

Exploration on the Construction of Legal Virtual Simulation Experiment Project

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Abstract. “In 2017, the Ministry of Education promulgated the "Notice of the General Office of the Ministry of Education on the Construction of a Demonstration Virtual Simulation Experiment Teaching Project from 2017 to 2020" (Teaching High Court [2017] No. 4), in which the planning is divided into two years to build a legal class virtual There are 20 simulation experiment teaching projects. Through the interpretation of the Ministry of Education construction planning requirements, combined with the current situation of law practice teaching in China, this paper expounds the necessity and deficiency of the virtual simulation experiment teaching of law, and imagines the experimental project suitable for the virtual simulation form, and puts forward suggestions on the technical level and the human level. Explore the construction ideas of the virtual simulation experiment project of law.

Keywords: Law; Practical teaching; Virtual simulation.

Introduction

In March 2012, the Ministry of Education issued the “Decade of Education Informational Development (2012-2020)”, which mentioned in its action plan that various high-quality digital education resources should be built, including the selection and development of 1500 virtual sets. Simulation training experimental system. In the three years from 2013 to 2015, the Ministry of Education approved a total of 300 national virtual simulation experiment teaching centers. The 300 approved national virtual simulation experiment teaching centers cover science, engineering, liberal arts, agricultural science, medical science and so on. In the subject area, the construction of the first stage virtual simulation experiment platform has been completed. According to the regulations of the Ministry of Education, the National Experimental Teaching Demonstration Center is a pre-condition for the application of the virtual simulation experiment teaching center. Therefore, in this stage of construction, the national-level legal virtual simulation experiment center has only been approved two, namely The Public Security Law Enforcement Virtual Simulation Experiment Teaching Center of the People's Public Security University of China approved in 2013 relies on the Public Security Law Enforcement Experimental Teaching Center of the People's Public Security University of China (national level); the “Fundamental Virtual Simulation Experiment Teaching of Law of China University of Political Science and Law” approved in 2014 Center", relying on the China University of Political Science and Law Experimental Teaching Center (national level). Compared with the fields of astronomy, surveying, and medicine that have been widely used in virtual simulation technology, the application of virtual simulation experiment projects in law majors is still in the exploration and pilot stage.

On July 11, 2017, the Ministry of Education promulgated the Notice of the General Office of the Ministry of Education on the Construction of a Demonstration Virtual Simulation Experiment

Project No.: GS2019YB33

Project Name: Research on the Construction of Virtual Simulation Experiment Sharing Platform for Judicial Appraisal of the Complexity of Complex Documents

Project Source: Research Project of Jiangsu University Laboratory Research Association

Teaching Project from 2017 to 2020 (Teaching High Court [2017] No. 4) (hereinafter referred to as the "Notice") From the construction of virtual simulation experiment teaching center to the construction of demonstration virtual simulation experiment teaching project, it marks the simplification of platform construction from unit construction to extensive construction. In the "Notice", 1000 virtual simulation experiment teaching projects are planned and constructed, including 20 law schools, 10 in 2019 and 2020. The next two years are important opportunities for the development of virtual simulation experiment teaching in law universities in China. The new stage of construction planning has transformed the construction of practical teaching, from the construction of experimental centers to the construction of experimental projects. Experimental teaching projects as the basic unit of experimental teaching in colleges and universities, the construction level directly determines the overall quality of experimental teaching. The construction of demonstration virtual simulation experiment teaching project is an important measure to promote the deep integration of modern information technology and experimental teaching projects, expand the breadth and depth of experimental teaching content, extend the time and space of experimental teaching, and improve the quality and level of experimental teaching. In the construction of this stage, the construction threshold is lowered, and the pre-conditions for the demonstration virtual demonstration experiment teaching project with the national experimental teaching demonstration center are not required. The ordinary undergraduate college is the construction and application of the virtual simulation experiment teaching project. The main body, this gives many institutions that have no national-level legal experimental teaching demonstration center to develop more experimental virtual simulation experiment projects.

