Study on the Application of Computer Simulation Technology in the Cultivation of Professional Skills

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Abstract. In view of the characteristics of computer simulation technology, the training program of professional talents is studied. Summarizing the problems existing in the training of professional skilled personnel, the aim is to perfect the method of cultivating professional skills in order to show the training value of computer simulation technology and provide reference for the development of the industry.

1. Introduction
Under the background of the new curriculum education reform, computer simulation technology, as the focus of professional skills training, not only fully meets the needs of education reform, but also transports more professional talents for the industry. For computer simulation technology, mainly through the use of computer science and technology, the establishment of simulation model system, and under the guidance of experimental conditions to form a dynamic model, the technology and professional skills training to integrate, can improve the professionalism of talent, promote the steady development of colleges and universities. However, in the current training of computer simulation technology professional skills, there is a lack of automation and single teaching methods, if these problems can not be solved in time, it will limit the development of professional skills, affect the use of computer simulation technology value. Therefore, in the current college education, education managers should realize the value of the use of computer simulation technology, according to the characteristics of the profession and the needs of talents, innovate educational forms to meet the needs of computer simulation technology in professional skills training.

2. Computer simulation technology and its characteristics
2.1. Computer simulation technology
For computer simulation technology, it is an abstract simulation of a feature of the actual existence system, which is extracted into the relevant new one through the design of the experiment and the analysis of the experimental system to improve the overall effect of the experimental research. With the development of network information technology, through the rational and effective application of simulation system, we can form a new simulation method and simulation technology, simulation technology generally includes different types, as shown in Table 1. When the computer simulation technology is established, the system is set up comprehensively to form the simulation software, hardware model and graphical display model, and the use value of computer simulation technology is enhanced through the systematic simulation model[1].
Table 1. Simulation Type

| Simulation model     | The type of simulation          | The type of computer | Economics |
|----------------------|--------------------------------|----------------------|-----------|
| Physical simulation  | The physical model             | Simulate computer    | High      |
| Semi-physical simulation | Physics - Mathematical Model | Hybrid computer     | Medium    |
| Computer simulation  | Mathematical model             | Digital computer     | Low       |

2.2. Features of computer simulation technology

The technology has the characteristics of high efficiency, good security and flexible control, through system analysis and design optimization, can enhance the professionalism of technology use, the study found that the characteristics of computer simulation technology are as follows: First, simulation time has the characteristics of scalability, because computer simulation technology is controlled, its process controllability is strong. People can set simulation time through professional needs, enhance the scalability of model design, improve the overall efficiency of the experiment. Second, the controllability of the simulation operation. Computer simulation technology generally takes the computer as the carrier, and through the experimental instruction and the control of the experimental process, the experimental project is set up to enhance the controllability of computer simulation. Third, the optimization of experimental simulation. Through the use of computer simulation technology, it is possible to repeat and make unlimited simulation experiments, and gradually get different experimental results, so as to determine the optimal solution.

3. The development of computer simulation technology

3.1. The establishment of the system object simulation model

In the development of network information technology, computer simulation technology, as a systematic and diversified model structure, can not only improve the value of technology use, but also promote industry innovation. However, in some professional systems, there are still problems of professional and technical personnel' lack of understanding of the system and the method of system model construction, which reduces the cognitive and research value of the model. Through the construction of the system simulation model, we can improve the construction ability of the model, shorten the time of the simulation model, and fully demonstrate the value of the use of computer simulation technology. In general, in the establishment of the system object simulation model, the technical methods are as follows: First, through the use of the original language of the computer, we can build intuitive simulation software. Second, the simulation object of building a composite specific system, for example, in nuclear power plant and weapons and equipment manufacturing, through the establishment of simulation model and simulation of environmental conditions, can enhance the construction effect of data resources. Third, in the use of computer simulation technology, through the virtual graphics interface, simulation of the construction of the block simulation model, we can establish a system object database, through the compilation of information, system construction design and analysis of the results, will form a dynamic object simulation model[2].

3.2. Embedded Computer Simulation

Through the use of embedded simulation technology, special simulation technology can be used in practical engineering projects to ensure the effectiveness of engineering project management, monitoring and scheduling management, to provide reference for the automatic use of computer simulation technology, and to enhance the value of simulation information technology. For example, in the simulation project and simulation model system construction, through interface development, design, project model construction, can achieve the sharing of various resources, enhance the value of information management and system use, provide support for the adjustment of various data, timely solve the problems in the use of computer simulation technology in the use of professional skills.
3.3. Construction of multiple media simulation models

With the development of network information technology, computer simulation technology as a layer-by-layer in-depth workflow form, generally includes the goal of simulation model, mathematical structure model, compilation of computer language model and analysis of system results, each simulation software operation really through the study of the system model, the various programs in the project to deal with, form a collaborative working form, enhance the use of multiple media simulation models. Usually in the construction of multi-media simulation model, it should be done: First, in the ideal simulation model construction, the simulation model should be tested, and then set up the workflow, determine the flexible algorithm, ensure the use of various information technology value, for the system diversification, open integration to provide reference. Second, in the reference of computer simulation project, through the comprehensive utilization of system support software and data processing software, the project text, images and data information can be intuitively processed, improve the construction value of the simulation model, and enhance the effect of the computer simulation model[3].

