstruction, and ecological system construction. It proposes that vocational education should be positioned as an "ecological restorer" for ICH inheritance, that curriculum development needs to achieve a translation from "cultural symbols" to "productive technologies", and that the construction of the ecological system should be advanced through the synergy of productive training bases, credit bank systems, and three-dimensional evaluation models. The research aims to provide theoretical references and practical paths for vocational colleges to deeply participate in the protection and inheritance of ICH.

1. Introduction

Intangible cultural heritage (ICH) is an important component of China's fine traditional culture, and its protection and inheritance are related to the continuation of cultural heritage and the construction of national identity [1,2]. The traditional family inheritance and master-apprentice oral transmission model of ICH inheritance is facing severe challenges such as the interruption of inheritors and the depletion of apprentice sources, and it is urgent to seek a sustainable talent cultivation channel in the modern education system [3]. Vocational education is an educational type that focuses on skill cultivation and is oriented towards employment. In recent years, the state has successively issued policy documents such as the "Opinions on Promoting the High-Quality Development of Modern Vocational Education" and the "Opinions on Further Strengthening the Protection of Intangible Cultural Heritage", clearly encouraging vocational colleges to participate in the cultivation of ICH inheritors, providing a policy basis for the deep integration of the two.

However, when examining the current practice, the ICH education in most vocational colleges still remains at the level of interest clubs, general lectures or simple skill experiences, lacking systematic course design, standardized skill training and effective connection with the job market. This article aims to break through the above-mentioned predicament and explore feasible paths for the integration of vocational education into ICH protection and inheritance from three progressive levels: role positioning, curriculum reconstruction and ecological construction, in order to provide theoretical references and practical inspirations for vocational colleges to deeply participate in ICH protection and inheritance.

2. The Role Positioning and Practical Tensions of Vocational Education in Intangible Cultural Heritage Inheritance

2.1 The Type Characteristics of Vocational Education and the Skill-Based Nature of Intangible Cultural Heritage

The fundamental difference between intangible cultural heritage and material cultural heritage lies in its "living nature", meaning it is not a static object or text but a knowledge system sustained through human physical practice. Whether it is traditional craft-based intangible cultural heritage such as woodcarving, lacquerware, and embroidery, or performance-based intangible cultural heritage like opera, dance, and musical instruments, their cores all rely on the physical performance of specific skills. The core skills of intangible cultural heritage are precisely typical tacit knowledge [4]. The type characteristics of vocational education are inherently compatible with this mode of knowledge transmission. General education tends to organize teaching based on textual logic, emphasizing conceptual understanding and propositional reasoning, while vocational education is based on action logic and follows the fundamental principle of "learning by doing". In terms of course structure, vocational education extensively employs practical teaching links such as internships, apprenticeships, and on-the-job training, which are highly consistent with the "oral transmission and hands-on practice" approach in intangible cultural heritage inheritance. In other words, the teaching process of vocational education itself is an ideal carrier for the transmission of intangible cultural heritage skills.

Further, the "vocational nature" of vocational education also offers a unique possibility for the value transformation of intangible cultural heritage inheritance. Traditional intangible cultural heritage inheritance often emphasizes the purity of skills and the legitimacy of the master-apprentice relationship, but pays less attention to how these skills can be transformed into a livelihood for practitioners. Vocational education inherently responds to job capabilities, product standards, and market logic, which makes it possible to connect traditional skills with modern vocational positions without undermining the core of intangible cultural heritage, thereby providing sustainable economic support for inheritors. This connection from "skill inheritance" to "vocational development" is precisely what general education cannot replace.

2.2 The Surface-level Dilemma of Current Integration Practices

Although there is a theoretical fit between vocational education and intangible cultural heritage inheritance, a review of current practices reveals a common problem: the integration mostly remains at the surface level and has not truly entered the core teaching links of vocational education. The term "surface-level" mainly manifests in three aspects [5].