I. The Necessity and Deficiency of Law Practice Teaching

Chinese traditional law teaching methods have always focused on theoretical teaching, lacking practical experience in teaching, even law students who are committed to the judicial industry are deeply entangled in the law and test, the gap between theory and application causes law students to seek employment. The way out is narrow, even if the starting platform is high, it seems that the stamina is insufficient. Therefore, whether it is the traditional law school or the law-based public security technology in the law major, the practical ability of law students needs to be improved. How to guide the law students to apply and apply the skills and skills needed to perform their duties as soon as possible The career competitiveness of future legal professionals is a constant concern of legal higher education.

Chinese legal education includes legal theory education, legal knowledge education and legal vocational skills education. The purpose of legal practice teaching is to combine the training objectives of the three, create a comprehensive design teaching scene, let students face the legal problems, apply legal knowledge, and improve legal skills. In the traditional teaching of law practice, most of the students' practical experience is through involvement in legal consultation, legal aid and contact with the parties, or in the first year of the undergraduate year to the law firm, the public security law department and other institutions, so that you can intuitively understand and participate in it. However, due to the different places of practice, the legal work directly encountered by individual students is very different. In addition, their first close contact with law firms and the judiciary is largely limited by the instructors of the internship unit. The practical experience gained in such internships is often non-standard and incomplete, which is not conducive to the classroom. The continuation and application of the learned operational specification concept will have a profound impact on the subsequent task processing. Therefore, it is crucial for law students to complete a relatively complete and standard set of professional practices during their school years. Recognizing this problem, college law education teaches students to establish legal knowledge and theoretical systems, and pays more attention to the cultivation of practical ability. The widely practiced legal practice teaching has effectively compensated for this vacancy. Reform the teaching mode, organize student simulation exercises through classroom experiments, such as simulated court experiments, legal clinics, guide students to initiate litigation process in preset scenarios, and master the use of

tools, thus forming a relatively complete, comprehensive and determined standard litigation process. Concept, so that there will be no major deviations in the internship and employment process.

However, in the process of promoting the practice of law practice, some problems that need to be solved gradually emerged: First, the law practice teaching started late, limited by conditions, the laboratory environment situation is insufficiently reduced, and it is not diversified, and the real situation is lacking. Close contact; Second, it is not completely out of the inherent classroom teaching mode. Students are on the spot or remotely. They are grouped and prepared to experiment and simulate roles. However, the components of self-response are lower, which is not conducive to the cultivation of individual application ability. Many places are interfered by teachers' teaching level and legal practice experience. The interactive reaction of all parties may not be timely and accurate, affecting teachers' judgments on students and students' judgments on themselves; fourth, limited by time and space, the frequency of experimental courses is not High, failed to form a solidified memory.

II. The Advantages of Law Virtual Simulation Experiment Teaching

Compared with real-life teaching, the application of virtual simulation technology based on multimedia and network communication technology in the practical teaching course of law can greatly improve the effectiveness of teaching. Compared with traditional legal practice teaching, legal virtual simulation experiment teaching has the following advantages:

1. Digital scene. The virtual environment is actually much easier to build than the real scene, and there is no need to build a large-scale civil engineering environment, and the virtual simulation environment has a high degree of overall reduction, and the high-quality three-dimensional image can be highly restored. The experimental scenarios are diversified, and the rich scene resource library can be built with less capital investment, so that the scene combination and conversion can be conveniently realized. For example, in the traditional simulation court experiment, it is necessary to arrange according to the lawsuit type, and in the virtual simulation environment. Next, the scene only needs to be switched; the third is to adapt to extreme situations, and can perfectly simulate the high-cost and destructive experimental effects, such as restoring the crime scene and simulating the criminal process, which is difficult for the real-life laboratory. The virtual scene can also solve the problem of repeated construction of the real-life laboratory such as the mock court, and the uneven distribution of legal practice teaching resources.

2. Increase participation. The legal virtual simulation system presets the basic rules of the course through procedures, sets the logical relationship and operation norms between each link, and gives the participants roles and responsibilities. After that, through the method of formulating the case, the students are fully involved in the legal work of the case. In the process, we will operate independently, participate in case analysis, experience control, debate, and review multiple positions, and achieve the set goals and master relevant legal professional skills by completing tasks. The whole process of the system is controlled and controlled, and the teachers are freed from the complicated work of supervising and collecting.

3. Enhance interactivity. The legal virtual simulation system can feedback the implementation effect of each step in real time according to the preset program, real-time monitoring and real-time feedback. Targeted guidance, tips, corrections, and quantitative assessment of student completion, teachers from one-to-many teaching to one-to-one guidance. Standardized processes, timely and accurate responses will undoubtedly greatly improve learning efficiency and interest.

