

# *The research on the path of promoting digital technology in vocational education under school-enterprise collaboration*

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**Keywords:** Vocational Education, Digital Technology, School-Enterprise Collaboration, Promotion Path

**Abstract:** This study aims to explore the path of promoting digital technology in vocational education under the collaboration of schools and enterprises, delving into the key role of digital technology in vocational education. Through literature analysis and case studies, the positive impact of digital technology and the crucial role of school-enterprise collaboration are discovered. By discussing the integration of digital technology, updating educational content, and training teachers and students, it aims to meet the needs of the digital age. Finally, it summarizes the key elements needed for the promotion of digital technology, calling for cooperation among all parties to promote the digital transformation of vocational education.

## **1. Introduction**

With the continuous development of digital technology in various fields of society, the field of vocational education is also facing the pressure of digital transformation. The application of digital technology in vocational education has become a key factor in enhancing students' employability. To effectively promote digital technology in vocational education, collaboration between schools and enterprises becomes particularly important. This article aims to study the path of promoting digital technology in vocational education under school-enterprise collaboration, exploring strategies and methods for successful promotion of digital technology.

## **2. The Necessity of Developing Digital Technology in Vocational Education**

### **2.1. The Role and Significance of Digital Technology in Vocational Education**

Digital technology plays an important role in the field of vocational education, offering rich opportunities and significant meaning under school-enterprise collaboration. With the rapid development of modern society, the requirements of vocational education are no longer limited to traditional knowledge impartation but need to focus more on practical application and industry demands. The introduction of digital technology helps students better adapt to the ever-changing professional environment.

Firstly, digital technology provides more flexible learning methods. Through online courses,

remote learning, and digital materials, students can learn at their own pace and according to their needs. This personalized approach to learning helps meet the diverse needs of students and improves the efficiency of education.

Secondly, digital technology offers practical opportunities. Simulators, virtual labs, and virtual reality projects allow students to apply their knowledge and skills in a risk-free environment. This is particularly important for vocational education, as students need to possess real-world skills and experience.[1]

Additionally, digital technology promotes school-enterprise collaboration. Schools and businesses can cooperate to develop digital training courses, ensuring that educational content aligns with industry demands. This collaboration strengthens the link between schools and enterprises, helping students better integrate into the professional field.

## **2.2. Challenges and Opportunities in Integrating Digital Technology into Vocational Education**

However, integrating digital technology into vocational education is not without challenges and opportunities. Firstly, the continuous development and updating of digital technology mean that educational institutions need to constantly upgrade and maintain equipment and educational resources, which may require significant investment.[2]

Secondly, educators need to adapt to new teaching methods and tools. Traditional educators may need training and support to effectively use digital technology in teaching. This also necessitates a change in the culture and method of education in institutions to meet the demands of the digital age.

However, corresponding to the challenges are tremendous opportunities. The integration of digital technology can improve the quality of vocational education, better preparing students for professional challenges. Additionally, digital technology can expand the reach of vocational education, allowing more students to access high-quality education, regardless of their location.

In summary, the role and challenges of digital technology in vocational education are evident. By effectively integrating digital technology, we can provide a better learning experience for students, better meet the needs of the professional field, and thus promote the development and improvement of vocational education under school-enterprise collaboration.[3]

## **3. Promoting Digital Technology in Vocational Education Based on Updating Educational Content**

### **3.1. Redesigning Curricula to Adapt to Digital Technology**

In today's era of increasingly widespread digital technology, vocational education needs to rethink and redesign its curricula to better adapt to the development and application of digital technology. This section explores the redesign of curricula to ensure they keep pace with technological innovation, meet industry needs, and provide students with the necessary skills. Key aspects to be discussed include:

#### **3.1.1. Current State Analysis of Vocational Education Curricula**

The current state analysis of vocational education curricula aims to ensure that the education system keeps pace with the rapid changes in the professional field. Curricula in different areas, such as engineering, healthcare, information technology, and hotel management, need to be reviewed and evaluated to ensure their content is up-to-date and meets industry requirements.[4]

In the engineering field, curricular content must reflect the latest trends in engineering technology, including emerging technologies and practices. Practical opportunities are also key, with students

needing to engage in real projects to apply their knowledge. Collaborative projects with the engineering industry ensure students gain practical experience.

