

Research on New Quality Talent Cultivation Mode of Digitally Enabled Higher Vocational Colleges and Universities

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Abstract:

With the rapid development of information technology, digital technology is gradually penetrating into various fields, and the talent cultivation mode of higher vocational colleges and universities has therefore ushered in a new opportunity for change. This study aims to explore how to build a new quality talent cultivation model for higher vocational colleges that meets the market demand and focuses on students' lifelong development and practical ability cultivation through digital empowerment. By analysing the current situation of the application of digital technology in education and its impact on talent cultivation, it puts forward a set of practical implementation strategies to promote the educational reform of higher vocational colleges and achieve the comprehensive cultivation of new quality talents.

Keywords:

Digital Empowerment, Higher Vocational Colleges, New Quality Talents, Cultivation Mode, Market Demand, Lifelong Development Introduction

1. Introduction

In recent years, against the background of the rapid development of the information society, the Ministry of Education (MOE) has introduced a series of policies to support digital teaching and learning, such as the Action Plan for Education Informatisation 2.0 and the Action Plan for Improving the Quality and Excellence of Vocational Education (2020-2023), which explicitly put forward the need to speed up the advancement of education informatisation and the digital transformation of vocational education. The introduction of these policies has pointed out the direction for the reform of talent training mode in higher vocational institutions. Building a new quality talent cultivation model through digital empowerment can not only improve the quality of teaching, but also meet the personalised learning needs of students and improve their professionalism and employment competitiveness. Higher vocational colleges and universities need to make full use of the advantages of digital technology, actively explore and practice the digital empowerment talent cultivation mode, and cultivate high-quality technical and skilled talents to meet the needs of the new era.

This is not only an inevitable trend of educational development, but also an effective way to improve the quality and efficiency of higher vocational education.

2. Overview of Digital Empowerment and New Quality Talent Cultivation Mode in Higher Vocational Colleges and Universities

Digital empowerment is the process of improving the quality of education and teaching and management efficiency through the use of digital technology in order to achieve the goal of talent cultivation. As the core carrier of vocational education, higher vocational colleges and universities bear the important responsibility of cultivating high-quality technical and skilled talents. With the constant change of market demand and the rapid development of technology, the traditional education model has been unable to fully meet the requirements of society and enterprises for skilled personnel. The new quality talent cultivation model emphasises a comprehensive education system oriented to market demand and focusing on students' practical ability, innovation ability and lifelong development. Through the deep integration of digital technology, higher vocational colleges and universities can achieve the optimal allocation of teaching resources and intelligent management of the teaching process, and improve the personalisation and flexibility of education. Digital empowerment can not only enhance the interactivity and interest of education, but also provide rich teaching resources and diversified learning modes to promote students' independent learning and personalised development.

The core of the new quality talent cultivation mode in higher vocational institutions lies in the deep integration of digital technology with education and teaching, using advanced technological means such as big data analysis, artificial intelligence and virtual reality to build a digital curriculum system with vocational competence as the core, and to enhance students' vocational quality and employment competitiveness. Through digital empowerment, higher vocational colleges and universities can better adapt to social development and market demand, and cultivate high-quality skilled talents with innovative spirit and practical ability. This not only helps to improve the quality and efficiency of education, but also promotes the continuous innovation and development of higher vocational education and provides a solid talent guarantee for economic and social development. The organic combination of digital empowerment and the new quality talent cultivation model of higher vocational colleges and universities is the way to achieve education modernisation and high-quality development.

3. Principle of Constructing New Quality Talent Cultivation Model for Digitally Empowered Higher Vocational Colleges and Universities

3.1. Principle orientated to market demand

Digital empowerment refers to the process of improving the quality of education and teaching and management efficiency through the use of digital technology in order to achieve the goal of talent cultivation. As the core carrier of vocational education, higher vocational colleges and universities bear the important responsibility of cultivating high-quality technical and skilled talents. With the constant changes in market demand and the rapid development of technology, the traditional education model has been unable to fully meet the requirements of society

and enterprises for skilled personnel. The new quality talent cultivation model emphasises a comprehensive education system oriented to market demand and focusing on students' practical ability, innovation ability and lifelong development. Through the deep integration of digital technology, higher vocational colleges and universities can achieve the optimal allocation of teaching resources and intelligent management of the teaching process, and improve the personalisation and flexibility of education. Digital empowerment can not only enhance the interactivity and interest of education, but also provide rich teaching resources and diversified learning modes to promote students' independent learning and personalised development. The core of the new quality talent cultivation model in higher vocational institutions lies in the deep integration of digital technology and education and teaching, the use of big data analysis, artificial intelligence, virtual reality and other advanced technological means, the construction of a digital curriculum system centred on vocational competence, and the enhancement of students' vocational literacy and competitiveness in employment [1].

