

Research of teaching and reform by means of competition Using virtual simulation platform for Financial Management Major

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Abstract. Taking Financial management major of Modern College of Northwest University as an example, this paper studies the basic situation of promoting teaching and reform through virtual simulation competition, and finds some problems such as low participation of teachers and students, limited digital ability of teachers, long cycle from competition to reform, and inflexible revision of training program. It is suggested to establish and motivate the mechanism, strengthen the training of teachers' digital ability, strengthen the construction of virtual simulation laboratory and establish the mechanism of revising the training program with The Times.

Keywords: Virtual simulation; Financial management; Promoting teaching through competition; Promote change through competition.

1. Analysis of the characteristics of financial management major

The financial management major is one of the economic management majors commonly offered in Chinese universities. Based on economics and management, this major manages capital movements through activities such as planning, decision-making, control and supervision. Manage financing, investment and capital operation, and forecast, prevent and resolve financial crisis such as loss and bankruptcy. Under the traditional teaching environment, this major mainly offers courses such as Management, Accounting, Financial Management, Finance, Financial Accounting, Auditing, Securities Investment, and Financial Statement Analysis. Most of these courses have a strict theoretical system, strong professionalism, high requirements for practice. Learning is difficulty.

From the perspective of the learning process of specialized courses, students' learning content first takes enterprises as the micro environment, and then takes national economic operation as the macro environment. For the students who have just entered the university, they lack the image understanding of the organization, management and operation of enterprises, and have no personal experience of the impact of national macroeconomic policies. Based on this, the professional courses of financial management have higher requirements for practical links. The typical representative of the traditional practice link such as manual accounting, accounting computerization, financial and tax integration management system software is the way of practice in the school, the establishment of practice base, to enterprises and institutions internship is a typical way out of the school.

With the popularization of computer technology, the core link in the process of enterprise financial management, manual accounts gradually replaced by computerized accounting, accounting process is mostly completed in the computer system, the corresponding practice can also be closer to the actual operation through software, this part of the practice content can be well solved in the school. But there are two obvious difficulties in practical teaching:

First, lacking of macro and micro environmental experience that financial management depends on. Taking enterprise financial management as an example, financing, investment, and fund management in the process of operation are the three major components of financial management. How to operate an enterprise, how much financing scale is appropriate, and how to balance investment income and risk? If the operation is not correct, what will be the adverse consequences? How will changes in economic policies such as interest rates, exchange rates, tax rates and loans

affect businesses? In addition to the theoretical knowledge in the textbook, it is difficult for students to have an emotional understanding.

Second, off-campus practice base, internship is difficult to play a substantive role. Financial department is the core department of almost any enterprise and public institution. In consideration of safety, it is difficult for students to get access to the specific business of the financial department in relevant units, let alone the core business [1]. At the same time, due to the irreversibility and risk of economic activities, the unit will try to reduce the participation of internship students, so they will not have a profound experience of the operation process, principles and methods of each link of financial management.

Recent years, under the background of the new scientific and technological revolution and the construction of new liberal arts, the construction of virtual simulation "golden course" is being carried out in full swing, featuring high positioning and fast construction speed [2]. Colleges and universities have cooperated with professional software development companies to develop simulation software that can highly simulate the actual economic operation process, allowing students to immerse themselves in the process of enterprise operation, business management and economic policy implementation in a role-playing way, so that they can try to use theoretical knowledge to solve practical problems. On the one hand, the use of these software provides students with a simulated macro and micro economic operating environment; on the other hand, it gives students the opportunity of trial and error to understand the effect of correct economic behavior and the consequences of wrong economic behavior. To a certain extent, it solves the problem that some courses of financial management cannot be put into practice.

Software development needs a process of continuous improvement, large-scale use is a necessary condition to speed up the process. By holding various types of competitions, software development enterprises, on the one hand, speed up software development, improvement, promotion and popularization, on the other hand, provide teachers and students with a good way to learn cutting-edge technology means and practices, and more importantly, truly walk out of a road of industry-university-research integration. The use of virtual simulation technology, with software development enterprises as the link, through the investigation of the needs of the actual economic field, the use of advanced technology to develop practical products, in the form of competition to improve, promote, for students to practice learning. According to the performance of the software, teachers choose the course, content and form to use, constantly improve and enrich the teaching methods and methods, and achieve the effect of promoting teaching, research and reform with competition.

As a new teaching method and mode, promoting teaching by competition and learning by competition, teaching is carried out in the form of professional skills competition and combining learning with competition, which is conducive to cultivating students' sense of competition and forming a learning atmosphere in which they are chasing each other, thus stimulating students' enthusiasm for learning [3].