Updating curricula in business and finance should cover the latest economic theories and market trends. Training in ethics and regulatory compliance is also crucial to ensure students adhere to laws and regulations in business practices.[5]

In the field of financial management, curricular content must reflect the latest financial tools and investment strategies to ensure students have effective financial decision-making skills. Practical opportunities are key, with students needing to engage in real financial projects, such as developing investment portfolio strategies or financial planning.[6]

In summary, modernizing business and finance curricula helps enhance students' professional competitiveness and career development, while also promoting continuous progress in the business and finance field. Tracking and adapting to industry changes is key to ensuring the education system keeps pace with the rapid development of the business and finance field.

### **3.1.2. Principles of Curricular Redesign**

The principles of curricular redesign are crucial for successfully adapting to the rapid evolution of digital technology. These principles ensure curricular content aligns with industry needs while providing students with the key skills and knowledge needed for success in the digital age. Firstly, flexibility is one of the core principles, as the technologies and tools in the digital technology field are constantly evolving, requiring rapid adjustment and updating of curricular content to ensure students graduate with the latest skills. Secondly, practicality is a key principle, requiring curricula to include real projects and case studies to cultivate students' ability to apply knowledge in real-world contexts. Interdisciplinary knowledge is also vital, as the digital technology field involves cross-disciplinary intersections, emphasizing connections between different areas. Lastly, enhancing students' innovative capabilities is necessary, especially in the face of rapidly changing technologies and contexts. The application of these principles helps cultivate students capable of adapting to the rapid evolution of digital technology, enabling them to succeed in the professional field.

### **3.1.3. Updating Curricular Content**

Updating curricular content is central to the redesign of curricula, ensuring students are exposed to the latest knowledge and technology. This process includes updating textbooks, syllabi, laboratory equipment, and other key elements. The methods of updating may vary across different fields, as knowledge and technology in each field are constantly evolving.

For example, in the field of information technology, as new programming languages and development tools emerge, curricula need to be updated to cover these latest tools and technologies. This ensures students remain competitive in the application development field, mastering the latest coding techniques and best practices. Simultaneously, content in networking and cybersecurity also needs constant updating to reflect the emerging network threats and security challenges, ensuring students are equipped to face these challenges.

In the field of smart finance, updates involve the latest trends and tools in information technology applications. These applications need to align with industry standards and best practices to ensure students have the necessary skills and experience for practical business operations. As information technology knowledge and applications constantly evolve, curricular updates also include the latest methods in data analysis and information system integration, ensuring students are aware of the latest technological advancements.

Meanwhile, artificial intelligence applications like ChatGPT have also become part of the finance field. These applications can be used for automated customer service, data analysis, and decision

support. Students need to understand how to effectively use these tools to improve business efficiency and competitiveness. Therefore, updating curricular content also includes the use and integration of these intelligent tools, ensuring students can fully utilize modern technology to support the needs of the finance field.

In summary, updating curricular content ensures the education system keeps pace with the evolving field requirements. This involves continually reviewing and adjusting educational content to reflect the latest knowledge and technology so that students are equipped to face real-world challenges and opportunities upon graduation. This process requires close collaboration, including educational institutions, educators, and industry partners, to ensure that the updating of curricular content is comprehensive, targeted, and consistent with industry standards.

### **3.1.4. Curriculum Evaluation and Improvement**

Curricular redesign is a process of continuous improvement, not a one-time task. In this process, curriculum evaluation and improvement are crucial to ensure they meet established learning objectives and industry requirements. Aspects of evaluation include monitoring students' academic performance and skill level to understand if they are making sufficient progress in the course. Additionally, feedback from students and teachers can be used to assess the effectiveness of the curriculum.

Monitoring student performance involves regular assessments of students' performance at different stages. This can include exams, assignments, project evaluations, and performance in practical practices. By regularly checking students' performance, educators can identify problems in the course and take timely measures to correct them.

