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Research on the Characteristics of Informationization Innovation in Chinese Vocational Education

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Abstract: Currently, vocational education has received sufficient attention in China and is showing a trend of vigorous development. The large number of talents it cultivates have injected fresh blood into the development of enterprises. In order to better promote the development of enterprises, some vocational education schools and enterprises have launched innovative education models to cultivate vocational education talents according to the needs of enterprises or customers. Why information technology construction is necessary in vocational schools is a good topic, and this article will explore in detail the characteristics of information technology innovation in Chinese vocational education.

Keywords: Vocational Education; Informatization; Innovate

The characteristics of information technology innovation in Chinese vocational education should first mention the requirements for the construction of demonstration schools, which need to meet the selection criteria: a good foundation for digital campus construction; Establish a fully functional and smooth running campus network, as well as a convenient and efficient school management information system; There is a digital teaching resource library, teaching platform, and test question library platform; The number of computers meets the needs of education, teaching, and management, and the main teaching venues are equipped with necessary multimedia equipment; The backbone courses of backbone majors are equipped with digital teaching resources[1].

1. Requirements for the ten-year development plan of educational informatization

1.1 Informationization construction of vocational education

Chapter 5 of the ten-year development plan for educational informatization: Accelerating the construction of vocational education informatization and supporting the cultivation of high-quality skilled talents; Vigorously promote the construction of digital campuses in vocational colleges, comprehensively enhance the level of information application in teaching, practical training, scientific research, management, and service; Promoting the reform of talent cultivation mode through informatization.

1.2 Information technology construction needs

So, the development of information technology construction in future vocational colleges will mainly revolve around comprehensive services, resource sharing, collaborative applications, mobile applications, the Internet of Things, and cloud computing. In terms of comprehensive services, proactive trials, and one-stop services; In terms of resource sharing, it is necessary to provide full lifecycle business services and concentrate various information resources; Improve the service quality of community life in collaborative applications; Improve the service quality of community life through mobile applications.

1.3 In terms of cloud computing, centralized management of virtualization resource calls and provision of elastic services.

1.3.1 Comprehensive services

Comprehensive services, aimed at teachers and students, are the mainstream trend of information technology construction in future vocational colleges. Information technology needs to provide personalized services for teachers and students, allowing them to enjoy the convenience and fun brought by information technology.

1.3.2 resource sharing

Resource sharing. With the continuous maturity of information technology and its development in the field of vocational education, the

development of information technology in vocational education will inevitably move towards intelligence, automation, and humanization. Realize the rapid transmission and sharing of various information resources,

2. Smart" Campus Construction

2.1 The construction of smart campuses requires

Three networks integration, Internet gigabit broadband access, Internet of Things 100 kinds of goods, Internet of Things 10000 communication terminals, plus intelligent software to build a smart campus. It is also urgent for vocational schools to build "smart" campuses, mainly for "eight reasons". Reason one: due to the learning situation, it is difficult to listen, sit still, be active, lose energy, and have a large age difference, which brings difficulties to teaching and management[2].

2.2 Boarding system requires

Due to the boarding system, which requires all-weather student management, it brings difficulties to student management.

2.3 The increase in teaching environment

The increase in teaching environment is caused by the increase in theoretical teaching, experimental teaching, practical training teaching, and internship teaching, which brings difficulties to student management and teaching management.

2. 4 Due to the urgent need to transform the practical teaching environment

The current practical teaching environment does not support student self-directed learning, personalized learning, and personalized assessment. If practical teaching venues are opened, it will increase the probability of danger and accidents, forming safety hazards for student self-directed training.

3. The goal of vocational education informatization construction is to achieve digital transformation of campus environment

3.1 Digital Campus Construction

Design, construction, and sharing of high-quality digital resources in the digital campus environment; Campus cultural construction in the digital campus environment; Optimization and reengineering of management processes in the digital campus environment; Collaborative education between home and school in the digital campus environment; Design and application of sustainable development mechanisms for digital campus construction; Design and application of collaborative innovation mechanism for digital campus construction[3].

3.2 Comprehensively improving the information technology teaching ability of teachers and students

The key to the development of teachers and students is to comprehensively enhance their information technology teaching ability, and to comprehensively enhance their information technology learning ability.

3.3 Teaching and Development of Students

Student development, learning attitude and ideological consciousness, with correct information awareness, able to accurately evaluate information, and a positive attitude towards the application of technology; Have the awareness of utilizing technology for innovative learning; Have the awareness of using technology to solve practical problems in learning and life. Learning methods and skills can utilize the internet to acquire, store, evaluate, process, and apply digital learning resources.

4. Application service system

Application services are information services provided based on software application systems. The application service system in digital campuses includes unified authentication and portal services, teaching application services, management application services, teaching and research application services, life application services, and software application system construction. There are mainly two modes: cloud ser-

vice mode and self built mode.

4.1 Unified authentication and portal services

Unified authentication and portal services refer to information services that support global unified user management and authentication, and provide a comprehensive information integration environment. The construction requirements are as follows: providing global unified user management and authentication services, supporting users to apply various information services safely and conveniently; Provide single sign on service, supporting users to access any authorized application system within the valid period with just one login; Provide comprehensive information portal services, supporting users to personalize various information resources and application services.

4.2 Teaching application services

Teaching application services refer to information technology services that support various teaching activities such as teacher lesson preparation, teacher teaching, and student learning. The construction requirements are as follows: providing electronic lesson preparation services to support teachers in conducting online collaborative lesson preparation; Provide online teaching services to support teachers in conducting online teaching; Provide online learning services to support students in engaging in self-directed, collaborative, and exploratory learning;

4.3 Management applications

Management application services refer to information technology services that support various educational management activities such as academic affairs, administration, assets, and personnel in schools. The construction requirements are as follows: providing electronic portfolio management services to support the recording and storage of various information during the growth process of students; Provide digital educational management services to support schools in efficiently carrying out educational activities such as course scheduling, course selection, course evaluation, and score collection; Provide digital administrative management services to support schools in efficiently carrying out government activities such as document circulation, knowledge sharing, information dissemination, and official document approval, fully realizing office automation; Provide digital financial management services to support schools in efficiently carrying out financial management, supervision, and control in an information-based environment; Provide equipment asset management services to support schools in efficiently managing various types of equipment and assets: Provide digital book management services to support schools in efficiently managing various digital book resources.

4.4Teaching and research application services

Teaching and research application services refer to information technology services that support teaching and research, teacher training, and other related activities. The construction requirements are as follows: providing teaching and research network community services, supporting online interaction, communication, resource sharing, and case studies among teachers; Provide teaching and research digital resource services to support teachers in independent learning and collaborative research* Provide cross school regional communication and evaluation services, and support remote evaluation and interaction among inter school teachers; Provide cross school regional collaborative lesson preparation services, support inter school teacher collaboration in designing lesson plans and courseware; Provide a growth portfolio service for teacher professional development, providing guidance for personalized teacher development; Provide teacher education technology training services, including training, assessment, and certification.

5. Conclusion

The innovation of vocational education informatization is three-dimensional and all-round, and this article only explores a few major aspects. The beginning of everything is difficult. Vocational education has taken the lead in many aspects of educational informatization, and in recent years, various types of education in China have been innovating the characteristics of educational informatization. Vocational education informatization is a microcosm of the overall and rapid development of vocational education. We firmly believe that using infor-

matization to drive the modernization of vocational education will provide more vivid experience for the national informatization to drive the modernization of education.

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