A Brief Analysis of the Application of Digital Resources to Vocational Colleges

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Abstract: The construction of digital teaching resources is an important means to adapt to the development trend of "Internet + education and teaching" reform, promote the development and sharing of high-quality teaching resources, and promote the comprehensive application of information technology in the process of education and teaching reform and teaching implementation, and it is also an important guarantee for strengthening the construction of digital teaching resources and network teaching. Through the exploration of digital resources, this paper aims to fully learn from the experience of advanced digital teaching resources construction at home and abroad in the process of promoting the construction of digital teaching resources, and encourage teachers to carry out teaching and research on the construction and application of digital resources. It is necessary to fully understand the needs of teachers and students, find problems and study countermeasures; It is necessary to combine the existing information technology application environment of the school to build digital teaching resources suitable for the school, and strengthen the application of digital teaching resources and improve the application ability of digital resources based on resource development, curriculum construction as the core, and the improvement of teachers' teaching ability as the guarantee.

1. Introduction

With the emergence of digital innovation practice, Western scholars have begun to pay attention to enterprise digital innovation and have carried out a series of studies on it. In today's society, the way of networked learning has continuously penetrated into the entire field of teaching and education, so that teaching channels and learning resources have been greatly enriched and satisfied. For many vocational colleges, it has greatly helped to improve the educational results, students' employment competitiveness and the core values of education. However, in order to achieve this goal, it is necessary for vocational colleges and universities and all teachers to comprehensively promote the construction of relevant resources based on the great importance attached to digital teaching resources, and build a systematic, practical, advanced and scientific digital teaching resource system to provide support and assistance for enriching teaching content, broadening teaching paths, improving teaching quality, and promoting students' personalized development.

2. The concept and characteristics of the literal resources

2.1 The concept of digital resources

Digital information resources refer to the conversion of digital information resources into digital format, which is one of the components of a digital library. The digital information resources of a library should include digital information resources of the collection and network information resources. The digital information resources of the collection refer to the use of keyboard input or optical character recognition input and storage in digital form, under the cooperation of hardware conditions. We need to access digital collections to the Internet and make them available to remote users for retrieval, inquiry and use; Network information resources refer to some beneficial information obtained through computer networks that can meet people's information needs. It is not all online information, but a "digital native" resource based on Internet pages [1]. With the deepening of digital innovation research, scholars have expounded its conceptual connotation from different perspectives. In general, digital innovation is a new attribute added to the existing non-digital products and services through digital resources. In terms of chronological order, the view of product innovation as the result comes first. With the spread of the new generation of information technology, some scholars have paid close attention to the application of digital technology in the process of innovation and the impact of digital technology on business models. Based on the understanding that it is difficult to separate the process and result of digital innovation, Henfridsson et al. (2018) try to break through the constraints of the perspective of process and results, and discuss digital innovation from a more comprehensive perspective. It seems that it is difficult to cover the rich connotation of digital innovation unilaterally from the perspective of innovation results or innovation process. More and more scholars realize that digital innovation includes not only product-based innovation, but also process-based innovation. For example, Apple phone has a variety of innovation results and process innovation [4]. Fichman et al. (2014b) believe that digital innovation can be broadly defined as a new product, process or business model, with more emphasis on the adopters making some major changes accordingly, and the organization is enabled to [5] by digitization. Abrell et al. (2016), from the perspective of innovation results and innovation process synthesis, believes that digital technology mainly influences enterprise innovation from two aspects: first, using digital tools to improve the performance of enterprise innovation process; second, adding new attributes to existing non-digital products and services through digital technology. Therefore, digital innovation is a process of using digital technology to produce novel products and services. This comprehensive perspective of innovation process and innovation results reflects the assumption that the boundary between digital innovation process and output is increasingly blurred [6].

2.2 Characteristics of the digital resources

Based on the development of digital technology, many important changes have taken place in the innovation of the digital age. First of all, many scholars have summarized the characteristics of digital resources from different perspectives. Yoo et al. (2012) believe that the availability of digital technology makes innovation present two overall basic characteristics: generative (generativity) and fusion (convergence) [7]; Yu Jiang et al. (2017) discussed in detail from the perspective of technology and organization [3]; From the perspective of digital human-creation (digital artifact), Yoo (2010), Abrell et al. (2016) believe that digitization brings "reprogrammable, addressable, perceptible, communicative, stored, traceable, and related" to physical components (programmability, addressability, sensibility, communicability, memorability, traceability, and associability) 7 features; Yoo et al. (2010), compared with previous techniques, Three important

features of digital technology are listed: reprogrammable (reprogrammability), data homogeneity (the homogenization of data), and self-reference of digital technology (the self-referential nature of digital technology). At present, scholars have not formed a consistent understanding of the characteristics of digital innovation. This paper further summarizes the above characteristics of digital technology, including 7 characteristics such as "reprogrammable, perceptible and communicative". In general, digital technology makes innovative results with the functions of computers, Internet and sensors. The paper of computing, communication and perception and management from the perspective of innovation mode into innovation platform, innovation combination and innovation distribution. Platform is an important carrier of digital innovation, combined with technology supply, to promote combined innovation and distributed innovation.