4. Problems in the cultivation of professional skills in computer simulation technology

4.1. The orientation of the course is not clear

Through the analysis of computer simulation technology, in the training of professional skills, there are unclear problems of curriculum target positioning, first, because of the particularity of computer simulation technology, some educational talents lack a clear understanding of teaching content, and, under the limited school hours limit, It leads to some standard targeting and simulation system can not be scientifically constructed, which affects the value of curriculum professional skills development. Second, in the course positioning and mapping engineering project, there is a problem of duplication of educational content, which not only affects the quality of education, but also affects the teaching goal of simulation technology, and limits the value of computer simulation technology in the cultivation of professional skills.

4.2. Lack of use of automation technology

In view of the characteristics of computer simulation technology, it can be applied to the professional skills training of college talents, talent training can be the core, showing the comprehensive value of talent training. However, in the professional skills training of some college talents, there is a lack of automation in the teaching of computer simulation technology, the emergence of this problem not only affects the effectiveness of curriculum education, but also reduces the professionalism of talent training, resulting in a single teaching method, can not enhance the professionalism of talents, for the reform of education and talent training to bring restrictions. In some professional skills development, educators only use a single computer simulation software to limit the innovation of computer simulation technology[4].

4.3. Lack of perfect teaching rules

Combined with the use value of computer simulation technology, there are problems of insufficient rule system and imperfect evaluation system in the training of professional talents. First of all, in the professional skills training of computer simulation technology, due to the lack of theoretical basis and single teaching methods, it limits the in-depth study of educational ideas and reduces the value of professional training. Secondly, in the guidance of computer simulation technology, there is a lack of systematic implementation means and method routes, which affect the professionalism of computer simulation technology, and bring limitations to the cultivation of computer simulation technology in professional skills. Finally, in the current professional skills training, computer simulation technology should be the core, through the use of technology and technology innovation, to show the professionalization of talent training, for the reform of education and the upgrading of talent capacity to support.
5. The use of computer simulation technology in the cultivation of professional skills

5.1. Deepening enterprise research and determining talent demand
In the development of network information technology, in order to realize the innovation of computer simulation technology, we should build a comprehensive education system, carry out the automatic control of various projects through various disciplines, various theories and research of various specialties, and ensure the value of computer technology and system engineering. Therefore, in the current professional skills training of computer simulation technology, in order to clarify the purpose of talent training, we should do the following: First, for the computer application system, the need to system design and project development as the focus, through the construction of various professional curriculum system, to deepen the understanding of talents on enterprise development. In the construction of professional curriculum system, we should establish basic curriculum module, combine the teaching content of higher mathematics class, and use Mathematica's programming for project development, guide professional students to actively build models in this kind of environment, and enhance the educational value of simulation software use and computer professional courses. Second, in the use of all kinds of professional simulation software, through the computer-related professional curriculum, education personnel should grasp the needs of talent, through the comprehensive use of existing teaching materials, professional knowledge, the task teaching method used in the professional simulation software system, and gradually enhance the practical ability of students. For example, in the cultivation of professional skills, through the research of computer simulation theory, the design of engineering projects and the application and development of projects, to demonstrate the value of skilled personnel training. Third, in the training of professional skills of computer simulation technology, it is necessary to carry out the integration of various system modules and educational resources on the basis of ensuring the systematic knowledge structure of the curriculum and the practical ability of professionals, and the educators can meet the needs of computer simulation technology in the cultivation of professional skills according to the characteristics of computer simulation technology, appropriate compression of theoretical content, enhancement of the value of theory and practice integration\(^5\).