4. Break through the space-time barrier. The traditional experimental teaching of law can only be carried out in laboratories or internships. Due to time and space restrictions, it is impossible to open experimental projects anytime and anywhere. The network information technology puts the courseware and experiment system to the PC, mobile and VR terminals, breaking through the constraints of space and time. Students can complete self-study, review and operation in the virtual situation and simulation process anytime and anywhere. You can save the progress of the experiment at any time, switch learning, not only to provide sufficient on-site communication time for classroom teaching, but also to repeatedly exercise and enhance proficiency according to your own needs.

III. The Legal Virtual Simulation Experiment Project Selection

It is generally believed that the methods of law practice teaching include case teaching, auditing trials, mock courts, legal internships, legal clinics, legal consultations, special debates and social surveys. There are many legal experiment projects. In the process of constructing virtual simulation experiment projects, we should adhere to the problem-oriented and demand-oriented, and accurately select the appropriate project categories, which must be in line with China's rule of law modernization, reflect practicality, and be able to reflect innovation and Differentiated, with the possibility of designing a standard experimental process, building on the basis of "can be practical". Compared with the experimental projects of science and engineering, most of the experimental projects are usually low-cost, low-consumption experiments, and are not suitable for virtual simulation projects, such as Clinical Law Education. The practice of legal clinics in the early stage of the construction of law majors in Chinese universities is mostly in the form of real legal aid services combined with simulated legal aid services, with real legal aid services as the mainstay. The drawbacks are the limited number of cases, the repeated types of cases, and the single mode of assistance. In recent years, colleges and universities have used the Internet platform to complete the upgrade of online legal aid, which has increased the number of cases and expanded the types of cases. The teaching of legal clinic has been updated to a new experimental teaching mode combining online and offline, but it has not been built into a virtual simulation experiment. Because the legal clinic is a typical reality than the virtual experimental project, the core of the experiment is the communication between people, the helper asks questions, the students solve problems, and the teachers conduct analysis and evaluation. If virtual simulation is to achieve its effect, select cases, design problems, and simulate human-computer interaction in human-computer interaction. It is inevitable that R&D costs are high, time-consuming and labor-intensive, and half the effort. This paper selects two experimental projects, mock court and forensic identification, to design and build a virtual simulation experiment:

1. Simulation court virtual simulation experiment

In the law practice teaching project, the mock court is the most widely used experimental project. In the traditional reality simulation, by simulating the trial situation, students can understand the various aspects of the trial, familiar with the operational procedures of the proceedings, master the litigation model skills, and cultivate students' ability to think and apply the comprehensive knowledge of law. Combined with virtual simulation experiments, the simulated court scene can be set as a court, preset three-dimensional scene display, the court's regional distribution, facilities, legal platform layout, seating, etc. at a glance; pre-recorded into civil, criminal, administrative cases, typical materials, and according to different The situation corresponds to different disposal rules, such as private prosecution / public prosecution, single court / collegiate bench, first trial / second trial / retrial. The curriculum includes pre-trial review, court preparation, court investigation, court debate, final statement of the defendant, collegial panel review, sentencing, closed court, etc., and correspondingly set up various court staff roles, giving legal documents, debate, mediation, etc. task.

After the students log in to obtain the task, they should first complete the data collection and legal document production as required, and submit it in the system before they can participate in the trial. The trial process should set up a standard process display and a real court trial video passage to guide students to familiarize themselves with the standard process, correctly quote the law, and interact with humans and computers. It can also be completed by multiple users online. The system can be completed through system pre-judgment and teacher evaluation. In this way, the teacher only needs to complete further inspection and off-site evaluation through the system, and use the limited on-site teaching time to complete the correction and improvement, and effectively improve the teaching quality; while the individual participation of the students is higher and the interaction is more active.

The simulation court was built as a virtual simulation experiment. The first was to realize the operation trace and the whole process control of the entire trial process, and reduce the manpower management cost. Second, the system intelligent division of labor, teachers design cases, start tasks, students' pre-complete cases and theoretical studies, greatly improving classroom efficiency. The third is to achieve information sharing, rapid release, accurate investment, and wide coverage. Fourth, it is highly scalable. On the one hand, it can continuously improve system performance through

software upgrades, and update the material library, case library, and relevant laws and regulations at any time to ensure that it keeps pace with the times; on the one hand, it can be combined with hardware facilities such as VR to enable students. Provide a more realistic immersive experience.

