Innovation and Practice of Labor Education in Local Ethnic Colleges under Digital Transformation: A Case Study of Sichuan Minzu College

Wang,Dongdong Li,Yahui

Sichuan Minzu College, Kangding, Sichuan, 626001, China

Abstract: This paper takes Sichuan Minzu College as the research object, and deeply explores the innovation and practice of labor education in local ethnic colleges and universities under the background of digital transformation. By analyzing the impact of digital transformation on the objectives, content, and methods of labor education, and combining the current situation and problems faced by Sichuan Minzu College's labor education, this paper draws on excellent cases from other colleges and universities. It proposes innovative strategies from the aspects of curriculum system, practice platform, teaching staff, values cultivation, and evaluation system, aiming to provide reference for local ethnic colleges and universities to carry out high-quality labor education in the digital era, and help cultivate high-quality ethnic talents with innovative spirit, practical ability, and correct labor values.

Keywords: Digital transformation; Local ethnic colleges and universities; Labor education; Innovative practice

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In the context of the current global digital wave, digital technology is profoundly changing all aspects of social production and life, and the education sector is also facing unprecedented changes. As an important component of cultivating well-rounded talents, labor education urgently needs to adapt to the trend of digital transformation. Local ethnic colleges undertake the important mission of cultivating high-quality talents for ethnic regions. Their labor education not only concerns the personal growth and development of students, but also has a profound impact on the economic and social development of ethnic regions and the progress of ethnic unity. [1] However, the labor education in local ethnic colleges currently faces many challenges in the process of digital transformation. How to achieve innovation and breakthroughs in labor education has become an important issue that urgently needs to be addressed. Sichuan Minzu College is located in an ethnic region and has a certain representativeness in labor education. Therefore, conducting research on it has important practical significance.

1. The Opportunities Brought by Digital Transformation to Labor Education in Local Ethnic Colleges and Universities

(1) Enrich labor education resources

The application of digital technology provides a new way for the enrichment of labor education resources in local ethnic colleges. Through the Internet, schools can access massive labor education resources, including advanced labor education courses, teaching cases, practice videos, etc. at home and abroad. At the same time, by utilizing digital technology, schools can explore, organize, and develop local ethnic labor education resources, presenting

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About the Author

Wang,Dongdong (1988-), male, Han nationality, master degree candidate, research direction: physical education teaching.
Li,Yahui (1991-), female, Han nationality, master degree candidate, research direction: physical education teaching.

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traditional ethnic skills in digital form, such as producing ethnic handicraft teaching videos, developing ethnic cultural virtual experience courses, etc. In addition, digital platforms can integrate labor education resources both on and off campus, achieve resource sharing, and provide students with richer and more diverse learning content. [2]

(2) Innovative labor education model

The digital transformation has promoted the innovation of labor education models. New teaching modes such as online learning, virtual simulation teaching, and remote collaborative practice based on Internet and intelligent technology have brought new vitality to labor education. Students can learn labor knowledge and skills anytime and anywhere through online courses, and use virtual simulation technology to conduct labor practice operations in a virtual environment, without being limited by time and space. Meanwhile, digital platforms can also facilitate interaction, communication, and collaborative learning between teachers and students, as well as among students themselves, thereby enhancing students' learning enthusiasm and initiative. For example, using virtual reality technology, students can immerse themselves in traditional ethnic labor scenes, enhancing their understanding and identification with ethnic culture. [3]

(3) Improving the effectiveness of labor education

The application of digital technology helps to enhance the effectiveness of labor education. Through big data analysis, schools can understand students' learning situations and needs, and provide personalized learning plans and guidance for students. At the same time, digital evaluation tools can comprehensively, objectively, and accurately evaluate students' labor learning process and outcomes, provide timely feedback on students' learning situation, and promote students' self-improvement. In addition, digital labor education can also cultivate students' information literacy and innovation ability, enabling them to better adapt to the development requirements of the digital age. [4]

