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## Educational information technology applied in student's vocational skills research

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### ABSTRACT

More and more teaching management of professional education applies the teaching theory and educational information technology in the vocational teaching process, conducts design, developing, using, evaluation and management on the teaching and learning process and resources. We create a new vocational education management mode by using educational information technology in student's vocational skills in order to enhance the student's creativity. This paper analyzes the present situation of the student's vocational skills mode, and thus puts forward the connotation of educational information technology and innovation ability of students in vocational education, so as to unite both cultivating students' thought innovation and interactive learning, which fully embody the subjectivity of the students' independent thought and creative ability.

### KEYWORDS

Educational information technology; Information management; Vocational skills.



## INTRODUCTION

With the development of the information and communication technology, more and more teaching management of professional education applies the teaching theory and information technology in the teaching process, and conducts design, developing, using, evaluation and management on the teaching and learning process and resources<sup>[1]</sup>. The information technology which possesses the information technology that integrated function, interactive function, expansion function and virtual function that creates the external conditions for the new-type education and teaching management as well as for the students' learning<sup>[2]</sup>. It can not only stimulate the students' learning interest and imparting knowledge through the external media manner, at the same time, it can also unite both cultivating students' thought innovation and interactive learning, which fully embody the subjectivity of the students' independent thought.

The application of the teaching technology emphasizes the quality education<sup>[3]</sup>. The previous advocated exam-oriented education is the traditional teaching which regards curriculum extension as the main purpose. It neglects the cultivation of the students' initiative. The new-type professional education and teaching management and teaching method that apply the teaching technology, mainly aims to overall improving the students' basic quality<sup>[4]</sup>. Based on the exam-oriented form of education, it creates the new-type quality education model of exerting the students' initiative. The complete application of the education technology can contribute to the improvement of the students' own culture, science and technology and psychology quality to certain degree, and further enhance the students' learning initiative and flexibility<sup>[5]</sup>.

The application of the teaching technology is the combination of the information, multi-media and diversification. In the professional education, as to the education technology, through integrating and optimizing the multi-media channel, it respectively stimulates the students' organ, so as to reach the multi-dimensional teaching effects, such as the combination of the text and graphics, visual and listening and so on. The purpose is to satisfy the education and learning demands from different levels, forms and channels. The comprehensive application of the education technology enables students' to enjoy the internet resource through the internet and other advance information technology<sup>[6]</sup>. They conduct free interactive learning without being restricted by the time or space. This kind of free learning method enables the students to select diversity space in the learning method, learning time and learning process. The students can control the teaching time and teaching progress automatically and even master the self-evaluation. Thus, the students become the dominators in the learning process that fully exert their subjective initiative.

The development of the education technology produces influence on the education and teaching method and teaching management institution of the higher learning education to certain degree, which generates the second level operation institutions such as the developing center, internet center, technology center of education etc. for abundant professional colleges. The computer and internet and the multi-media information technology are used in the daily teaching and daily administrative management process to a large degree, which produce huge impact and influence on the traditional education, teaching and teaching management model<sup>[7]</sup>. In the practical operation progress, due to the new-type multi-media computer, the teaching software, computer teaching facility and the internet maintenance and other teaching media is greatly different from the traditional classroom, teaching tool, wall map and teaching materials, it requires corresponding teaching and management staffs and the teaching and management method conducting more scientific reformation. Under the new-type education and teaching management model, it also produces much more contradiction, for example, the daily teaching affairs that originally are belong to the school teaching affair management, currently, due to the existing of the teaching technology center or the corresponding institutions, there are overlapping points in the management for both, which is easy to cause the obscure rights and responsibilities and mutually making excuses<sup>[8]</sup>. Thus, it requires considering and comprehending the connotation of the education management model completely and understanding the influence of the information technology to the innovation ability of the students who accepted professional education. Only by this way, can it embrace the education technology construction into the new-type professional education teaching and management structure.

## INFORMATION TECHNOLOGY PROCESS' CARRIER IN THE PROCESS OF EDUCATIONAL TEACHING

### Courseware lesson plan's information management

With the deep reform of professional education curriculum, new type of education teaching method has an constant influence on classroom teaching, many kinds of auxiliary teaching method gradually come into traditional classroom teaching, such as: multimedia courseware, network course, network courseware, electronic reading, collaborative learning, audio-visual materials and so on. Multiple three dimension's ways of learning related is constantly accepted by learners, such as: Electronic notes, electronic lesson plan, the classroom video e-learning and so on. That we apply the way of information management to multimedia courseware, and electronic lesson plan will not only make teaching cover the classroom, but also expand the wide area. We expand audience of classroom teaching, broaden the space and time limits, and provide learners more ways of learning.

