

Research on the construction path of virtual teaching and research office in universities under the background of intelligence

Pu Li

Ankang University, Ankang 725000, China

Abstract: Grassroots teaching organizations play an important role in teaching management, promoting teaching research, improving teachers' teaching ability and personnel training in colleges and universities. In the context of wisdom, colleges and universities around the core task of moral cultivation, to improve the quality of talent training as the key, to build a new form of online + offline, cross-professional, interdisciplinary grass-roots teaching organization -- virtual teaching and research room. This paper makes an in-depth analysis of the necessity and existing problems of the construction of virtual teaching and research rooms in colleges and universities, and puts forward suggestions on the construction path of virtual teaching and research rooms in colleges and universities under the background of wisdom.

Key words: Intelligentization; University virtual teaching and research office; Construction path; Research

1. The necessity of the construction of virtual teaching and research office in colleges and universities under the background of wisdom

(1) Helping colleges and universities implement education reform

In the era of information technology, with the construction of MOOCs and the wide application of online, online and offline blended teaching methods, the establishment and development of virtual teaching and research rooms in universities have been promoted. Virtual teaching and Research room is a new type of intelligent grass-roots teaching organization. It applies new network technologies such as VR, knowledge graph and blockchain to carry out teaching and research activities across regions, universities, disciplines and specialties. The virtual teaching and research room breaks the limitation of time and space of traditional teaching and research activities, enables more teachers to participate in educational research activities, realizes resource sharing and experience mutual learning, and gives full play to the role of grassroots teaching organizations. According to the practical analysis of the construction of virtual teaching and research room, it mainly includes the following characteristics: First, platform support. The construction of virtual teaching and research rooms in colleges and universities needs the support of intelligent platforms to maintain operation and accumulate results, which can effectively promote the effective development of cross-regional, cross-school and interdisciplinary collaborative teaching and research activities. By building virtual teaching and research groups on the basis of the platform, teachers can participate in teaching and research activities and share teaching and research results relying on the platform. Second, leading by famous teachers. The operation of virtual teaching and research rooms in colleges and universities needs the guidance of famous teachers with strong cohesion and appeal. Under the leadership of these famous teachers, they can set a benchmark for other teachers, and play a coordinating and organizing role to drive the teachers in the teaching and research rooms to play a community effect and jointly discuss scientific educational concepts and methods, so as to improve the overall level of teachers. Third, joint construction and sharing. This is the most critical feature of the virtual teaching and research room. Teachers participating in the virtual teaching and Research room need to actively build and share resources. They can share the teaching resources and teaching experience they have made with other teachers in the teaching and research room. In general, the construction of virtual teaching and research room helps to improve the overall education level of teachers, change their teaching concepts and teaching methods, and then realize the effective implementation of education reform.

(2) Virtual teaching and research room is the key embodiment of teaching organization innovation

According to the actual analysis, the virtual teaching and research room constructed in colleges and universities in the new era can solve the difficulties of teaching organization construction and teachers' teaching problems to a large extent. First of all, the virtual teaching and research room mainly relies on the national level to improve and innovate the existing grassroots teaching organizations, which also fully reflects the new requirements of the higher education system for grassroots organizations. The construction and operation of the teaching and research office can further straighten out the relationship, clarify the functions and improve the system in the process of the modernization of the governance capacity and governance system of higher education. Secondly, the virtual teaching and research section helps colleges and universities carry out education reform, which breaks the boundaries of majors and disciplines, which is conducive to the sharing of academic issues and talent training methods among educational subjects.

2. The existing problems in the construction of virtual teaching and research rooms in colleges and universities

(1) Some teachers' information literacy is weak

According to the actual analysis, the current information literacy of college teachers is generally not high, and some teachers, especially older teachers, still have a basic understanding of information-based teaching by using PPT courseware, and have not fully brought into play the role of information-based equipment and resources. As a result, many teachers lack a correct understanding of the virtual teaching and research room, and are still accustomed to carrying out offline activities when carrying out teaching and research activities. They lack the application ability of information technology, and are not good at using the virtual teaching and research room to carry out cross-regional

and professional teaching and research activities in colleges and universities. The role of the virtual teaching and research room is difficult to play, which leads to poor participation enthusiasm of teachers.

