

# Exploration on the path of digital empowerment to improve the quality and efficiency of ideological and political education in vocational undergraduate education

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**Abstract.** Based on the core orientation of "integrating moral education and technical training" in vocational undergraduate education, this paper explores the paths for digital technology to empower ideological and political education and improve its quality and efficiency. The paper points out that although the application of digitalization has optimized resource allocation, it still faces practical dilemmas such as deviations in conceptual cognition, superficial application of carriers and an imperfect support system in practice. To this end, the paper proposes an innovative path of the trinity of "concept, carrier and support": updating the educational concept to clarify the orientation of "digital empowerment and education-oriented"; deepening the application of technologies such as big data and virtual scenarios to build an immersive and precise educational carrier; improving the construction of interdisciplinary teams and diversified evaluation mechanisms to strengthen supporting capabilities. It aims to promote the transformation of ideological and political education in vocational undergraduate education from formal innovation to practical effect improvement, and cultivate high-quality technical and skilled talents that meet the needs of the new era.

**Keywords:** digital empowerment, vocational undergraduate education, ideological and political education, quality and efficiency improvement

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## 1. Introduction

As a key link connecting higher education and vocational education, vocational undergraduate education undertakes the important mission of cultivating high-quality technical and skilled talents who integrate moral education with technical training and combine engineering learning with practical training. As the soul project of vocational undergraduate education, ideological and political education directly determines the value orientation and sense of responsibility of technical and skilled talents. General Secretary Xi Jinping emphasized: "To do a good job in ideological and political work in colleges and universities, we must adapt to circumstances, advance with the times, and innovate in response to trends." This important statement points the way for the innovative development of ideological and political work in various fields in the new era. Against the background of the country's in-depth implementation of the big data strategy and accelerated promotion of digital transformation in education, the application of digital technology has changed the

working methods of ideological and political education and optimized the allocation of educational resources. The rise of digital technology has provided new support for improving the quality and efficiency of ideological and political education in vocational undergraduate education, breaking the temporal and spatial barriers and formal limitations of traditional ideological and political education, and becoming an important engine for high-quality development in the new era. However, in the process of promoting digital practice, influenced by multiple factors such as the orientation of vocational undergraduate education, resource allocation and team literacy, digital empowerment for ideological and political education has revealed some practical dilemmas, restricting the full play of the effectiveness of ideological and political education. Based on the practice of ideological and political education in vocational undergraduate education, this paper analyzes the existing dilemmas in the practice of digital empowerment, explores targeted paths for quality and efficiency improvement, and provides practical ideas for vocational undergraduate colleges and universities to rely on digital technology to improve the quality of ideological and political education and cultivate high-quality technical and skilled talents that meet the needs of the new era.

## **2. Practical dilemmas of digital empowerment for ideological and political education in vocational undergraduate education**

With the core orientation of "practice-oriented, skill-based, integrating moral education and technical training", vocational undergraduate education is distinctly different from general undergraduate education which focuses on theoretical research. Its ideological and political education work emphasizes more integration with social professional practice and future job requirements. Facing the 15th Five-Year Plan period, vocational education pays more attention to connotative development and quality improvement, and digital empowerment for ideological and political education is an important measure conforming to this trend [1]. At present, most vocational undergraduate colleges and universities have gradually introduced digital technology to carry out ideological and political education. By virtue of the advantages of digitalization such as convenience, interactivity and immersion, they have effectively promoted the organic connection between ideological and political education, professional skill training and vocational practical training in vocational undergraduate education, and helped realize the coordinated promotion of "fostering morality" and "strengthening skills" in vocational undergraduate education [2]. However, an analysis of practical cases of digital ideological and political education in domestic vocational undergraduate education reveals that digital empowerment for ideological and political education in vocational undergraduate education has prominent problems in three dimensions: concept, carrier and support. First, there are deviations in conceptual cognition and vague positioning of digital empowerment. Some vocational undergraduate colleges and universities lack sufficient understanding of the importance of digital empowerment for ideological and political education, holding cognitive misunderstandings such as "valuing technology over education" and "valuing form over effectiveness". They simply equate digital empowerment with online teaching of ideological and political courses or the adoption of digital resource platforms, ignoring the in-depth integration of digital technology with the teaching content of ideological and political education, and failing to reflect the pertinence of ideological and political education in vocational undergraduate education. Meanwhile, some ideological and political teachers in vocational undergraduate education lag behind in the concept of digital education, still using traditional teaching models in the teaching process, lacking the awareness of actively applying digital technology, tending to single and passive knowledge teaching, and having a weak awareness of applying practical professional cases and digital scenarios. Second, the application of carriers is not in-depth, and the effectiveness of empowerment is not fully released. At present, the application of digital ideological and

political carriers in vocational undergraduate colleges and universities is still in a superficial stage. The built platforms are mostly used for basic functions such as courseware playback and homework submission, lacking in-depth application of digital technologies such as big data, VR/AR, and failing to build immersive and interactive ideological and political education scenarios with weak classroom interactive functions. Third, the support system is imperfect and supporting capabilities need to be improved. Digital empowerment for ideological and political education requires a sound ideological and political education support system as support. However, at present, the digital literacy of ideological and political teachers in vocational undergraduate colleges and universities is uneven, lacking interdisciplinary education teams of "ideology and politics + digitalization + major", with low integration of digital technology application and operation capabilities with ideological and political knowledge; in terms of evaluation mechanisms, the evaluation of digital ideological and political education still focuses on quantitative indicators such as theoretical learning scores and online learning duration, lacking comprehensive consideration of students' ideological literacy, professional literacy and practical performance, with a single evaluation method that cannot fully reflect the actual effectiveness of digital empowerment for ideological and political education.