3. The necessity of the application of digital resources to higher vocational colleges

3.1 The need of professional construction

The construction of digital education resources is carried out with the curriculum as the carrier, and the construction of curriculum resources will certainly have a positive impact on the curriculum teaching and reform. In the teaching process of using the teaching resource database, teachers can accept the curriculum development ideas and resource development ideas conveyed by the resources provided by other teachers. In the process of use, teachers gradually update their ideas, and their curriculum development ability and resource development ability are gradually improved. The improvement of teachers' professional ability is a huge impetus for school professional development; the professional setting of higher vocational colleges is based on the needs of enterprises, and the professional curriculum structure is adjusted according to the change of enterprises. Only in this way, the students trained by higher vocational colleges can be favored by enterprises. In this sense, the construction of higher vocational education resources can meet the needs of enterprise employees' skills training and sustainable development. This creates conditions for the close cooperation between schools and enterprises; in the process of resource construction, the video or virtual simulation software solves the teaching situation that is impossible or difficult to operate, and the abstract principles or theories that are well solved and difficult to understand, which plays a very important role in the construction of practical practice (room) base. It can be seen from the above aspects that the construction of digital education resources plays a promoting role in the professional construction[8].

3.2 The need to improve social service capacity

The acquisition of knowledge requires a large number of authoritative, perfect and effective learning resources. The resource sharing is conducive to solving the problem of uneven distribution of teaching resources caused by the unbalanced distribution of resources. Schools can share high-quality digital resources through the network platform to share the results of construction and maximize the utilization rate of resources. For example, the "China University Mooc" platform and Love Curriculum website provide high-quality courses of domestic first-class universities, which are open to the society for free of charge. Anyone can learn the courses of domestic first-class teachers that they are interested in, and even obtain the course certificate signed by the course teachers. In this sense, the school's social service ability has also been well reflected.

3.3 The need to improve the level of talent training

The construction of digital teaching resources is very necessary to improve the level of talent

training. The optimization and combination of digital resources can facilitate the construction of network courses. Online courses can break through the time and space limitation to realize the [2] of teachers 'teaching, students' learning and teacher-student interaction. From the perspective of teachers, the construction of resources is convenient for knowledge accumulation, which provides rich materials for future lesson preparation and teaching. From the perspective of students, they can use the Internet to learn the quality educational resources provided by the teacher, complete the homework and exams assigned by the teacher, and make real-time query of the results, rather than being limited to the classroom. Students can control their learning progress to meet the needs of online learning and assessment and contribute to the cultivation of students' independent learning ability. The application of the flipped classroom is a typical example.

4. The current situation of digital resources applied in higher vocational colleges

4.1 The standards are not uniform

At the present stage, most colleges and universities are still exploring the construction of digital resource database, and no one is perfect, so there is no unified standard to standardize, which leads to the chaotic classification and low utilization rate.

4.2 Excessive development of resources, poor equipment conditions

Most higher vocational colleges belong to the industry, with little communication between schools, the logic of the digital teaching resource database is chaotic, and the resource classification is mixed, which leads to retrieval difficulties. In addition, the school server is poor, which often leads to server crash and slow operation. Then there is a lot of repetition of teaching resources in the region, resulting in the repeated development of resources and excessive waste.

4.3 Generalization of media material

The campus digital resource database is built on the poor server, the campus network speed is extremely poor, and the media material is universal. All of these are affecting the process and development of establishing this resource base.

4.4 The quality of the information platform is poor

The developers of the application platform who develop the digital teaching resource database do not have enough knowledge of the information technology means, and the quality of the information platform established is not good. In, the design is not reasonable, the application is unstable, this document, PPT is not standard in the classroom on the computer cannot open or display incomplete. To some extent, it interferes with the teaching.