(2) The evaluation mechanism of the construction of virtual teaching and research room has not been established

At present, most colleges and universities are still in the initial stage of research on the construction of virtual teaching and research rooms, mainly drawing on foreign experience, and have not yet established an evaluation mechanism for the construction of virtual teaching and research rooms suitable for domestic colleges and universities, which seriously affects the implementation effect of virtual teaching and research rooms. The lack of evaluation mechanism makes the virtual teaching and research room lack of corresponding indicators and standards, and the teachers' teaching and research activities have not been standardized, which is not conducive to the standardization and professional construction of the virtual teaching and research room.

(3) The application of virtual classroom is not strong

The virtual teaching and research rooms built in some schools are difficult to meet the needs of teachers and students. The core of virtual teaching and research room is to provide space for teachers' teaching and students' learning. Therefore, its construction should be guided by the needs of teaching and self-study, and the convenience and efficiency of teaching process should be taken as the starting point and destination of the construction of virtual teaching and research room. However, at present, the construction of virtual teaching and research rooms in many schools does not reflect the subjectivity of teachers and students, which makes the participation of teachers and students in the construction process is not high enough, and ignores the needs of the teaching process.

3. The construction of virtual teaching and research office in colleges and universities under the background of wisdom

(1) The university attaches great importance to the improvement of teachers' teaching ability

In order to support the construction of the school's virtual teaching and research office, the school should further enhance the teachers' innovation awareness and ability under the premise of adapting to the intelligent background. First, school administrators need to work out a plan to improve teachers' comprehensive ability through publicity and questionnaire survey data. Under the background of wisdom and big data, they realize the necessity of improving teachers' comprehensive education ability in the new era, and then formulate a new teacher strength improvement plan based on the survey data, laying a solid foundation for the smooth development of subsequent training activities in this way. Second, the study should further clarify the information education ability and scope that teachers should have in the new period, and it is also possible to organize teachers from other colleges and universities to carry out research activities on a regular basis, so as to formulate a new management system. Thirdly, teachers' training activities should be carried out by means of information technology. With the advantage of the Internet platform, colleges and universities build an "online + offline" integrated training system. In this process, teachers of different majors and courses can master more teaching concepts and teaching methods, make them understand the application status of information technology in smart education, and promote teachers' application ability of information technology. Third, with the help of the information platform, colleges and universities regularly hold online teacher conferences. Relying on the online platform built by the school, teachers can be exposed to more cutting-edge teaching ideas, so as to change their own teaching concepts. This method can also enable teachers to grasp the latest ability requirements of students in related positions, and then introduce more professional and rich teaching content into practical teaching and theoretical teaching, and further improve the pertinency and effectiveness of teaching. Fourthly, in the development of colleges and universities, the old teachers can implement the new policy, and the old teachers can lead the new teachers to participate in education, teaching and scientific research activities, so as to strengthen the overall education ability of teachers and ensure that young teachers can join the teaching position as soon as possible; Schools should organize teachers to complete the tasks arranged by the school, and focus on leading teachers to videotape teaching, live teaching and interactive training activities, through this way to promote the teaching methods, evaluation and other aspects of intelligent development, effectively improve teachers' teaching innovation ability, through this way to realize the sharing of educational resources and talent training methods.

(2) To form a new operation mechanism construction plan

In the context of wisdom, colleges and universities can explore the establishment and construction of virtual teaching and research rooms by relying on their teaching and research rooms, and form a new operating mechanism construction plan through integration and classification. First, by means of information technology, the university will operate the real teaching and research room and the virtual space of the island. It is necessary to ensure that the functions, organization and membership structure of the teaching and research room are the same as those of the real research room, so as to avoid carrying out follow-up work without deviation. Second, on the basis of the development of disciplines, focusing on the common problems of majors and disciplines, the virtual teaching and research Department is used as the carrier to cross-integrate disciplines of the university and other colleges and universities, so as to realize resource sharing and joint construction. Third, the university can set up a multi-subject joint virtual teaching and research room for talent training in the new era. This teaching and research room gathers teachers from different majors in universities to participate in the planning of talent training programs and curriculum reform plans. Fourth, schools can also build virtual teaching and research rooms with the nature of specific academic communities. Its overall functions cover personnel training mechanism, various teaching videos, teaching research and high-quality teaching resources, etc. At the same time, it also supports colleges and universities to train teachers so as to improve their professional ability and teaching ability.