2. The Current Situation and Challenges of Labor Education in Local Ethnic Colleges Under Digital Transformation

(1) Shortage and imbalance of labor education resources

Shortage of hardware facilities and venues. Most ethnic colleges are located in economically underdeveloped areas with limited financial support, resulting in lagging hardware facilities and venue construction for labor education. Taking Sichuan Minzu College as an example, the economic foundation of the Ganzi area where the school is located is weak, and the school has insufficient investment in the construction of labor education venues. There is a lack of professional labor practice workshops, modern agricultural plantations, and other diversified practice venues on campus. The existing labor practice sites have small areas and single functions, which can only meet the basic needs of manual labor courses, making it difficult to carry out emerging labor education projects involving digital equipment operation, modern manufacturing simulation, etc. In terms of digital devices, there is a shortage of computers with low configurations, and advanced devices such as virtual reality (VR) and augmented reality (AR) are even rarer, which cannot provide students with immersive and modern labor practice experiences. The teaching staff is weak. There is a dual problem of insufficient quantity and low quality of labor education teachers in local ethnic colleges. [5] On the one hand, there is a serious shortage of full-time labor education teachers, and many colleges and universities do not even have a dedicated labor education teaching staff. Courses are often taught by teachers from other disciplines, who lack systematic professional knowledge and teaching experience in labor education. On the other hand, the digital literacy of existing teachers is generally low, making it difficult to adapt to the requirements of digital transformation. They are not proficient in the application of digital technologies such as intelligent teaching tools, big data analysis, and online teaching platforms, and cannot effectively integrate digital technologies into the design and teaching process of labor education courses. For

example, when conducting digital labor courses, teachers may not be able to provide accurate demonstrations and guidance due to unfamiliarity with software operations, which can affect teaching effectiveness. In addition, the ability of ethnic regions to attract outstanding talents is limited, making it difficult to introduce composite teachers with digital technology and labor education backgrounds, further exacerbating the dilemma of the teaching staff. Insufficient development of course resources. In terms of curriculum resources, there is a serious problem of insufficient development in labor education in local ethnic colleges. The traditional labor education curriculum is outdated, mainly focusing on simple physical labor and basic life skills, disconnected from the labor forms of the digital age, and lacking attention to emerging labor fields such as digital technology application, innovation and entrepreneurship, and intelligent manufacturing. [6] At the same time, the development of ethnic characteristic labor education curriculum resources is relatively lagging behind. Although local ethnic colleges have abundant ethnic cultural resources, such as unique ethnic handicrafts and traditional agricultural culture, these resources have not been fully explored and transformed into labor education courses. Even though some ethnic characteristic courses have been developed, there are still problems of fragmented content, lack of systematicity, and low degree of digitization, and a complete curriculum system has not been formed. For example, some ethnic handicraft courses only present simple text and image materials, which cannot vividly demonstrate the production process and procedures through digital means, making it difficult to attract students' learning interest and effectively inherit ethnic culture.

(2) The tradition and rigidity of labor education models

The teaching method is single. Currently, labor education in local ethnic colleges is still dominated by traditional teaching methods, with classroom teaching taking a dominant position. Teachers usually adopt the teaching method, unilaterally imparting labor knowledge and skills to students, lacking interactive and practical elements. In practical teaching, teachers often demonstrate operations while students imitate and practice. This "cramming" and "hands-on" teaching method puts students in a passive state of acceptance, lacking opportunities for independent exploration and innovation. For example, in the manual weaving course, teachers demonstrate according to fixed steps, and students mechanically repeat the operation, which makes it difficult to stimulate students' creativity and enthusiasm for labor. In the digital age, students have become accustomed to diverse and interactive learning methods, and this single teaching method can no longer meet their learning needs, resulting in low participation and enthusiasm for labor education courses. Lack of personalized and differentiated teaching. Students from local ethnic colleges come from different ethnicities and regions, with significant differences in their knowledge base, learning abilities, and interests. However, the existing labor education model ignores individual differences among students, adopts a "one size fits all" teaching method, and uniformly sets teaching goals, content, and progress, which cannot meet the personalized development needs of students. For students with a solid foundation in digital technology, the existing course content may be too simplistic to stimulate their learning motivation; For students with weak foundations, the difficulty of the course may be too high, leading to fear and poor learning outcomes. [7] In addition, this lack of personalized teaching mode is not conducive to tapping into students' strengths and potential, and it is difficult to cultivate diverse talents with innovative spirit and practical ability. The disconnect between practice and theory. Labor education emphasizes the combination of practice and theory, but in local ethnic colleges, practical teaching and theoretical teaching are often separated from each other. Theoretical courses focus on the explanation of labor knowledge, lacking connection with actual labor scenarios, making it difficult for students to apply the knowledge they have learned to practical operations; Practical courses, on the other hand, place more emphasis on skill training and neglect the guidance of theoretical knowledge. Students may learn about it during the practical process, but they may not know why. For example, in agricultural labor practice courses, students only engage in simple planting and breeding operations without understanding the underlying agricultural scientific principles and technological applications; In the digital technology practice course, although students have mastered software operation skills, they do not understand how to apply these skills to solve practical