Furthermore, feedback from students and teachers is also a valuable source of information. Students can provide feedback on course content, teaching methods, and learning resources, helping educators understand their needs and expectations. Teachers' feedback can offer insights into course materials and teaching strategies, aiding the continuous improvement of the course.

Based on the results of the evaluation, the curriculum can undergo necessary adjustments and improvements. This may involve updating textbooks, modifying teaching methods, or reorganizing the structure of the course. In this way, the curriculum can remain up-to-date and effective, meeting the needs of students and industry requirements. This cyclical process of evaluation and improvement ensures the quality and relevance of the curriculum, ensuring students receive the best educational experience.

## **3.2. Strategies and Methods for Content Updating**

In addition to redesigning curricula, strategies and methods for updating content need to be considered to ensure educational content keeps pace with the development of digital technology. The following discusses several common strategies and methods:

### **3.2.1. Industry Collaboration**

Collaboration with the industry is considered an efficient strategy for content updating. By actively establishing close ties with the industry, vocational education institutions can stay informed about the latest technological trends and practical work requirements. This collaboration is not limited to partnerships with companies but also includes cooperation with industry associations and professional organizations. The forms of collaboration can cover setting curriculum standards, providing practical projects, and internship opportunities. Such close ties ensure vocational education institutions' curricula align with market demands, helping students acquire skills and knowledge that match the job market. This not only increases students' employment opportunities but also promotes

the development and innovation of vocational education.

### **3.2.2. Online Resources and Open Educational Resources**

Using online resources and open educational resources is an economical and effective way to update content. Many educational institutions and organizations offer free or low-cost online courses and materials, providing students with the latest knowledge. Educators can integrate these resources into their courses to enrich the teaching content. Online resources and open educational resources offer flexibility to students and educators, as students can access these resources at their own learning pace. This method helps ensure timely content updating and provides more learning opportunities for a broader range of students.

### **3.2.3. Continuous Professional Development**

Continuous professional development for educators and teaching staff is key to ensuring content updating. They need to continuously learn and research the latest technologies and educational methods to maintain their professional expertise in their field. Vocational education institutions can offer training and workshops to help educators continuously update their knowledge and skills. Additionally, educators can actively participate in academic research and industry conferences to understand the latest trends and best practices. This not only helps improve educators' teaching levels but also ensures they bring the latest information and practices into the classroom, benefiting students.

### **3.2.4. Student Participation**

Active student participation is also an important part of content updating. They can help keep the curriculum aligned with student needs by providing feedback and suggestions. Students are the direct beneficiaries of the curriculum, so their opinions and perspectives are valuable. Additionally, students can actively participate in experiments and projects, offering new perspectives and innovative thinking for content updating. Their involvement helps inspire innovation and practice, promoting continuous content improvement. By establishing positive interaction with students, vocational education institutions can better meet students' needs, ensuring they graduate with the latest knowledge and skills to be competent in the evolving professional field.

In summary, content updating is a key component of vocational education, requiring collaboration with the industry, utilization of online resources and open educational resources, continuous professional development, and active incorporation of student participation. These strategies collectively ensure the timely updating and quality improvement of the curriculum, meeting the needs of students and industry requirements. This helps cultivate more competitive graduates, positively contributing to their career development and employment opportunities.

## **4. Strategies for Promoting Digital Technology in Vocational Education under School-Enterprise Collaboration**

### **4.1. Digital Technology Training for Teachers**

The application of digital technology in education is not only for improving students' academic performance but also for fostering their innovation and problem-solving abilities. To achieve this goal, teachers need to receive training in digital technology to provide high-quality education. Here are the details:

#### **4.1.1. Necessity of Digital Technology Training for Teachers**

The application of digital technology in vocational education, including virtual labs, online collaboration tools, and simulation software, offers more learning opportunities for students. However, teachers need to adapt to these new tools and methods to effectively impart knowledge. Training is essential to ensure teachers have the necessary skills and knowledge to use these tools effectively in supporting student learning.