Firstly, the forms of school courses have become extracurricular and marginalized. Many vocational colleges still introduce intangible cultural heritages at the level of organizing interest clubs, holding lectures on intangible cultural heritages, and organizing visits and experiences. These

activities, although helpful in enhancing students' understanding and interest in traditional culture, are placed at the periphery of the curriculum system and lack systematic design, credit recognition, and assessment standards. Students often participate as "volunteers" or "enthusiasts", rather than as "semi-professionals" undergoing systematic training. Secondly, there is an imbalance between aestheticization and technicalization of teaching content. When some colleges introduce intangible cultural heritages, they tend to simplify them into "art classes" or "craft classes", overly emphasizing the visual presentation of the final works, while neglecting the complex material handling, tool operation, and process control behind them. Taking traditional lacquer art as an example, the real technical barriers are not the drawing of patterns, but the collection and refinement of lacquer, the polishing and mounting of the base material, and the temperature and humidity control in the shade room, a series of "invisible" technical steps. If teaching only stops at the level of "painting a picture with lacquer", students may gain an aesthetic experience, but they will not have acquired the core skills necessary for professional development. Thirdly, the integration of industry and education is weakened and formalized. The "industry-education integration" advocated by vocational education is often simplified in the field of intangible cultural heritages to merely establishing a "master studio" or signing a school-enterprise cooperation agreement. However, in actual operation, the studio may only be a place where the master occasionally gives lectures on campus, lacking regular teaching arrangements and real production tasks; the cooperation agreement may also become a formality due to the lack of an interest connection mechanism. Students neither come into contact with real customer demands nor experience the entire process management from design, prototyping to delivery. The final works they produce are often "classroom assignments" rather than "market products". This kind of teaching without real task-driven motivation is difficult to cultivate students' professional abilities and market awareness [6].

2.3 The Irreplaceable Role of Vocational Education as a Restorer of the Intangible Cultural Heritage Ecosystem

The mission of vocational education is not to cultivate a few "national-level inheritors" or "masters of arts and crafts", but to restore the "middle force" that has been broken in the intangible cultural heritage industry chain, thus becoming an ecological restorer of the living transmission of intangible cultural heritage. The so-called "middle force" refers to those front-line technical and skilled talents who have a solid technical foundation, can independently complete qualified products, and have a clear understanding of industry norms. What vocational education can provide is a systematized, large-scale, and employment-linked talent cultivation channel. Unlike the traditional individualized master-apprentice transmission, vocational education can conduct systematic training for dozens or even hundreds of people at the same time, and through modular course design, break down the multi-year apprenticeship period into measurable and accumulable learning units. More importantly, vocational education is naturally linked to vocational qualification certification and the labor employment market. After completing their studies, students can obtain academic certificates or skill level certificates and enter the industry as "regular troops" rather than seeking their own way out with the ambiguous identity of "apprentices". This systematized identity recognition and employment channel is something that the traditional master-apprentice system cannot provide. In addition, vocational education also undertakes the function of "explicitization" and "standardization" of the intangible cultural heritage knowledge system. Vocational education can, under the premise of respecting the essence of tacit knowledge, through the formulation of teaching standards, the establishment of operation norms, and the accumulation of teaching cases, convert some encodable knowledge into teachable resources. This approach will not dissolve the

"living nature" of intangible cultural heritage; instead, it builds a safety net for it, preventing core techniques from being systematically forgotten due to the changes of individual inheritors [7].

3. The Path of Core Curriculum Reconstruction for Integrating Intangible Cultural Heritage into Vocational Education

3.1 Course Translation from Cultural Symbols to Productive Techniques

When intangible cultural heritage (ICH) is incorporated into the vocational education curriculum system, the first challenge is how to transform the "heritage" at the cultural level into "courses" at the teaching level. A common misconception is to equate ICH courses with "ICH appreciation" or "traditional handicraft experience", with teaching content mainly focusing on cultural knowledge introduction and simple imitation production. This approach, although helpful in enhancing students' cultural literacy, fails to cultivate vocational talents with genuine operational skills in ICH. The key to breaking this deadlock lies in achieving a course translation from "cultural symbols" to "productive techniques". "Productive techniques" emphasize the operational content of ICH skills that can be taught, trained, and evaluated. Any traditional skill, regardless of its rich cultural connotations or profound aesthetic implications, necessarily involves a series of specific skill points when it comes to operation, including material selection and processing, tool usage and maintenance, process arrangement and connection, quality judgment and defect repair, etc. The primary task of curriculum development is to extract a complete "skill map" from specific ICH projects, breaking down the abstract "craftsmanship" into several independent training and progressive skill units.