5.2. Innovative educational methods and setting curriculum goals
Through the research of computer simulation technology, we should actively innovate educational methods and integrate the education system through the setting of curriculum objectives in the training of professional skills, so as to show the value of professional talents training. In general, in the innovation of educational methods of computer simulation technology, we should do: First, in the cultivation of professional skills of computer simulation technology, we should study the development direction of enterprises in depth according to the needs of the enterprise market, and actively construct the curriculum demonstration system through research activities and solid project settings. In order to ensure the integration of education and the value of job services, it provides reference for the research of current computer simulation technology. For the professional curriculum system, the development of industry and enterprise should be the core, through teacher participation and social practice knowledge, to enhance the comprehensive quality of professional teachers, and to support the research of the project and the development of the project. Second, in the innovation of educational methods of computer simulation technology, educators should talk about the design of professional curriculum system as the core, through the curriculum practice needs and the innovation of educational content, clear professional skills talent training program, in order to show the value of computer simulation technology personnel training. Therefore, in the professional training of computer simulation technology, we should innovate the practice method of professional courses, through the existing experiments, training conditions and standardization principles, the integration of existing project resources, will meet the needs of students as the core, the integration of various professional education methods, so that students in the autonomous and diversified environment to improve their comprehensive quality, to provide support for the training of professionals in computer simulation
technology. Third, with the development of network resource sharing environment, colleges and universities can take educational resources as the core and set up laboratories through professional courses and the setting of special courses. For example, in the training of professionals in colleges and universities, in order to enhance the professionalism of computer simulation operators, colleges and universities can combine the characteristics of the course project, set up The Android Lab, Android program design and program development as the core, show the value of professional design, for the development of Android programs, design and the promotion of students' professional quality to provide reference[6].

5.3. Using layered teaching to improve teaching effectiveness

Combined with the characteristics of computer simulation technology, in the cultivation of professional skills, we should set up professional curriculum education methods in order to realize the reform of professional curriculum education and provide reference for the integration of project education and the cultivation of professional talents. In general, in the professional training of computer simulation technology, we can set a layered education model to ensure the quality of talent training, to support the integration of education and the improvement of teaching results. First of all, colleges and universities should integrate information systems in response to the needs of software construction, enhance students' understanding of graphic image skilled, and provide support for the improvement of computer simulation technology. Moreover, in some professional curriculum design, should be in the enterprise experts and college leaders planning, the public curriculum and compulsory courses, and in the professional curriculum to select the core modules, through the professional curriculum and the design of the stage courses, gradually improve the professionalism of students. For example, for freshman students, you can set the “Computer Foundation”, “Computer Animation Foundation”, and “Computer Simulation Technology Direction Foundation” courses, design "3D Modeling" and "Animation" in the second stage of the sophomore year, and take 3DMax software as the core, emphasizing the students' ability to apply basic theoretical knowledge. Moreover, in the subsequent teaching guidance, "virtual reality interaction" can also be integrated with professional courses, so that students more systematically VRP software and Unity3d technology use methods, to ensure the effectiveness of the use of various technologies. Secondly, in the stage curriculum of computer simulation technology, it is necessary to integrate the stage course as the core, for example, in the second semester, can be targeted at the characteristics of the professional course, in the first nine weeks of the 3DMax software as the main teaching guidance method, students in this stage, can systematically master the modeling, rendering and animation courses of professional methods. In the last nine weeks can be incorporated into VRP software, etc., and practice as the core, enhance the students' professional skills and practical skills. Finally, combined with the characteristics of computer simulation technology, in the training of professional skills, teachers can carefully design cases, through the "engineering combination", "project guidance" and "task-driven" methods, emphasizing the subjectivity of students, for the promotion of students' autonomy and the strengthening of professional skills to support.

5.4. Create simulation studios to improve students' practical skills

With the development of computer simulation technology, in the cultivation of professional skills of talents, colleges and universities can innovate practical educational methods for the characteristics of the curriculum. First, set up a computer simulation studio. In the training of professionals in colleges and universities, through the construction of computer simulation studio, we can undertake the research of external projects, enhance students' understanding of enterprise attributes through social services and project training, and meet the needs of professional skills of college talents. Moreover, in the design of professional curriculum system and educational innovation, teachers should take students as the core, through the combination of engineering form and computer simulation studio design, to carry out the "teaching, learning, do" integration project innovation, enrich the professional quality of students, for the integration of shared resources and teaching resources innovation to provide reference.
Secondly, in the construction of simulation laboratory, colleges and universities can enable students to accept the enterprise's projects as soon as possible, and flexibly set up practical training program in the classroom, guide students to improve their actual combat ability and comprehensive literacy, while enriching their own experience, to provide students with a variety of practical experience, to demonstrate the value of computer simulation technology in professional skills training, and promote the steady development of the industry[7].

6. Conclusion
In short, in the current professional training of computer simulation technology, colleges and universities should combine the training needs of professionals, carry out the integration of curriculum education and innovation of teaching methods, timely recognize the problems in the training of professional talents, through the integration of various work and innovation of educational methods, to enhance students’ sense of innovation, provide a reference for the current computer simulation technology professional training. Moreover, in the cultivation of professional skills, computer simulation technology should also deepen the understanding of the needs of enterprises, through educational innovation, layered teaching and experimental teaching, to create a good learning environment for students, in order to improve the value of computer simulation technology in professional skills training, for the current development of the education system and talent innovation to provide reference.

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