2. Judicial identification virtual simulation experiment

The mock court mentioned above is a typical liberal arts experimental project in the practice of law practice, while the judicial appraisal experiment has the characteristics of the liberal arts and science and engineering experiments. It should not only pay attention to the standard disposal process of transactional work, such as accepting commission or hiring The initial review and document review of the materials and samples, the focus of the experiment is to emphasize the standard operation and proficiency improvement in professional technology, such as site surveys and identification of various types of projects, with a view to minimizing the students' actual work in the future. Risk of mis-operation or reverse process operation.

The judicial simulation virtual simulation experiment project must first establish the relevant real laboratory environment, equipment and equipment to be completely virtualized, and set the usage rules and experimental responses consistent with the real conditions. Take the physical evidence laboratory as an example, it should set up chromatographic scanner, multi-function material identification instrument, fingerprint smoke-sensing cabinet, high-power stereo microscope, multi-channel psychological tester and other instruments; provide fingerprint discovery, fixation and extraction; footprint discovery and fixation And extraction; handwriting identity identification, seal identification, print document inspection, portrait identity recognition, lie detection and other simulation functions. Secondly, establish a real case virtual library, restore a variety of typical case discovery sites, such as robbery, theft, murder, etc., and pre-set various types of evidence as extractable material. Once again, set up simulation command center, interrogation room, task force, arrest scenes, etc., and set up public security personnel, victims, suspects, witnesses and other roles. Then, according to different types of cases, the experimental projects are organically combined, and the above-mentioned projects and materials are used in series.

On the basis of the judicial appraisal project, a criminal case of virtual simulation can be initiated, and the system guides the students to watch the system drill and complete the whole process of investigation, including receiving the report, filing the case, on-site inspection, physical evidence test, investigation measures and application of the investigation technology. , arresting, interrogating, closing the case, etc., calling the criminal investigation and evidence experiment project, completing the real case handling process according to the virtual scene simulation, mastering the standard handling procedure, and finally making the criminal case settlement file submitted in the system, through system prejudging and teacher evaluation You can complete the study. For some cases where the crime scene is difficult to display, you can only explain the background, display the materials and directly start the process, and enter the drill and layout tasks. For the cybercrime on the dust, it is necessary to enter the library, so that students can understand their criminal techniques, characteristics, and the corresponding investigation and evidence collection process.

In addition to the laboratories, cases, scenes, and material reserves mentioned above, the constantly updated law database is also necessary, not only for students to search, learn, but also in court trials. And case handling at any time.

IV. Establish A Scientific and Effective Experimental Evaluation System

1. Confirmation of experimenter identity

Although the virtual simulation experiment has the advantage of breaking through time and space, students can enter the experiment at any time and place, pause the experiment, save the progress, and complete the experiment in multiple time periods. However, the drawback is that, since the experimental operation is carried out online due to the departure from the real place, the possibility that the non-self-completed or non-individual completion is not completely eliminated. If the experimental evaluation score is added to the general review of the course in a certain proportion, there is a possibility of cheating. The author believes that face recognition can be performed before entering the experimental system, and face recognition and expression command detection can be

performed randomly during the experiment. Although it is not completely avoided, it can be confirmed to the greatest extent by the student.