3.2 A Collaborative Knowledge Production Mechanism of Inheritors and Professional Teachers

After the course content is determined, the next challenge is "who will teach". The teaching of ICH skills places dual capability demands on teachers: on one hand, they need to have solid operational skills to accurately demonstrate and keenly identify students' movement deviations; on the other hand, they need to have professional educational and teaching capabilities to design teaching plans, organize classroom activities, and implement learning evaluations. In reality, these two types of capabilities are often distributed among two groups of people: ICH inheritors are highly skilled but generally lack teaching experience and curriculum development capabilities; vocational school professional teachers are familiar with educational and teaching laws but mostly do not master the core skills of ICH. This "dual-teacher" dilemma is the core obstacle to the deep integration of ICH courses into vocational education [8].

The solution to this dilemma does not lie in requiring either inheritors or professional teachers to "do it all", but in establishing a collaborative knowledge production and teaching implementation mechanism of "inheritors + professional teachers". The core of this mechanism is division of labor and cooperation: inheritors are responsible for providing "experience parameters", that is, the skill secrets accumulated over long-term practice and difficult to obtain from books; professional teachers are responsible for converting these experiences into "teaching standards", that is, structured teaching goals, progressive training tasks, and operational evaluation criteria. The two form a closed-loop collaboration in course development, teaching implementation, and evaluation feedback, rather than a simple "inheritors teach skills, professional teachers manage discipline" shallow division of labor.

The value of this collaborative mechanism lies not only in enhancing teaching effectiveness but also in promoting the "partial explicitness" of ICH knowledge. The nature of tacit knowledge

determines that it cannot be completely transformed into text or data, but through the intervention of professional teachers, those relatively stable and repeatable knowledge elements can be extracted to form teaching resources. This not only reduces the entry difficulty for beginners but also establishes a more reliable institutional basis for the preservation and dissemination of core skills. At the same time, this process is also an empowerment for inheritors themselves: they do not have to force themselves to learn teaching design methods they are not good at, but only need to focus on demonstrating their most proficient skills and sharing their experiences.

3.3 Empowering the Development and Application of ICH Teaching Resources through Digital Technology

On the basis of course translation and teacher collaboration, the intervention of digital technology provides new possibilities for the in-depth development of ICH teaching resources. One common predicament faced by the inheritance of intangible cultural heritage is the difficulty in finding master teachers and obtaining genuine teachings. The time and energy of outstanding inheritors are limited, and the number of students they can directly guide is extremely small. The value of digital technology lies in breaking through this spatio-temporal limitation, recording the core skills of inheritors in a high-fidelity manner, and converting them into teaching resources that can be repeatedly watched and finely analyzed. Currently, high-precision 3D scanning, motion capture, and high-speed cameras have become increasingly mature and can be applied to the documentation and teaching of intangible cultural heritage skills. Motion capture technology can convert the dynamic information of an inheritor's operation process, such as body posture, force application sequence, and tool movement trajectory, into 3D data models. Students can repeatedly observe the details from any angle in the software and even superimpose their own motion data for comparison and analysis. High-speed cameras can capture instantaneous movements that are difficult to discern with the naked eye, breaking down the inheritor's techniques into several key frames to help students understand the timing and rhythm of the movements. These technologies have been successfully applied in sports training and can be transferred to the teaching of intangible cultural heritage skills with great feasibility and broad prospects. A further expansion direction is to establish a "database for diagnosing deficiencies in intangible cultural heritage skills". The operation data generated by students during practical training can be collected by the system and compared with the standard data of the inheritor. The system can automatically identify the links with significant deviations and provide feedback to both students and teachers. For example, when a student is practicing embroidery, the system can use image recognition technology to determine whether the length, spacing, and direction of the stitches meet the standards and mark the areas with problems. This immediate and precise feedback mechanism significantly shortens the practice period from "knowing how to do it" to "actually doing it correctly" and reduces the workload of teachers in checking each student one by one.

