
The Predicament and Way Out of the Teaching Reform of the Economics and Management Experimental Course in the Post-Epidemic Era

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Abstract – The use of educational informatization to promote the innovation of college education and teaching mode is an inevitable trend of experimental teaching reform in the post-epidemic era. Aiming at the post-epidemic era, this paper analyzes the dilemma in the teaching reform of economics and management experimental courses, and explores the road of a new teaching system using of network teaching platforms to build a scientific assessment and monitoring system, implement a new hybrid experimental teaching model, and establish a virtual-real combination of experiments.

Keywords – Post-Epidemic Era, Experimental Teaching, Combination of Virtual and Real, Teaching Effectiveness, Teaching Environment.

I. INTRODUCTION

Since the outbreak of the new crown pneumonia epidemic in early 2020, our country's higher education has undergone major changes in teaching mode and teaching system. "Suspension of classes without suspending school" has become a new form of current higher education teaching, giving China a new connotation and direction for the development of higher education. In particular, the teaching of economics and management experimental courses is facing new challenges in the post-epidemic era. The so-called post-epidemic era does not mean that the epidemic has completely disappeared as we originally imagined, and everything has returned to the same state as before, but the epidemic will rise and fall from time to time, and small-scale outbreaks may occur at any time, returning from foreign countries and seasonal outbreaks, and the delay is relatively long. For a long time, it has had a profound impact on all aspects of the era. The economics and management experimental courses have their own unique characteristics. Under this special epidemic background, how to realize the integration of traditional teaching and online teaching in economics and management experimental courses, so that experimental teaching can truly improve students' comprehensive quality and cultivate students' innovation. The role of capacity is an inevitable question.

Most of the courses in the economics and management experimental courses are compulsory or basic courses for students, and the experimental courses have their own particularities, that is, students must use the laboratory in class. Getting rid of the predicament of the economics and management experimental courses under the influence of the new crown epidemic, and finding the teaching mode and method suitable for the economics and management experimental courses in the post-epidemic era are the top priorities of colleges and universities at present.

II. PROBLEMS FACED BY THE TEACHING REFORM OF ECONOMICS AND MANAGEMENT EXPERIMENTAL COURSES

Compared with the course teaching of other Disciplines, the teaching of Experimental courses for Economics

and management majors is exploratory. The experimental course teaching aims to cultivate practical, applied and compound talents, and is a teaching method to improve students' practical ability and comprehensive quality. At present, the experimental courses of various economic and management colleges in China still generally adopt the traditional teaching experimental infrastructure, and there are great problems in terms of teaching effect and teaching quality. In the pre-epidemic era, our country's economics and management experimental courses were in a state of shortage and lack of experimental teaching environment and experimental teaching tools, not to mention the great improvement in the post-epidemic era, and suddenly there will be qualitative breakthroughs.

1. Unreasonable Arrangement of Experimental Teaching Time

The experimental courses offered by the economics and management major include "ERP Simulation Exercise", "Financial Econometric Analysis and Application", "Accounting Information System", "Econometrics", "Management Statistics" and other courses, all of which are closely combined with theoretical courses and experimental courses. But in the actual teaching process, teachers will encounter a problem, that is, the theory must be taught, and the experimental class must also be taught. However, during the epidemic, theoretical courses can be taught through live broadcast software. Although experimental classes can also be taught through software such as Tencent and DingTalk, teachers cannot see the students' operation steps and operation results in real time, and cannot fully grasp the dynamics of students in the experimental class, which greatly reduces the teaching effect of the experimental class. The unsatisfactory experimental teaching effect will inevitably make teachers consider extending the class hours of online experimental teaching. Because the total class time remains unchanged, extending the experimental class time will inevitably reduce the theoretical class time. The unscientific distribution of class hours for theoretical courses and experimental courses also affects the effect of experimental teaching.