2. Virtual simulation platform promotes teaching and practice by competition in financial management specialty

In recent years, Business School of Modern College of Northwest University has organized students to participate in the "National College Economics Virtual Imitation Experiment Competition", "Lixin Accounting Cup", "Net in Net Cup", "Keyun Cup" and other competitions which have great influence in the field of financial management in China. The software used in these competitions is more or less built into virtual simulation. Take the "National University Economics Virtual Imitation Experiment Competition" organized by China Quantitative Economics Society as an example, from the earliest track "Economics Comprehensive Game Experiment Competition" to the current five tracks (adding "finance and Public management competition", "Smart Bank Digital Operation Competition", "International Economic Analysis and Decision Competition", "smart

logistics Entrepreneurship simulation competition"). The tracks use software that simulates a macro - and micro-economic operating environment from different perspectives.

For example, the comprehensive game experiment of economics is to set up the core departments of enterprise operation, such as production, sales and finance, etc. The production department invests production factors in proportion, the sales department is responsible for product market development, and the financial department manages financing, investment and funds in the operation process. In addition, it also connects with upstream enterprises, consumers and government departments. Through these designs, a relatively complete enterprise operation ecosystem is constructed. Students can try the basic business as production positions, sales positions, financial management positions. When carrying out basic business, it should not only pay attention to internal enterprises, but also take into account the influence of upstream and downstream enterprises, consumers and national policies. Let the students personally understand the links of enterprise operation, what factors are affected by it, and constantly understand the theoretical knowledge in the books through trial and error.

Other competitions can do the same thing in different areas.

Since 2018, teachers majoring in financial management have organized virtual simulation competitions corresponding to economic operation courses, accounting courses and funds management courses according to their professional strengths. In the early stage, students with excellent performance and strong independent learning ability are selected from the junior grade to learn the software content, continuously strengthen the practice, and participate in the preliminary and final competitions under the guidance of the teachers of the organizer. The junior students have relatively comprehensive professional learning content, strong understanding ability, problem analysis and problem-solving ability, and have achieved good results. After getting familiar with the competition, the teachers gradually set up the competition echelon, and joined some sophomores so that they could have a familiar process and lay a solid foundation for good results in the next year's official competition. In the second stage, the teachers introduced the mature software into the practice week of the final semester. In the second and third semesters, the course application software was set up to carry out the practice operation. Many virtual platforms, such as "finance and public management", "Digital operation of smart Bank", big data financial management analysis and management accounting practice platform, were introduced successively. Let more students contact the virtual simulation platform, strengthen the implementation of practical links, also laid a more solid foundation for the competition, a wider range of choices, students learn faster, more excellent results. In the third stage, the virtual simulation platform is gradually introduced into the laboratory, the laboratory software equipment is enriched, the training program is improved, the old practical courses are replaced, and the professional elective courses and public elective courses based on the virtual simulation platform are set up, such as economics simulation experiment, big data financial analysis, intelligent bank operation, finance and public management, etc.

The opening of the course, let the students to the application of virtual simulation platform to carry out the practice of understanding more comprehensive, comprehensive. Through practical operation, I not only deepened my grasp of theoretical knowledge and improved my understanding ability, but also laid a good foundation for later competition [4].

The use of virtual simulation platform will greatly promote the improvement of teachers' teaching methods and means. Constructivism learning theory holds that "situation", "collaboration", "conversation" and "meaning construction" are the four elements or four attributes of learning environment [5]. Under the background of digital economy, the working scene of financial management is also moving towards digitalization, and the teaching scene of teachers should also move towards digitalization. Through the application of virtual simulation platform, teachers learn advanced teaching concepts and methods on the one hand, on the other hand, they can timely grasp the new trends in the professional field, constantly improve from the perspective of technology and content, change the traditional infusing teaching method, and truly establish the "student-learning-centered" teaching concept. Let the students learn and practice.

Since 2018, we have organized more than 600 students to participate in 45 virtual simulation competitions, and more than 300 students have won various awards such as the national finals and regional competitions. It has promoted the improvement of students' practical ability, the construction of laboratories and the implementation of teachers' teaching reform, and has achieved fruitful results.

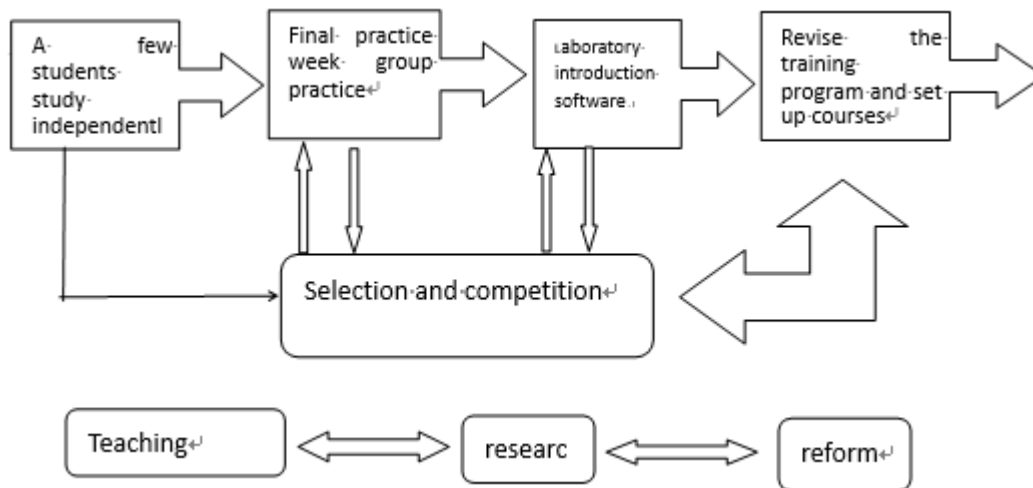


Figure 1. Schematic diagram of the process of promoting teaching, promoting research and promoting reform by competition