labor problems. The disconnect between theory and practice makes it difficult for labor education to achieve the goal of cultivating students' comprehensive labor literacy.

(3) Lack and lag of digital transformation capability

The construction of digital infrastructure is outdated. The digital infrastructure construction of local ethnic colleges is generally backward, which cannot provide strong support for the digital transformation of labor education. Insufficient campus network bandwidth leads to video lag and live streaming delay in online teaching, affecting the smoothness of teaching; The information management system is not perfect, and there are many loopholes in teaching resource management, student learning data recording and analysis, making it difficult to achieve precise management of labor education. In addition, the update of digital teaching equipment is slow, and many universities are still using old computers, projectors and other equipment, which cannot meet the needs of digital teaching. For example, when conducting virtual simulation labor practice courses, due to insufficient equipment performance, high-quality virtual scenes cannot be presented, which greatly reduces students' experience and learning effectiveness. [8] The weak digital infrastructure seriously restricts the speed of promoting the digital transformation of labor education. Insufficient ability to integrate and utilize digital teaching resources. Although there are abundant digital teaching resources on the Internet, local ethnic colleges lack the ability to integrate and utilize resources. On the one hand, schools lack effective resource screening and evaluation mechanisms, making it difficult to select high-quality content suitable for their own labor education from a vast amount of resources, resulting in a mismatch between the introduced resources and the actual teaching needs. On the other hand, schools lack systematic digital integration of existing teaching resources, and a large amount of ethnic cultural resources, teaching cases, etc. are preserved in traditional forms without being converted into digital resources for sharing and utilization. In addition, teachers are not good at utilizing digital resources in the teaching process and still rely on traditional textbooks and lesson plans, which cannot fully leverage the advantages of digital resources in enriching teaching content and improving teaching effectiveness. For example, when teachers explain traditional ethnic handicrafts, they fail to utilize high-definition videos, 3D models, and other resources on the internet, making the teaching content dull and difficult for students to deeply understand the details and charm of the craftsmanship. The educational philosophy and management system are not suitable for digital transformation. Digital transformation is not only a technological change, but also an innovation in educational philosophy and management system. However, local ethnic colleges are still relatively conservative in terms of educational philosophy and management system, and there is a significant gap between them and the requirements of digital transformation. In terms of educational philosophy, some teachers and managers have insufficient understanding of the importance of digital transformation in labor education, and still adhere to traditional educational concepts, believing that labor education only needs to focus on physical labor training, neglecting the cultivation of modern labor literacy such as digital literacy and innovation ability. In terms of management system, schools lack institutional guarantees and incentive mechanisms conducive to digital transformation, and do not tilt towards digital labor education in teaching evaluation, teacher assessment, resource allocation, etc., resulting in low enthusiasm of teachers to participate in digital teaching reform. For example, schools still prioritize the quality of traditional classroom teaching in evaluating teachers' teaching, without incorporating digital teaching outcomes into the evaluation system, resulting in a lack of motivation for teachers to develop digital labor education courses and innovate teaching.

3. Innovative Strategies for Labor Education at Sichuan Minzu College under the Background of Digital Transformation

(1) Improve the digital labor education curriculum system

Integrating digital technology with ethnic culture. Combining the ethnic characteristics and local industrial needs

of Sichuan Minzu College, deeply integrating digital technology with ethnic culture, and developing distinctive labor education courses. For example, offering a digital drawing course for thangka, using digital drawing software and technology to teach students thangka drawing skills while integrating thangka cultural knowledge; Set up an e-commerce operation course for Qiang embroidery to cultivate students' ability to promote and sell Qiang embroidery products using e-commerce platforms. Through these courses, we not only inherit and promote national culture, but also enhance students' digital labor skills and entrepreneurial awareness. Develop blended online and offline courses. Design a blended online and offline labor education course that fully leverages the advantages of both online and offline teaching. Online courses provide theoretical knowledge explanations, teaching videos, learning materials, etc., and students can learn independently; Offline courses organize students for practical operations, group discussions, and case analysis, while teachers provide on-site guidance and answer questions. At the same time, utilizing online teaching platforms to achieve teacher-student interaction, homework submission and grading, learning progress tracking, and other functions can improve teaching efficiency and quality.