(3) Continue to promote the construction of virtual teaching and research rooms with the help of intelligent equipment

With the continuous deepening of education reform, the sustainable development proposed by the Ministry of Education is an

important direction of teaching reform, which covers the high-quality development of teaching and providing students with lifelong learning opportunities. The effective integration of intelligent technology and teaching can further enrich teaching resources, make teachers' teaching methods more targeted and more flexible, which can help teachers break through teaching restrictions and effectively improve the quality of talent training. With the support of the Internet of Things and big data technology, the new model can perceive the teaching environment and teaching process, so that the relevant managers can obtain the relevant data, and the blockchain technology can avoid the occurrence of information leakage, and play the application value of the intelligent virtual teaching and research room.

In order to ensure the sustainable reform of teaching, colleges and universities can use AI technology in the construction of virtual teaching and research rooms, and select the data with application value, which can facilitate teachers to adjust the teaching direction and choose more targeted teaching modes. Based on the new technical means, professional and curriculum teachers can integrate the learning track of students, analyze the learning characteristics and advantages of students, and then choose the teaching content and methods suitable for the comprehensive development of students; Through the use of AI technology, teachers can further reduce the teaching burden. In addition, in the development of the school, it is necessary to actively promote the construction of industry-university-research platforms, strengthen the orientation of professional and curriculum teaching, transform scientific research achievements into teaching products, and make the virtual teaching and research room have "wisdom" management and "wisdom" teaching. With the support of intelligent technology means, the comprehensive performance of smart classroom is more complete, which is conducive to teachers to carry out targeted teaching activities, but also to realize the all-round development of colleges and universities.

(4) Establish and improve the long-term development mechanism

First, the long-term development mechanism for teachers. In the era of big data, leaders of virtual teaching and research offices in colleges and universities should focus on the actual development needs of educational subjects and students, formulate targeted teacher training and development mechanisms, and regularly carry out exchange and thematic exchange activities, so as to summarize and promote the practical experience of outstanding teachers among the members of virtual teaching and research offices in a timely manner. To ensure that teachers are able to conduct independent and active research activities, so as to improve teachers' abilities. In addition, the school should also strengthen business exchanges with other virtual teaching and research rooms, learn the excellent experience of other virtual teaching and research rooms, and give play to their application value.

Secondly, the studio innovation mechanism should be established. Whether it is on campus or off campus, regionally or nationally, because its construction involves the participation of teachers from multiple departments and universities, it reflects a more spontaneous feature. In this regard, in order to ensure the integrated development of the virtual teaching and research department, so that it can help improve the comprehensive ability of colleges and universities, it is necessary to organize various members to discuss the establishment of a long-term development mechanism. Specifically speaking, in the new period, colleges and universities should strengthen the top-level planning and system guarantee for virtual teaching and research rooms. The construction of virtual teaching and research rooms in colleges and universities should build a long-term development mechanism integrating incentive, guarantee and evaluation, and encourage departments and teachers to carry out the construction of virtual teaching and research rooms to provide various guarantees for the construction of virtual teaching and research rooms.

Epilogue:

In recent years, China's Ministry of Education has issued the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Outline of 2035 Vision Goals, which clearly states that China's colleges and universities need to build a high-quality education system, adapt to the requirements of high-quality higher education system in the new era during development, and carry out the construction of grassroots teaching organizations in the era of big data and artificial intelligence. Among them, the virtual teaching and research room is an important exploration in the construction of teaching organizations in colleges and universities. In order to comply with the development of the education era, colleges and universities need to clarify the current status of the operation of the research room at the present stage, combine the possible problems in the construction of virtual teaching and research room, explore the construction path from multiple perspectives, so as to make it a guide for the development of the school and effectively improve the quality of talent training.

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