5. Suggestions and significance of applying digital resources in higher vocational colleges

5.1 Suggestions on the application of digital resources to higher vocational colleges

With the continuous development of digitalization, it will inevitably face some difficulties and problems in the process of application in higher vocational colleges. This paper addresses the problems found in the research situation, and the suggestions are as follows:

With the effective use of data resources, we can classify some items simply and clearly in the catalog of the platform. We can sort out and summarize the nature of several colleges and majors in

the school, and tell students that if they want to find computer-related knowledge points to enter the IT column. Take IT as an example, we can further classify them, which can be divided into courses and extracurricular, and divide them into three levels: early, high and different levels, and different stages correspond to different levels of resources.

Learn to maintain the digital resources regularly. The system is in a state of unmanned management when everyone thinks it is broken, but this is a wrong idea, we must maintain regularly, so that the database will not appear large mistakes, to avoid more serious losses. This is not unnecessary, the long-term consequence of unmanagement is the loss of system crash data, so that the cost of building the database is wasted.

By improving the incentive mechanism, we can mobilize the enthusiasm of teachers to apply the digital teaching resources. In order to guide teachers to actively participate in the construction of digital teaching resources, the development of digital teaching resources is linked with teacher evaluation and professional title promotion, and can also be converted into class hours. Teachers' individual teaching websites and teaching resource database will be rewarded to a certain extent, some high-quality teaching resources will be declared, reviewed and approved, and certain financial support will be provided to mobilize the enthusiasm of teachers to participate.

Develop various types of digital teaching resources to improve their adaptability to teaching. Some American scholars have shown a lot of research that online users are extremely impatient compared with face-to-face environments. Therefore, many researchers believe that the length of online teaching videos should not be too long, or present the content in terms of special topics and problems. In recent years, with the emergence of "micro-lessons", this dilemma has been greatly improved. It is a new type of teaching resources for a certain knowledge point or teaching link in the teaching process according to the requirements of curriculum standards. It has the characteristics of distinct themes, diverse types, short and concise, and easy to expand, which can adapt to teaching and become the development trend of digital teaching resources.

Colleges and universities lead the construction direction of the resource platform. Digital teaching resources producers and users are higher vocational colleges, colleges leading to accurately grasp the target of resources and the requirements of platform construction, driven by actual teaching demand, course teaching resources construction, give full play to the alliance in higher vocational colleges teachers, cooperation, the unique advantages of teaching resources, complement each other, realize the digital teaching resources collection, production and integration. Higher vocational colleges should consider the problem from the perspective of the demand side, put forward the post elements and enterprise elements in the construction of curriculum resources, and transform the career work scene into digital simulation application teaching resources.

5.2 The significance of the application of digital resources in higher vocational colleges

In the context of the digital age, all walks of life have put forward higher requirements for the ability and quality of employees. For example, in the recruitment of talents, applicants not only need to master rich scientific and cultural knowledge and professional knowledge, but also need to have professional quality, humanistic quality, professional ethics, innovation ability, teamwork ability and social practice ability. Through research, the main significance of the exploration of this paper is as follows:

In order to give full play to the value of digital teaching resources, higher vocational colleges need to give priority to the construction of digital teaching resources according to their own school-running philosophy, teaching characteristics and educational goals, and build a digital teaching resource system that meets the teaching needs and is conducive to students' all-round development.

It can make the teaching form more diversified, more in line with students' interests and development needs, enrich the teaching content, ensure that the teaching system is close to the needs of employment to the maximum extent, so that students fully realize the necessity of learning professional knowledge and enriching practical skills, develop the good habit of active learning, interactive learning and lifelong learning, and improve the quality of vocational and technical personnel training; It also plays a very positive role in promoting the healthy development of vocational education.

Digital teaching resource is a new type of information resource with information means as the main carrier. It is a collection of all kinds of knowledge, materials and information presented by means of animation, video, micro-lessons, pictures, virtual simulation and other means. Digital resources have show form diversity, flexible learning methods, resource sharing balance, data analysis science, more adapted to learners habit active learning, interactive learning, intuitive learning and mobile learning habits, and for the teacher's teaching work also brought great convenience and effect of ascension.

6. Conclusion

In summary, there are still obvious regional differences in the level of informatization construction of China's colleges and universities, and the co-construction and sharing of digital teaching resources is still an effective way to achieve educational equity. Therefore, when applying digital resources to vocational colleges, it is necessary to take students as the center, change the role of teaching and learning, pay attention to the cultivation of students' interest in learning, cultivate independent learning, interactive learning, fragmented learning, guide students to learn online teaching resources, actively participate in the construction of teaching content, integrate traditional teaching mode with digital teaching resources, make use of the diversity of their presentation types, give full play to the advantages of digital integration, and improve traditional teaching modes. Improve the quality of teaching and students' learning autonomy, and fully meet the different requirements of different students in the learning process.

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