3. Problems found by virtual simulation platform in the process of promoting teaching and improving practice of financial management major

(1) The participation of teachers and students needs to be improved. Virtual simulation platform is a new experimental method developed in recent years, with novel methods, advanced means, more content and more information. Whether it is used for competition or teaching, teachers and students need to spend a lot of time studying. Teachers have heavy pressure of teaching and research, and students have the pressure of postgraduate entrance examination and job hunting, so most students do not want to spend too much energy to participate in this relatively long and difficult process.

(2) Teachers' digital ability is an important constraint. Most of the teachers majoring in financial management are from liberal arts backgrounds. Even if they are from science and engineering backgrounds, there is still a big gap in their digital literacy compared with the rapid development of digital economy and technology in recent years. The design and development of virtual simulation platform is limited by the digital literacy of teachers, and many teachers even have some difficulties in learning and using it. This will cause obstacles to the further development of teaching reform.

(3) The cycle from match to change is longer. There is a long time between contacting a competition, getting familiar with the competition, the use of software, the introduction of laboratory construction, and the establishment of courses for systematic practical teaching. The short time is about 2 years, and the long time may be 5 or 6 years. This kind of lag often leads to the lag of curriculum reform.

(4) There are many factors affecting the modification of training program. Professional training programs often have a certain degree of stability, coupled with the institutional constraints of national undergraduate education standards, its revision has to go through a very strict process. On the one hand, this practice maintains the seriousness of the training program, but also hinders the application of virtual simulation technology in the course of teaching reform which has developed rapidly in recent years.

4. Analysis on the way of promoting teaching and reform by means of competition with virtual simulation platform for financial management specialty

(1) We will establish an incentive mechanism to promote teaching and reform through competition. Professional competition is an effective way to strengthen communication with teachers and students of other colleges, learn advanced education and teaching concepts, and learn cutting-edge knowledge of disciplines. As for the financial management professional virtual platform competition, it often involves a new operating platform, several professional courses or even the comprehensive application of the whole professional knowledge, which is often time-consuming and difficult. In order to concentrate on training in a short period of time and achieve better results in the competition, instructors and students must pay a lot of energy. Therefore, the school needs to establish a perfect incentive mechanism from the institutional level, so that teachers and students are willing to pay energy for it. For students, credits, honors and bonuses are the motivation to participate. All departments of the college should play an active guiding role in credit recognition, award setting and bonus payment. For teachers, the payment of honors and bonuses are essential conditions, and support from hardware and software facilities, time arrangement, funds and other aspects is also required. Under certain conditions, it is linked to the teachers' workload assessment, performance evaluation and professional title evaluation and employment, so that teachers have the motivation to actively participate in the process of promoting teaching and promoting reform through competition.

(2) Strengthen digital training for teachers. Under the background of digital economy, the teaching and working environment of economics majors is increasingly inseparable from digitalization. The design and use of virtual simulation platform require teachers to have a strong ability to collect, process, process and use digital data. Teachers should consciously keep up with the pace of digital development and take the initiative to learn basic skills. Schools should provide multiple channels online and offline, provide training opportunities for teachers, and the teaching and research department should organize seminars on digital learning frequently.

(3) Strengthen the construction of virtual simulation laboratory. To promote teaching and reform through competition cannot be separated from the support of virtual simulation experiment platform. On the one hand, teachers should take the initiative and timely docking with software development enterprises, learn advanced software platform, choose the right platform, and guide some students who have the ability to learn through practice to participate in the competition; On the other hand, we should compare the software performance and course time requirements, and actively introduce software platforms suitable for majors and disciplines to enrich the laboratory, so as to connect with the practice links of specialized courses or set up relevant professional courses, so as to provide a foundation for teachers to reform teaching methods and improve training programs.

(4) Update curriculum system and training program timely. With technological progress and changes in social environment, curriculum structure and teaching methods need to be adjusted in time. Content that meets social needs should be put in place and outdated content replaced in time. The school level should have the corresponding flexibility and institutional arrangements.

Conclusion: With the help of virtual simulation platform, promoting teaching by competition and promoting reform by competition is an effective breakthrough to solve the difficulty of financial management professional practice to a certain extent. The school level should pay attention to mobilize the enthusiasm of students, strengthen the construction of the laboratory, and establish a flexible mechanism to adjust the training program.

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