In the post-epidemic era, schools will face emergencies in which teachers and students cannot conduct offline teaching. Such temporary notifications and emergencies are not within the scope of the teacher's teaching plan, and there may even be a notification that the next day or the next few days of offline courses will be suspended in the evening. Therefore, the time of experimental teaching cannot be guaranteed, and the progress of the experimental class will slightly lag behind the progress of the theoretical class. If the time for offline experimental teaching in the laboratory is not guaranteed, it will inevitably affect the teaching quality of the overall course. Even if students are temporarily notified to conduct online experimental teaching, students need to be fully prepared. This process will face many uncertain factors and cannot ensure the effect of experimental teaching.

2. Difficulty in using Teaching Software

The economics and management experimental courses are not only professional courses in economics and management, but some of them also involve public courses such as statistics and programming. The available systems are Win7, Win10, etc. These systems are equipped with hundreds of softwares required for each experimental course, such as stata, spss, matlab, Eviews and so on. Experimenters in the university laboratory will install and test the software of all courses in advance before teachers take classes, and try their best to ensure the operating environment of the Software and Ensure that the experimental teaching is carried out in an

orderly manner. Whether it is a cloud server or local system software, teachers can choose to use it.

During the epidemic period, students cannot use the laboratory for classes, so they must install software on their own computers, or call the software on the school's cloud server for experimental operations. If students choose to install the software of the experimental course by themselves, many students will face that the software cannot be installed on their own computer or the computer cannot work normally due to the configuration of the computer itself after installation, which will affect the students' experimental teaching process. If students choose to use the software on the cloud server, they may encounter the situation that the home port and the school port cannot be connected. Moreover, if a large number of students want to take experimental classes and enter the cloud server at the same time, the economic cost of the school will be greatly increased.

3. Lack of Teaching Experiment Environment

Under the background of the post-epidemic era, whether students take experimental classes in the laboratory or online, they need to have a good experimental environment. At present, online learning experimental courses, whether between teachers and students or between students, lack platforms and channels for sufficient communication and feedback. Although simple communication can be carried out through the class software, this kind of communication is insufficient and intangible. Especially in economics and management experimental courses, students need to communicate with teachers in real time, and online communication is often not smooth. As the current experimental teaching has a small class capacity of 30-50 students and a large class capacity of 80-100 students, it has caused greater obstacles to the communication between teachers and students and between students. At the same time, there is also a lack of an environment for answering questions and feedback after class, which affects students' enthusiasm for learning.

In the absence of a teaching environment, students cannot fully devote themselves to experimental learning, and cannot integrate into the teacher's course practice, so that they cannot arouse the awareness of cooperation among students, and thus cannot improve students' cooperation ability. In economics and management experimental courses, manual sand table courses such as ERP simulation drills require the use of group-based situational competitive teaching, while online teaching lacks such a simulated environment, and online operations cannot completely replace offline drills.

III. THE WAY OUT OF THE TEACHING REFORM OF ECONOMICS AND MANAGEMENT EXPERIMENTAL COURSES

1. Build a Scientific Assessment and Monitoring System for Economics and Management Experimental Courses

Face-to-face experimental courses that cannot be taught in time in the face of the epidemic situation urgently need to use the resources of "Internet +" to optimize the teaching structure of experimental courses through modern information technology, so as to ensure the smooth progress of experimental teaching. The teaching quality assessment and monitoring system of experimental courses is the core mechanism for evaluating the teaching quality of experimental courses. A scientific and efficient teaching assessment and monitoring system is conducive to teachers' flexible use of teaching methods for teaching evaluation in the post-epidemic era,

which is convenient for colleges and universities to rectify problems in experimental teaching in a timely manner, and gives correct value judgments on the experimental teaching process and teaching results, which is conducive to improving experimental teaching quality. Make full use of “Internet +” means to achieve the effective unification of qualitative and quantitative indicators, dynamic factors and static factors, optimize the experimental teaching mode, and build a scientific assessment and monitoring system for economics and management experimental courses.

