

Construction of Customized Teaching System of Higher Vocational Colleges in the Era of "Internet +"

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Abstract: In the current "Internet +" era, all kinds of information technologies are becoming increasingly mature, which provides the basic support for the transformation and development of higher education. Under the background of information, higher education needs to pay more attention to students' personalized learning needs and students' comprehensive development, and customized teaching arises at the historic moment. This has important practical value for improving the quality of higher education and deepening the reform of higher education. In order to establish and improve the customized teaching system of higher vocational colleges, higher vocational colleges should realize the role change of customized teaching elements, accelerate the integration and development of teaching modules, and improve the design of customized teaching system.

Keywords: Higher Vocational Colleges; Customization; Teaching System.

1. Introduction

The blowout development of network information technology makes human education no longer limited by time and space, but also enriches the channels and content of human education. As the main body of senior talent training, higher education also faces great opportunities for development under this background. Driven by the task of improving quality and growth, higher education should grasp the opportunity of the Internet era, build a customized teaching system, provide students with customized and personalized teaching services, avoid the shortage of rigid traditional teaching system, and comprehensively promote the improvement of teaching quality.

2. Connotation of Customized Teaching in Application-Oriented Colleges

1. Under the background of the developed Internet, how to make use of the network to optimize and improve the traditional teaching system has become a concern of higher education workers all over the world, and customized teaching is providing reform ideas for higher education [1].

Traditional customized teaching has been applied in higher vocational colleges in China for many years. Although this training method is a targeted training plan formulated to meet the needs of employers for employees' skills or knowledge, it cannot meet the subjective needs of students [2]. At present, higher vocational colleges should make full use of the network advantages as much as possible in the implementation process of customized teaching to make up for the deficiency of traditional classroom teaching. "Internet + higher education" is a breakthrough to the traditional teaching mode, but also to the reform of the education system [3]. With the help of Internet technology, on the one hand, it is helpful to analyze the needs of talents in the social industry and judge the future development direction of the industry; on the other hand, it can conduct a comprehensive and detailed evaluation and diagnosis of students, including their interests and personal advantages, so as to help students realize the

customized learning process. The customized teaching of higher vocational colleges not only achieves the integration of high-quality education resources inside and outside the school, but also greatly facilitates students' access to resources and meets students' needs for customized education. It includes the education of professional knowledge theory, but also the education of innovation ability and quality education, thus promoting the synchronous improvement of students' knowledge skills and creative ability; it not only helps students to achieve all-round development, but also meets their personalized development needs.

2. The key to implementing the customized teaching in higher vocational colleges is to apply the Internet thinking to its own teaching process. On the one hand, with the help of the Internet, a powerful modern technology, it can provide new ideas and new channels for the teaching innovation of higher vocational colleges, and help higher vocational colleges to complete the integration of teaching resources and the transformation of teaching mode, so as to improve the quality of education. On the other hand, the data related to students can be obtained through the Internet, so as to conduct a comprehensive investigation and analysis of students, so as to understand their learning needs, and provide targeted teaching resources to realize the optimization of educational resources.

3. The Idea of Constructing Customized Teaching System in Applied Colleges and Universities

In the traditional teaching process, the makers of teaching activities are the schools and teachers, while the customized teaching under the background of "Internet +" is determined by the students themselves in the whole teaching process [4]. Therefore, higher vocational colleges should adopt different ideas and processes from traditional methods when constructing customized teaching system.

Under the background of "Internet +", the establishment of customized teaching system should start from the following five aspects. First, an intelligent campus system is built based on modern technologies such as cloud computing, the Internet

of Things and virtual reality, and the "Internet +" learning system is used to support the operation of the system. Second, customization should be around higher vocational colleges teachers and students, on the one hand, for higher vocational colleges teachers and students to provide customized teaching and customized learning software and hardware facilities, on the other hand, the teaching methods, learning methods, scientific research management actively seek innovation, realize the optimization of higher vocational colleges teaching platform. Third, based on the "Internet +" of higher vocational colleges under the customized teaching system, on the campus of various learning resources package classification, modular learning resources, so that students according to their own learning interest and learning ability to easily combine into their own learning module, customized teaching plan. Fourth, a customized teaching system should be able to record students' learning situation, so that it can help students to better grasp their own learning situation and learning progress, and can also allow teachers to better guide students for follow-up learning. Fifth, the customized teaching system should be able to provide students with various learning services, such as data services, innovation services, scientific research services, etc., which can not only help students to complete personalized learning, but also gradually train students to become a qualified decision maker [5].