4. Ecosystem Construction of Vocational Education Services for Intangible Cultural Heritage Inheritance

4.1 Physical Field Reconstruction of Productive Training Bases

The learning of intangible cultural heritage skills has a special environmental dependency. In the traditional master-apprentice system, apprentices grew up in real production scenarios: a carpenter apprentice started by helping the master pull the saw, gradually getting involved in marking, planing, mortising, and eventually became independent. The reason why this "learning by doing" model was effective was that learners were always in real task situations, directly perceiving the characteristics

of materials, the performance of tools, and the market's requirements for product quality. In contrast, the current intangible cultural heritage teaching in vocational colleges mostly takes place in standardized classrooms or simulated training rooms. The materials students handle are pre-treated "teaching materials", and the completed works are "classroom pieces" aimed at assignment scores, which are far from real production. The core direction of physical field reconstruction is to upgrade "training bases" to "productive training bases". The so-called productivity means that the base is not only a place for teaching but also for production: it takes on real orders, produces marketable products, and undergoes market testing. This model is usually called "front shop, back school" in the field of vocational education, where the front shop faces the market for product display and sales, and the back training base undertakes production and teaching functions. In this environment, students no longer complete "assignments" as "students", but participate in "production" as "quasi-employees", and their work results directly face customer evaluations and market screening.

This transformation brings multiple educational values. First, real production tasks inherently contain complete skill requirements. A woodcarving order may involve material selection, rough cutting, rough carving, fine carving, sanding, and waxing, among other processes. Students must go through all these steps to complete the order, rather than picking only the parts they are good at as in classroom exercises. Second, real production tasks foster quality awareness. The grading criteria for classroom assignments are set by teachers, and students often aim to "please the teacher"; but the quality standards for real orders are determined by the market and customers. A loose mortise or an area not sanded properly could lead to the entire batch of products being returned. This kind of rigid market constraint is something no classroom preaching can replace. Third, real production tasks cultivate cost awareness and efficiency awareness. Students need to learn to calculate working hours, control waste, and arrange processes, which are precisely the occupational qualities most easily overlooked in traditional intangible cultural heritage courses.

4.2 The System Design of Modern Apprenticeship Driven by Credit Banks

The reconfiguration of the physical field provides learning scenarios, but to encourage more learners to enter this scenario and complete their learning journey, it is necessary to remove key obstacles at the institutional level. A structural problem faced by the inheritance of intangible cultural heritage (ICH) is the single and unstable source of learners. While enrolled students in vocational colleges are an important source, many young people who are interested in learning traditional skills may be unable to enter the formal education system due to age, educational background, or time constraints. Meanwhile, students who have enrolled may also hesitate to choose ICH-related majors due to a lack of understanding of the ICH industry. The core task of the system design is to establish a low-threshold entry, highly flexible learning, and guaranteed exit channel. The "credit bank" system provides a feasible institutional framework for this purpose. The core logic of the credit bank is the storage, accumulation, and exchange of learning outcomes. Specifically in the field of ICH, the following mechanism can be designed: Any learner, regardless of whether they have a student status in a vocational college, can take ICH courses at recognized teaching points or online platforms, and the credits earned will be stored in their personal credit accounts. When the accumulated credits reach a certain amount, learners can choose to apply for further studies in ICH-related majors in vocational colleges, and the credits they have obtained will be recognized, eliminating the need for repetitive learning. Conversely, the credits earned by enrolled students for ICH courses during their school years can also be used as the basis for applying for relevant professional qualification certificates or industry skill level certifications.