2. Implement a New Model of Mixed Economics and Management Experimental Teaching

In the traditional teaching mode, teachers mainly disseminate knowledge through blackboard writing, dictation, pictures, videos, etc. In the context of the information age, the dissemination of knowledge is no longer a single channel, but has the characteristics of three-dimensional and multi-channel, and is accompanied by the characteristics of interaction and feedback, which has become more intuitive and diverse. The characteristics of this kind of knowledge dissemination require teachers to disseminate information in an all-round way within a limited time, which has very high requirements on teachers' teaching ability and organizational ability, but information loss cannot be avoided in the process of dissemination. The experimental teaching of economics and management can adopt immersion, interactive and other teaching methods, which can not only lay a solid theoretical foundation for students, but also improve the practical skills that students can use in the workplace, allow students to truly participate in the learning process, and improve students' problem analysis and problem solving skills.

Select high-quality online teaching platforms and teaching resources to carry out online and offline blended teaching. Students can walk into the laboratory offline and conduct zero-distance exchanges and discussions. Students learn online using teaching methods such as live teaching, recorded teaching, and MOOC teaching. Teachers should continue to innovate teaching methods, explore and learn from them, and teach experimental courses in a more optimized teaching method to improve the quality of experimental teaching. Before the class, teachers record teaching videos in advance according to the syllabus, sort out the class content and knowledge points into documents, and upload them to the platform for students to learn independently. Through QQ group, Tencent conference, Chaoxing, Rain Classroom and other platforms, interact with students in real time in the form of audio or video. In addition, through the form of MOOC, students can learn the excellent courses of famous teachers in domestic famous schools and help students answer their questions.

3. Establish a New System of Economics and Management Experimental Teaching Combining Virtual and Real

The establishment of a new system of economic and management experimental teaching that combines virtual and real can rely on virtual simulation experiments and use virtual simulation experiments as a teaching method to establish a new teaching system. Virtual simulation experiment teaching is a teaching experimental activity based on virtual reality technology, which can break through the drawbacks of traditional experimental teaching and improve the quality of higher education experimental teaching in terms of resource supply, experimental scope, operation form, and experimental depth. Its essence is to use virtual simulation technology to build a complete and realistic virtual experimental environment, restore the experimental principle and operating environment of the real experiment, make the teaching environment virtual, the experimental process efficient,

and realize the organic combination of teaching and learning. Students use virtual simulation experiments as a learning method, which is conducive to expanding the depth and breadth of experimental teaching in economics and management courses, improving students' interest in learning, making it easier for students to master the knowledge points of experimental teaching, and achieving better teaching effects.

Establish an online virtual experiment, offline real experiment, and a combination of virtual and real experimental teaching systems for economics and management to realize the integration and complement of various teaching methods. Utilize new technologies and new methods, apply information technology to the teaching of experimental courses and course skill training, and develop diversified teaching practices. Students conduct all-round simulation practice through three stages: pre-class preview, in-class practice, and post-class consolidation. In the pre-class preview stage, students can first perform virtual experiment simulation operations, familiarize themselves with the experimental links, operation procedures and precautions, and have a perceptual preliminary understanding of the entire experimental course; in the in-class practice stage, students can be in the laboratory, with classmates. The teacher conducts face-to-face communication and operation. If you have any questions, you can directly ask the teacher to answer them and get timely help. Students can improve their hands-on ability in a real experimental environment and enhance their experience and feelings of experimental teaching; in the post-class consolidation stage, through the online virtual experiment, the part practiced in the previous class is strengthened and absorbed again, and the effect in the experiment can be realized more purposefully, so as to improve the effectiveness of the students' experimental training, and make the experimental teaching system play a greater role.

IV. CONCLUSION

This paper expounds the problems encountered in the teaching reform of economics and management experimental courses during the epidemic and how to get out of these difficulties, providing experience and ideas for carrying out experimental teaching in the post-epidemic era. In the post-epidemic era, information technology empowers experimental teaching in colleges and universities, integrates online and offline, and escorts experimental teaching. Constructing a scientific assessment and monitoring system for economics and management experimental courses, establishing a new experimental teaching mode and teaching system, will gradually become a new format of experimental teaching.

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