4. Construction Path of Customized Teaching System in Higher Vocational Colleges

4.1. Each Subject Changes its Role

1. The school turns into a place for interactive dialogue. Higher vocational colleges organization and management level change under the impact of the Internet and modern technology, the original redundant organization began to develop in the direction of flattening, the Internet promoted the internal information of higher vocational colleges, reduce the management cost, improve the management efficiency and quality, make the management level improve [6]. As this transformation has progressed, the role of schools in teaching has also changed. The transformation of the role of higher vocational colleges is mainly reflected in the following two aspects: first, higher vocational colleges will become one of the educational service providers as network educators and social educators, and complete the planning and management of teaching resources. Second, with the formation of an open and diverse educational environment, the responsibilities of higher vocational colleges are no longer only to provide education services for students. The derived responsibilities should be to provide teachers and students with a face-to-face communication place, which cannot be provided by Internet technology.

2. Technology throughout the whole teaching process. Modern technology plays an increasingly important role in the construction of higher vocational colleges. In the teaching places and learning places of higher vocational colleges, technology is no longer only a form of learning content, but runs through the whole teaching process of [7]. First of all, the customized teaching of higher vocational colleges under the background of "Internet +" needs the support of modular teaching resources and software, and the Internet and modern technology create the possibility of practical application for this innovative teaching mode. Secondly, modern technology

can replace teachers and students to complete some simple and repetitive mechanical activities, such as recording teachers' teaching process and students' learning progress, so that it can devote more energy and time to carry out other creative activities. Finally, modern technology helps teachers to better complete their teaching decisions. By providing teachers with complete, timely and accurate teaching data, and completing the analysis of these data, teachers can have more reference and basis when making teaching decisions.

3. Teachers should change from "teaching" to "educating people". In the customized teaching model, the difference between individual students becomes a factor that teachers must pay attention to. Teachers should understand each student's learning ability and learning interest, make targeted teaching plans, determine the teaching content, and provide guidance and opinions for students' personalized development, to help students to make more favorable decisions, so as to complete the transformation from a "teacher" to an "educator".

4.2. Develop Teaching Modules

1. Establish the "Internet +" higher vocational college structure. In order to effectively implement customized teaching, the modular transformation can only be made in the original system, so as to break the interdependence between the organizations of higher vocational colleges. In order to establish a modular "Internet +" higher vocational college structure based on current resources; the following three measures can be applied. First, higher vocational colleges no longer divide students according to grade, but take students' ability, personality and learning habits as the main factors to be analyzed in the process of their own structural restructuring, so as to break the vertical interdependence relationship. Second, higher vocational colleges should make use of the powerful function of the Internet to integrate learning resources into the campus resource library, so that students can extremely easily obtain the course resources they want, rather than regard the subject as the main basis for resource division, so as to weaken the horizontal dependence. Thirdly, by applying modern information technology to the teaching of higher vocational colleges, students are no longer restricted by books and venues, and the relationship of physical interdependence is broken.

2. Professional integration of "Internet +". First of all, we should make up for the defects of liberal arts and sciences, and blur the subject boundaries as far as possible. In order to promote the development of customized teaching in higher vocational colleges, students should be given multiple choices in terms of subject setting, so that students can choose a more appropriate development direction on the basis of gradually improving their own cognition. Secondly, higher vocational colleges should adjust the professional diversion time. Most students tend to complete their choice of future majors before entering higher vocational colleges. When choosing, students do not have a comprehensive understanding of the content and prospects of the chosen major, which makes the phenomenon of changing majors more common in higher vocational colleges. From customized point of view to meet the requirements of students, higher vocational colleges should use formative evaluation results, the analysis of students' individual differences, so as to fully reflect the individual will in students of professional choice, make fuzzy professional tendency to postpone the students choose professional, make professional tendency