### **3. Core logic of digital empowerment for ideological and political education in vocational undergraduate education**

To solve the practical dilemmas of digital empowerment for ideological and political education in vocational undergraduate education, it is necessary to base on the core orientation of vocational undergraduate education in cultivating high-quality technical and skilled talents, adhere to the unity of problem orientation, goal orientation and practice orientation, closely follow the requirements of industrial structure upgrading and the development of new quality productive forces [3], and make efforts from three dimensions of concept, carrier and support to explore an innovative path of digital ideological and political education with the characteristics of vocational undergraduate education, and promote the transformation of digital empowerment from "formal innovation" to "practical effect improvement". To solve practical dilemmas, we must base on the orientation of vocational undergraduate education in cultivating high-quality technical and skilled talents, adhere to the unity of problem orientation, goal orientation and practice orientation, and promote the transformation of digital empowerment from "formal innovation" to "practical effect improvement".

### **4. Innovative paths of digital empowerment for ideological and political education in vocational undergraduate education**

#### **4.1. Updating educational concepts and clarifying the positioning of digital empowerment**

Concept innovation is the premise of digital empowerment for ideological and political education. It is necessary to break cognitive misunderstandings and establish the core concept of "digital empowerment, education-oriented, and aligned with vocational characteristics". Vocational undergraduate colleges and universities should raise ideological awareness, incorporate digital empowerment for ideological and political education into the overall development plan of the school, clarify that the core goal of digital ideological and political education is to realize "coordination of moral cultivation and skill enhancement, integration of theory and practice", abandon the achievement-oriented approach of "valuing form over effectiveness", and focus on educational effectiveness. At the same time, strengthen conceptual training for ideological and political teachers, guide teachers to change traditional teaching concepts, establish digital education awareness, take the

initiative to learn digital technologies and methods, and promote the transformation of ideological and political education from "theoretical indoctrination" to "interactive experience" and "precision education" in combination with the job requirements of different majors, so that digital technology truly serves the needs of ideological and political education and realizes the organic unity of technological empowerment and value guidance.

#### 4.2. Deepening carrier innovation and building immersive and precise digital educational carriers

Carrier innovation is the key to releasing the effectiveness of digital empowerment. It is necessary to give full play to the advantages of technologies such as big data and artificial intelligence, and build a diversified and collaborative digital ideological and political education carrier system. First, upgrade the intelligent ideological and political education platform, integrate online and offline educational resources, improve platform functions, use big data technology to analyze students' ideological dynamics, innovate presentation forms, and carry out online interactive teaching, group discussions and other activities to enhance students' participation enthusiasm. Second, build immersive ideological and political experience scenarios, for example, use digital means such as short videos, animations and virtual cases to restore red education scenarios and vocational training scenarios, allowing students to experience professional posts and perceive the connotation of ideological and political education in virtual scenarios. Driven by new quality productive forces, the integrated education model of industry, education and science has been continuously deepened, and the construction of digital carriers should also be closely aligned with industrial practice and job requirements [4]. Moreover, vocational undergraduate education needs to strengthen the cultivation of engineering innovation capabilities, and the integration of ideological and political education with digital technology is an important support for improving students' comprehensive quality [5]. Third, promote the collaboration of online and offline carriers, combine online ideological and political learning with offline vocational practice, volunteer services and campus cultural activities, realize "learning theories online and practicing actions offline", enhance the appeal of ideological and political education and improve its effectiveness.

#### 4.3. Improving the support system and strengthening the supporting capabilities of digital empowerment

A sound support system is an important guarantee for the effective implementation of digital empowerment for ideological and political education. It is necessary to make concerted efforts from three aspects: team building, resource investment and evaluation mechanism. In terms of team building, construct an interdisciplinary education team of "ideology and politics + digitalization + major", strengthen digital training for ideological and political teachers, improve teachers' capabilities in digital operation, content creation and integrated application; encourage ideological and political teachers to conduct in-depth research and study in enterprises and industry frontlines, absorb industry experts into the ideological and political education team, and improve the collaborative education mechanism. In terms of resource investment, increase investment in digital ideological and political resources, regularly update digital ideological and political courses and case resources, strengthen cooperation with other colleges and universities and enterprises, and share high-quality digital ideological and political resources. In terms of evaluation mechanism, build a diversified and scientific evaluation system for digital ideological and political education, incorporate students' ideological literacy, digital capabilities, innovation capabilities and practical performance into the evaluation scope, use big data technology to realize the whole-process tracking and objective analysis of the evaluation process, strengthen

the application of evaluation results, give play to the "baton" role of evaluation, and promote the continuous optimization and quality and efficiency improvement of ideological and political education.

## 5. Conclusion

Digital empowerment for improving the quality and efficiency of ideological and political education in vocational undergraduate education is an inevitable choice to adapt to the digital transformation of education and promote the high-quality development of vocational undergraduate education, as well as an important path to cultivate high-quality technical and skilled talents who integrate moral education with technical training. At present, although digital empowerment for ideological and political education in vocational undergraduate education faces practical dilemmas such as conceptual deviations, superficial carriers and insufficient support, as long as vocational undergraduate colleges and universities base on their own school-running characteristics, adhere to problem orientation, focus on innovation and breakthrough, make concerted efforts from the three dimensions of concept, carrier and support, and continuously optimize the digital ideological and political education system, they can fully release the empowerment effectiveness of digital technology, promote the in-depth integration of ideological and political education with vocational undergraduate talent cultivation, effectively improve the quality and effectiveness of ideological and political education, and contribute the strength of vocational undergraduate education to the development of the real economy, industrial upgrading and national innovation-driven development.

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