#### **4.1.2. Content of Digital Technology Training for Teachers**

The content of digital technology training for teachers should cover multiple aspects. First, teachers need to understand different types of digital tools, including online educational platforms, virtual labs, and data analysis tools. They should learn how to select and use these tools to meet the diverse needs of students. Additionally, they need to understand how to design and manage online courses, including curriculum development, material selection, and task allocation. Teachers should also learn how to assess students' learning to adjust teaching methods accordingly.

#### **4.1.3. Training Methods and Resources**

Digital technology training for teachers can utilize various methods. One approach is organizing regular workshops and training sessions, allowing teachers to learn and exchange experiences face-to-face. Online training courses are also a flexible option, enabling teachers to learn according to their own schedule. Teachers can also gain support and resources by participating in social media groups, online educational communities, and professional organizations. These platforms offer opportunities to interact with other educators, share best practices, and acquire new educational technology tools.

#### **4.1.4. Continuous Support and Updates**

Digital technology training should not be a one-time event but a continuous process. Educational institutions should provide regular support and updates to ensure teachers' skills and knowledge stay in sync with technological evolution. This can include regular workshops and training courses, as well as opportunities for community sharing of best practices. Educational institutions can also establish internal support systems, allowing teachers to receive help and feedback anytime.

### **4.2. Digital Technology Training for Students**

Digital technology training for students is essential to ensure they have the skills needed for success in the digital age. Here are the details:

#### **4.2.1. Objectives of Digital Technology Training for Students**

The primary goal of digital technology training for students is to equip them with basic skills and knowledge related to digital technology, meeting the requirements of future professions. This includes basic computer operations, cybersecurity, digital literacy, and information retrieval. Additionally, students should learn how to effectively use digital technology to solve practical problems and develop innovative solutions.

#### **4.2.2. Curriculum Integration**

Digital technology training for students should be integrated with school curricula to ensure they acquire digital skills relevant to their subjects. This can be achieved by incorporating digital



technology teaching and projects into different subject courses. For example, business courses could include big data analysis technologies and smart tools, while art courses might cover the use of digital design and creative tools. In this way, students can apply digital technology across different subjects, enhancing their comprehensive abilities.

#### **4.2.3. Student-Led Learning**

Beyond classroom training, students should also be encouraged to learn digital technology independently. This can be facilitated by providing online resources, exercises, challenges, and projects. Students can delve into specific areas of digital technology based on their interests and needs, thus improving their skill levels. This type of self-directed learning also cultivates students' self-management and problem-solving abilities, making them more adaptable to the constantly changing technological environment.

#### **4.2.4. Practice and Projects**

Digital technology training for students should emphasize practical experiences and projects. Such real-world experiences help students apply their learned knowledge in actual situations, deepening their understanding. Students can engage in projects like app development, data analysis, multimedia production, etc., thereby enhancing their practical skills. This approach also encourages students to collaborate, solve problems, and innovate.

#### **4.2.5. Assessment and Certification**

Finally, digital technology training for students should include assessment and certification mechanisms to ensure they have mastered the necessary skills. This can include online tests, project portfolio evaluations, and digital technology certifications. These certifications can provide students with a competitive edge in the job market, demonstrating their practical skills in digital technology.

In conclusion, digital technology training for both teachers and students plays a key role in promoting digital technology in vocational education under school-enterprise collaboration. Teachers' training ensures they can effectively integrate digital technology into teaching, while students' training provides them with the necessary digital technology skills to meet future career requirements. These trainings should be an ongoing process to ensure that teachers' and students' knowledge and skills keep pace with technological development. Through such training, vocational education can offer a better educational experience for students and lay a solid foundation for their career success.

### **5. Conclusion**

This study emphasizes the importance of school-enterprise collaboration in promoting digital technology in vocational education. Through the integration of digital technology, updating educational content, and training teachers and students, vocational education can better adapt to rapidly changing market demands, offering improved employment opportunities for students. Successfully promoting digital technology requires the joint efforts of all stakeholders, including educational institutions, businesses, and government departments. Only through collaboration and sustained investment can the digital transformation of vocational education be achieved, creating greater value for students and society.

### **Acknowledgement**

The 2023 Hebei Provincial Social Science Development Research Project "Research on Promoting

the Deep Integration of Digital Economy and Real Economy in Hebei Province", Project Number: 20230202023.

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