3.2. Principle of integration of digitalisation and education

The rapid development of digital technology has brought unprecedented changes to the field of education, and the integration of digitalisation and education has become an important means of improving the quality and efficiency of education. By introducing digital technology into the teaching process, the optimal allocation of teaching resources and the significant improvement of management efficiency can be achieved. Digital technologies, such as virtual reality, augmented reality, big data analytics and artificial intelligence, can provide a more vivid and interactive learning experience for teaching, enabling students to acquire practical skills in an immersive environment. Using these technologies, teachers can design richer and more varied teaching content and activities to enhance students' interest and engagement in learning. The use of online learning platforms and educational apps allows students to learn anytime, anywhere, breaking the time and space constraints of the traditional classroom and promoting personalised and independent learning. Big data analytics technology can monitor and analyse students' learning behaviours and performance in real time, provide accurate learning feedback and improvement suggestions, and help teachers better tailor their teaching to students' needs. Higher vocational colleges and universities need to continuously explore and practice the deep integration of digitalisation and education in order to cultivate high-quality technical and skilled talents who can meet the needs of the new era, and to promote the continuous innovation and development of vocational education [2].

3.3. Principle of Practicality of Digital Curriculum

The principle of practicality in digital curriculum design emphasises that in the process of curriculum development and implementation, it is necessary to focus on practical teaching and help students apply the theoretical knowledge they have learnt to practical work. By combining digital technology with the course content to build highly simulated virtual laboratories and practical training environments, students can practice operations in simulated real work scenarios to enhance their practical ability. Using virtual reality and augmented reality technology, the course design can create a realistic professional environment, so that students can familiarise themselves with the workflow and operating procedures in the immersive experience, and develop the ability to solve practical problems. The wide application of online education platforms

and digital teaching resources allows practical teaching to break through the limitations of time and space, and students are able to carry out practical operations independently outside the classroom, practice repeatedly and constantly consolidate what they have learnt. Curriculum design should also be combined with industry needs and job requirements, and the practical content should be updated and adjusted regularly to ensure that the teaching content is practical and cutting-edge. Big data analysis technology can help teachers monitor students' practical operation process in real time, find problems and provide timely feedback to guide students to improve.

3.4. Principle of Lifelong Development of Students

The principle of lifelong development of digital curriculum design emphasises the cultivation of students' lifelong learning ability so that they can adapt to the ever-changing professional environment. In today's fast-developing information society, where technology and knowledge are updated at an extremely fast pace, students need to have the ability of continuous learning and self-renewal in order to remain competitive in their careers. Through the application of digital technology, curriculum design can provide flexible and diverse learning modes, such as online courses, virtual classrooms and mobile learning platforms, enabling students to acquire new knowledge and skills anytime and anywhere. The openness and sharing of digital learning resources enable students to independently choose the learning content and progress that suits them, and personalised learning experiences can be realised. Curriculum design should also focus on cultivating students' learning ability, information literacy and problem solving ability, so that they can adapt quickly and apply effectively when facing new knowledge and technology. Through the introduction of practical teaching methods such as project teaching method and case teaching method, students' learning and application abilities in real situations are enhanced, and their comprehensive quality and vocational adaptability are improved. The application of big data and artificial intelligence technology can provide students with personalised learning advice and learning path planning, helping them to continuously improve according to their own development needs.

4. Implementation Strategies of New Quality Talent Training Models in Word-based Enabled Higher Vocational Institutions

4.1. Strengthen the construction of digital curriculum system

Strengthening the construction of the digital curriculum system is the key to improving the quality of education and cultivating high-quality talents to meet the needs of the new era. By integrating modern information technology and educational resources, the digital curriculum system can provide a more flexible, efficient and personalised learning experience. For example, a higher vocational institution has launched a series of digital courses in order to improve students' practical skills and employment competitiveness. These courses use virtual reality technology to build realistic virtual laboratories so that students can perform practical operations in a virtual environment, such as chemical experiments and mechanical processing, which greatly enhances their hands-on skills and practical experience. The school also uses big data analysis technology to monitor students' learning behaviour and performance in real time, providing personalised learning advice and improvement plans to help students better master knowledge and skills. Meanwhile, the introduction of online learning platforms and mobile applications enables students to learn anytime,

anywhere, breaking the time and space constraints of the traditional classroom and improving the flexibility and autonomy of learning. The school has also cooperated with a number of enterprises to develop customised courses for different job requirements. Through the participation of enterprise experts, the course content is closer to the actual job requirements, and students can receive training that is highly consistent with the working environment right at school. Through this kind of school-enterprise co-operation, it not only enriches teaching resources, but also enhances students' employability and vocational adaptability. The digital curriculum system also focuses on cultivating students' innovative ability and teamwork spirit. Through the project teaching method and case teaching method, students learn and apply knowledge in actual projects to enhance their comprehensive quality. Through these measures, higher vocational colleges and universities have not only improved the quality and efficiency of teaching, but also cultivated a large number of high-quality technical and skilled talents who can adapt to the needs of the new era, providing strong support for social and economic development. Strengthening the construction of the digital curriculum system is an important initiative to promote the modernisation and high-quality development of education [3].