2. Two-way mutual evaluation of teachers and students

The "Notice" mentioned that the virtual simulation experiment teaching project is included in the relevant professional training programs and teaching courses, and the relevant teaching effect evaluation methods are formulated. The evaluation mechanism is not fixed, but is continuously improved based on feedback from both teachers and students. The Ministry of Education encourages universities to explore the teaching performance incentive mechanism that is conducive to the open sharing of virtual simulation experimental teaching projects, and establish a mutual recognition and credit transfer mechanism for relevant experimental teaching projects between universities. The characteristics of operation simulation, intelligent division of labor, and full process control of legal virtual simulation experiments are not only for students, but also for the constraints and ability of teachers. It is based on the systematic and automated management of virtual simulation experiment projects. Establish quantitative data, objective and fair evaluation system, and have a comprehensive three-dimensional assessment of teachers' work effectiveness and students' learning outcomes. The legal virtual simulation experiment system can be applied in the examinations of litigation law, simulation court, criminal investigation and material evidence technology. The student's learning outcomes are tested by on-site tasks and on-site completion. As a practical test score, a certain percentage of the theoretical test scores are included in the general review of the course to promote the subjective initiative of practical learning. In addition, the experimental evaluation system also helps to complete subjective evaluations accurately and quickly, such as instant mutual evaluation between teachers and students. Teachers can refer to the system records, complete the evaluation in combination with the students' usual performance, and no longer stay in the print image points; students can submit evaluations and suggestions on the experimental courses, experimental results, and teacher levels through the system, instead of cumbersome experimental feedback questionnaires.

3. Stereo dynamic evaluation

Compared with the practice teaching in the law classroom, the evaluation system of the legal virtual simulation system first realizes the whole process evaluation, not only the evaluation of the overall experimental results, but also the recording and evaluation of the completion of the phase single task, emphasizing the process management and evaluation; The three-dimensional evaluation is realized. Through the dimension and rule setting, the single evaluation price is organically combined to comprehensively reflect the students' ability level in judgment, analysis and response, understand the advantages, find the weak points, and solve them one by one. Third, realize the quantification. Evaluation, in which the introduction of theoretical accuracy, knowledge transfer ability, program diversity, operational completion and other data support, relatively objective and fair. At the same time, the evaluation should also have the characteristics of stage and continuity to reflect the growth of students in a certain period.

V. Issues That Still Need Attention

Through the above theory and simulation, from the virtual to the whole process of the reality, the students' legal theory and legal professional skills are combined and consolidated, and the legal theory can be connected with the actual work relatively skillfully, and enter the role as soon as possible. However, the virtual simulation system is applied to the intricate field of law. Influenced by the characteristics of the law discipline, the virtual simulation experiment project of construction law still has two major problems: the technical level and the construction of professional experimental teaching team.

1. Technical level

First of all, the research and development of the law virtual simulation experiment teaching project requires the comprehensive application of multimedia and big data. The introduction of mass data and the preparation of the curriculum, curriculum design and rule setting require a large number of professional and high-quality talents to participate. Therefore, a virtual The design of the simulation experiment project is very time consuming and labor intensive. Secondly, the scope and depth of

artificial intelligence and human-computer interaction are limited. The artificial intelligence currently used in practical teaching can only process quantifiable data, can not make complex judgments, and cannot present too complicated and meticulous branches and levels, such as systems. The recognition of students' natural language is the current high level of artificial intelligence. With the existing construction funds and cycles, good results cannot be achieved. For the technical dilemma, if you invest more in R&D, it may be unrealistic. Designers can try to break through the bottlenecks at the technical level through the innovation of teaching methods. Take the simulated court experiment as an example. In the trial, there are multiple roles such as control and trial. If the student enters the experimental system in a single role, the other roles use artificial intelligence. With the existing technical ability, the system cannot recognize the natural language of the student at all. Therefore, at this stage, single task roles such as clerk, witness, and appraiser can be set as artificial intelligence, and the three parties in charge of trial and defense should be held by students because of complicated tasks and frequent communication, thus avoiding artificial intelligence to better identify human nature. The problem of language.

2. The human level

Although the virtual simulation experiment project is only a single project, the project necessarily needs a mature experimental teaching team. It is necessary to construct a perfect practice normative framework around the project, and still rely on the guidance of teachers, and many colleges and universities experimental teachers have more theoretical knowledge. Lack of practical experience and no experience in the industry. The number of full-time experimental post teachers in China's colleges and universities law school is very small. Most of the experimental school teachers in colleges and universities have only one or two experimental posts, and the experimental post teachers are not stable, resulting in the so-called experimental teaching team is only a general teaching post teacher. The simple patchwork is neither given attention nor made a difference. Law practice teaching should pay attention to the construction of experimental teaching team. The law school department needs to strengthen cooperation with law firms and judicial organs to encourage teachers to participate in practice, so that teachers have the opportunity to observe more and communicate more, and strengthen the understanding of current practice in the professional field. Consider hiring key personnel in the judicial practice department as part-time experimental teachers.

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