(2) Strengthen the construction of digital labor education practice platform

Establish a virtual simulation labor practice base. Increase investment, build virtual simulation labor practice bases, and use virtual simulation technology to simulate labor scenes in characteristic industries in ethnic areas, such as watchtower construction and Yi Torch Festival activity organization. Students can engage in practical operations in a virtual environment, learn labor skills, and reduce practical costs and risks. At the same time, virtual simulation practice bases can also be combined with offline practice bases to provide students with more comprehensive and rich practical experiences. Promote the construction of digital platforms for school enterprise cooperation. Strengthen cooperation with local enterprises and e-commerce platforms, and build a digital platform for school enterprise cooperation. Through this platform, enterprises can publish practical projects and employment requirements, and students can register online to participate in practical activities, internships, and employment. At the same time, the platform can also provide online training, technical guidance and other services to promote the integration of school labor education with the actual needs of enterprises, improve students' practical abilities and employment competitiveness.

(3) Enhancing teachers' digital teaching ability

Carry out digital training for teachers. Regularly organize teachers to participate in digital teaching training, which includes the application of digital technology, the use of online teaching platforms, virtual simulation teaching methods, etc. Invite experts, scholars, and technical personnel from enterprises to give lectures, and improve teachers' digital teaching skills and innovation abilities through theoretical explanations, practical operations, and case analysis. At the same time, teachers are encouraged to participate in academic exchanges and research activities, learn advanced teaching experience and methods. Establish a teacher incentive mechanism. Establish a sound teacher incentive mechanism and commend and reward teachers who have demonstrated outstanding performance in digital labor education and teaching reform. Incorporate teachers' digital teaching achievements into the performance evaluation and professional title evaluation system, and stimulate teachers' enthusiasm and initiative to participate in digital labor education and teaching reform. At the same time, provide more professional development opportunities for teachers and support them in carrying out research projects and teaching research related to digital labor education.

(4) Cultivate students' correct digital labor values

Strengthen education on labor values. Strengthen the education of students' labor values through various forms such as classroom teaching, themed class meetings, and social practice. Combining the excellent traditional culture and the deeds of model worker in ethnic areas, guide students to establish correct labor concepts, understand the value and significance of labor, and cultivate students' feelings of respecting and loving labor. At the same time,

educate students to have a correct understanding of the role of digital technology in labor, avoiding excessive reliance on technology and neglecting the cultivation of physical labor and innovation ability. Guide students to make reasonable use of digital technology. Carry out digital literacy education, improve students' awareness and application ability of digital technology, and guide students to use digital technology reasonably for learning and labor practice. For example, organizing students to participate in digital technology competitions, innovation and entrepreneurship projects, and other activities to cultivate students' innovative thinking and practical abilities. At the same time, strengthen cybersecurity education, guide students to use the internet correctly, and avoid being addicted to the internet and influenced by harmful information.

(5) Building a digital labor education evaluation system

Establish diversified evaluation indicators. Establish a diversified evaluation index system for labor education, evaluating students from multiple dimensions such as labor attitude, labor skills, innovation ability, and teamwork. Evaluation indicators should not only focus on students' learning outcomes, but also attach importance to their learning process; We should not only assess students' mastery of theoretical knowledge, but also evaluate their practical operational abilities. At the same time, based on the characteristics of ethnic colleges and universities, the ability to inherit and innovate ethnic culture will be included in the evaluation index system. Utilize big data for evaluation and analysis. Utilize big data technology to collect and analyze data on students' labor education learning process, such as course learning records, practical activity performance, online interaction, etc. Through data analysis, comprehensively understand students' learning situation and development needs, and provide a basis for teachers to adjust teaching strategies and optimize teaching content. At the same time, personalized learning advice and development guidance are provided to students based on the evaluation results, promoting their comprehensive development.

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