clear students can choose professional early. Finally, the "Internet +" courses should be integrated. Perfect professional curriculum system is an important basis for higher vocational colleges to improve the quality of talent training. By classifying and integrating the previous courses, higher vocational colleges can meet the personalized needs of different students for the courses, and ensure the personalized and comprehensive growth of students. On the one hand, we should determine the goal of the curriculum integration. At present, the society's requirements for talents are constantly improving, which not only requires the talents trained by higher vocational colleges to have professional knowledge, but also requires them to have the spirit of innovation and lifelong learning concept. Therefore, when integrating the curriculum, higher vocational colleges should not only consider students' cognition and practice of professional knowledge, but also comprehensively consider the future social needs and students' comprehensive development, so as to help students become compound talents that meet the needs of the future society. On the other hand, the integration of online courses should be considered. In the era of rapid development of Internet technology, the emergence of online curriculum has changed the traditional classroom mode, and its curriculum forms are increasingly diverse, such as online open class, one-to-one online class, large-scale online classroom, etc. Online course is a new teaching mode based on Internet technology, which can provide students with more diversified choices and is convenient for students to obtain numerous course resources. Due to the above advantages of online courses, higher vocational colleges can consider integrating the high-quality resources in online courses, so as to promote the development of customized teaching in higher vocational colleges.

4.3. Development of Customized Teaching System

In order to eliminate the contradiction between customized teaching and standardized teaching, colleges and universities in building with "Internet +" as the background of the teaching system, should always carry out the concept of modular, comprehensive thinking about the role of modern information technology in education innovation, and based on this consideration for the corresponding teaching strategy.

1. Improve the evaluation of students' abilities. In the traditional teaching process, the makers of teaching activities are the school management and teachers, while the customized teaching of higher vocational colleges under the background of "Internet +" is determined by the whole teaching process by the students themselves. Although this change can meet the personalized needs of students, the problem is that if students are not comprehensive, profound and specific enough, it is difficult for them to develop a teaching plan that meets their own needs. According to the theory of multiple intelligences, each learning individual has differences in intelligence advantages, but the relevant survey results show that most students do not know where they have learning advantages, which has become a huge obstacle to the customized teaching in higher vocational colleges. Therefore, in the process of implementing customized teaching, higher vocational colleges should not only rely on Internet technology, but also give full play to the role of teachers in higher vocational colleges. The rich experience of teachers can help students to evaluate themselves more comprehensively and accurately, which is also the starting

point for customized teaching.

2. Set up the professional selection module. At present, higher vocational colleges have classified education and management of students according to their majors. This is incompatible with the customized teaching of higher vocational colleges, which can give students more flexible and diverse professional choice space. Higher vocational colleges in the process of customized teaching implementation should set professional selection module, each student can on the teaching platform based on their own interests, learning time and teachers opinion factors such as professional course selection, help students realize independent decision of professional, so as to enhance the enthusiasm of professional knowledge learning. In addition, in addition to giving students the right to choose their major, opportunities for multiple choices and cross-choices should be provided. The opportunity of multiple major choices can enable students to find majors that match their interests and abilities in the learning process, while cross-choice further expands the space for students to choose majors, which can meet the differentiated needs of students, so as to truly realize the customization of majors.

3. Build a customized teaching platform supported by technology. In order to ensure the effective implementation of customized teaching in higher vocational colleges, it is necessary to build a matching customized teaching platform. A series of modern information technologies based on the Internet, including mobile Internet, big data, artificial intelligence, cloud computing, provide necessary support for the implementation of customized teaching. This customized teaching platform has two major advantages: it can collect data for the students' learning process, realize the construction of students' individual model, thus providing corresponding teaching services for students' individual ability and learning interest to help higher vocational colleges improve the teaching quality; second, the platform creates synchronous intelligent learning environment with the help of modern information technology, which can not only help students to realize customized learning, but also provide the sharing and communication between students, and promote the learning communication between students.

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