The deep value of this system design lies in reconstructing the "cost-benefit" structure of ICH learning. Learners can first try a course, earn a few credits, and feel whether they are truly suitable

for this field before deciding whether to continue investing. This "small steps, fast pace" decision-making model is more in line with the behavior habits of contemporary youth and is more likely to dispel the concern that "learning is useless". Complementary to the credit bank is the "skill passport" system, which means that after students master a core skill of ICH, they can obtain a skill passport jointly certified by vocational colleges, industry associations, or human resources departments. This passport not only records the name and mastery level of the skill but also indicates the corresponding job ability standards. Students holding a skill passport can use it to prove their actual abilities to employers when seeking employment, without relying on traditional academic certificates or portfolios.

4.3 Innovation in Lifelong Assessment through a Three-Dimensional Evaluation Model

On the basis of the gradual improvement of the physical and institutional fields, the transformation of the evaluation system becomes a key link to ensure the quality of talent cultivation. Currently, the evaluation methods for ICH courses generally have two problems: first, they focus on results rather than the process, with the final grade determined by a single piece of work submitted at the end of the term, which fails to reflect the efforts and growth of students during the learning process; second, they emphasize skills over culture, with scores mainly based on the aesthetic appeal of the finished product, while neglecting the assessment of cultural understanding, design innovation, and other dimensions. This one-dimensional evaluation orientation does not match the demand for composite talents in ICH inheritance.

Constructing a "three-dimensional evaluation model" is a feasible solution to the above problems. This model decomposes the evaluation into three dimensions, each with a corresponding weight. The first dimension is "cultural understanding", accounting for 30%, which examines students' understanding of the historical origin, cultural connotation, aesthetic principles of craftsmanship, and social value of ICH projects. Evaluation methods include course papers and knowledge tests. The establishment of this dimension aims to correct the tendency of "emphasizing skills over culture" and ensure that students have the necessary cultural awareness and confidence while engaging in hands-on operations. The second dimension is "skill proficiency", accounting for 40%, which examines students' operational proficiency in core skills. The evaluation method is mainly practical operation assessment, with quantitative scoring based on the operation standards of each skill unit. This dimension is the core of the evaluation system and directly corresponds to the technical core of ICH inheritance. The third dimension is the "Innovation Conversion Rate", accounting for 30%, which examines students' ability to creatively transform traditional skills. Evaluation methods include design work reviews, product development plan presentations, and market test feedback. The establishment of this dimension aims to respond to the contemporary proposition of "activating inheritance", and to test whether students can produce works that meet contemporary aesthetic standards and market demands while respecting tradition.

The implementation of the three-dimensional evaluation model requires corresponding process recording tools. Electronic portfolios or learning analysis systems can be introduced to record students' cultural learning trajectories, skill training data, and innovation practice achievements throughout the learning cycle. Evaluation is no longer limited to a one-time assessment at the end of the term, but rather a continuous diagnosis and feedback throughout the entire learning process. This "full life cycle" evaluation concept resonates with the immersive learning in production-oriented training bases and the flexible system of credit banks, jointly forming a complete ecosystem that supports the cultivation of intangible cultural heritage inheritance talents.

5. Conclusion

The deep integration of vocational education and the protection and inheritance of intangible cultural heritage is not only a practical necessity to address the inheritance predicament but also an inherent requirement for vocational education to demonstrate its distinctive type characteristics. This article's research indicates that the core value of vocational education in the inheritance of intangible cultural heritage lies in its role as an "ecological restorer", transforming fragmented skills and experiences into teachable, accumulable, and certifiable knowledge systems through systematic course translation, institutionalized teacher collaboration, and digital resource development. The collaborative construction of production-oriented training bases, credit banks, and three-dimensional evaluation models provides a complete ecological support for this transformation. It should be noted that the involvement of vocational education is not intended to replace traditional family inheritance and apprenticeship systems but to form a complementary and symbiotic multi-dimensional pattern with them. Future research could further explore the tension adjustment between the "authenticity" of intangible cultural heritage and the "standardization" of vocational education, as well as the effective prevention and control of excessive commercialization risks.

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