4.2. School digital infrastructure construction

School digital infrastructure construction is an important prerequisite for the modernisation of education, and through the establishment and maintenance of the necessary digital infrastructure, schools can provide strong support for teaching and learning. First of all, schools need to be equipped with a high-speed and stable network environment to ensure that teachers and students can smoothly access online learning resources and platforms. Building a wireless network that covers the whole school provides seamless network connectivity to various areas such as classrooms, libraries, dormitories, etc. to meet the learning needs in different scenarios. Secondly, schools should invest in modern multimedia classrooms and laboratories equipped with advanced computer equipment, projectors, intelligent whiteboards and other teaching tools to provide teachers with rich teaching tools and enhance classroom interactivity and teaching effectiveness. The introduction of virtual reality and augmented reality equipment can provide students with a more intuitive and vivid learning experience, especially in courses that require practical operation and experimentation, virtual laboratories and simulation systems can effectively make up for the lack of traditional experimental equipment. The establishment of a comprehensive digital library system, which provides a large number of electronic books, journals and academic resources, enables students to easily and quickly access the required materials and supports independent learning and research after class. Schools also need to build powerful data management and analysis systems to comprehensively collect and analyse teaching data and student learning data, provide personalised learning suggestions and improvement measures, and help teachers optimise teaching content and methods. In addition, schools should focus on building information security, protecting the personal information and data of teachers and students, and preventing cyber attacks and data leakage. Train teachers and administrators to master digital tools and technologies and improve their digital literacy and teaching ability. Through the above measures, schools can build a perfect digital infrastructure, provide solid support for teaching and learning, promote the overall improvement of education quality, and cultivate high-quality talents who can adapt to the requirements of the digital era [4].

4.3. Enhancing the digital literacy of the teaching force

Enhancing the digital literacy of the teaching force is a key factor in ensuring the success of education modernisation. Teachers must have sufficient digital skills to effectively use digital tools and resources to improve teaching quality and efficiency. Schools need to organise regular digital skills training covering basic computer operation, use of educational software, and management of online teaching platforms to help teachers master the necessary digital tools. Advanced training programmes should cover data analytics and the application of virtual and augmented reality technologies in teaching and learning to enable teachers to design and implement more interactive and engaging lessons. Schools should also encourage teachers to participate in various online and offline professional development activities, such as seminars, workshops and online courses, to continuously update and enhance their digital knowledge and skills. In addition, schools can establish an evaluation system for teachers' digital literacy and motivate them to continuously improve their competence through regular assessment and feedback. Collision and growth of collective wisdom can be promoted through cooperation and exchange among teachers, such as organising teaching teams to jointly develop digital courses and share experiences and best practices. Introducing expert lectures and school-enterprise co-operation projects gives teachers the opportunity to get in touch with the latest industry technologies and education concepts to enhance their professionalism. Schools should provide sufficient technical support and resources, and set up special technical support teams to solve problems encountered by teachers in the process of using digital tools in a timely manner, so as to reduce their technical burden.

4.4. Promote digital industry-teaching integration between schools and enterprises

Promoting school-enterprise digital industry-teaching integration is a key strategy for cultivating talents that meet the needs of the industry. By strengthening the cooperation between schools and enterprises, digital teaching can better meet the needs of the actual working environment. Schools should establish close partnerships with enterprises to jointly develop digital curricula and training programmes based on industry needs, ensuring that teaching content is closely integrated with vocational skills. Enterprise experts can participate in curriculum design and teaching implementation to provide students with the latest knowledge and practical experience in the industry, and enhance their practical skills and employment competitiveness. Schools can co-operate with enterprises to build digital training bases, using virtual reality and augmented reality technology to simulate real work scenes and operation processes, so that students can experience and master actual work skills while in school. Through school-enterprise co-operation, students can participate in real projects of enterprises, carry out internships and practices, accumulate work experience, and enhance their professionalism and adaptability. Enterprises can provide schools with advanced equipment and technical support to ensure that teaching facilities and technologies are in sync with the industry frontier, and to enhance the quality and effectiveness of teaching. Schools and enterprises should jointly carry out research and innovation projects to promote the innovation of technology and teaching methods, and cultivate talents with innovation ability. Schools can adjust and update the teaching content and methods in a timely manner according to the feedback from enterprises to ensure that the talents cultivated can meet the needs of industry development.

5. Conclusions

Digital empowerment brings new development opportunities for the talent cultivation mode of higher vocational colleges. It is of great practical significance and long-term impact to promote the reform and innovation of higher vocational education and cultivate high-quality technical and skilled talents who meet the needs of the society by constructing a new quality talent cultivation mode oriented to market demand and focusing on the lifelong development of students. In the future, higher vocational colleges and universities need to actively promote digital transformation, establish a digital teaching model that is closely aligned with the needs of the industry, and continue to improve the digital literacy of teachers and students to adapt to the rapidly changing technological and vocational environments, so as to achieve modernisation and high-quality development of education.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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