### Teaching management' information improvement

Teaching plan is the most basic documents of teaching activities, and also is the standard of management teaching behavior and instructing teaching activities. Teaching plan contains teaching purpose, teaching content, and teaching method of organization. In the course of arranging teaching plan for corresponding course, we should take information technology's influence on teaching plan into consideration, based on teaching plan before. Taking the financial management course of the economic information management department for example, we distribute this course's teaching class for 90 hours without applying information technology CAI courseware and the finance management business sand table simulated training. With the reform of teaching methods and teaching means, we will gradually reduce to 72 teaching hours. This kind of adjustment considers not only the undated teaching content but also transformed teaching methods and means. Reformed teaching plan will give a 65% compression of it before. Because we apply the teaching hours that is saved due to adopting new technology to new finance management business sand table simulated training, case analysis and empirical research's time has been greatly increased under the premise of reducing teaching hours, which enhance students' learning interest and improve the learning effect.

### Teaching quality's information monitoring

The teaching quality control is also important evaluation index of information management. What we need to do first is the construction of network resources in the course of teaching and pay much assessment to teaching activities' design technique and its arrangement's rationality through the integration of network teaching and multimedia teaching means in order to make the teaching quality's information and teaching supervision's assessment. Teaching quality monitored by information can be realized through campus network. We can use internet survey questionnaires to collect feedback information, tidy up students' feedback information, deliver it to receiving information column of relevant teachers and then form good interactive process between teaching and learning through teaching supervision. This kind of information means will timely will release outstanding teaching resources and teaching activities to the campus net, and make full use of the existing carrier to play the role of the teaching monitoring<sup>[9]</sup>. In addition, the teacher can still surf the internet directly for personal, class' and classrooms' arrangements. Students can also surf the internet for elective courses, teaching plan, schedule arrangement, its score. The advancement of paperless office is a success that vocational college implements information monitoring under the background of information technology. It, to a certain extent improves the work efficiency and increased transparency, overcome the time limit, space restrictions, and many other drawbacks. All these make a rapid seamless link among teacher, students and school. Therefore, the information sharing and resource sharing greatly improve the management of teaching efficiency and reduce the cost in the process of artificial teaching.

### Teaching staff construction and management

Information technology strengthens the teaching management efficiency in a certain degree, but teachers who use information technology are still the top priority if we want to improve the teaching

quality of the information technology education. As the main body of the implementation of professional college education teaching, teachers have big involvement with the quality of teaching education. Usually, due to long time undertaking the same or related teaching tasks, teachers can digest professional knowledge in their own field and teach the students by mastered skills. However, as for the fast development of the information technology and internet technology, it's also a big challenge for teachers whether they can really make themselves adept to master the skills and use them flexibly in their teachings. Therefore, to remit this contradiction, we should strengthen the related skill training to the old teachers and provide teachers with new technology and new knowledge that are necessary in teaching some courses through training. This process is good for teachers to keep up with the pace of the new situation, helping them flexibly use the information technology as the carrier in teaching services.

## **STUDENT'S VOCATIONAL SKILLS RESEARCH ENHANCE THE STUDENT'S CREATIVITY**

### **Induce student's innovative thinking**

The induction of the innovative thinking is a direct reflection of teacher's persuasive voice during the teaching process. During the classroom teaching, the teacher, according to teaching syllabus and teaching content, using multimedia courseware sound, color, diagram, articles and other artistic conception, can strengthen the cultivation of thinking in images, arouse students' innovative thinking. Multimedia courseware can demonstrate quantification process of scientific research, display knowledge forming process and the inner link and motion situation, and show thinking pattern of solving problems. Through the computer aided teaching demonstration, students observe in the dynamic situation and discover the methods and ways to solve problems. This vivid teaching method helps to faster the process of solving problems and also makes it more concise. The demonstration helps students to engage in highly charming and attractive learning environment, therefore their strength of observation, imagination ability and subjective initiative could have been fully applied. Thus complementarily improve students' will for active learning and effectively cultivate their innovative thinking ability and solving problem ability.

### **Induce students' innovation enthusiasm**

By utilizing the educational technology such as multimedia can enhance the students' practical ability and at the same time can trigger their innovation enthusiasm. When teachers are teaching new knowledge, elaborate teaching design can initiate students to obtain knowledge. Making full use of teaching method such as teaching aids, studying tools and electronic media for simulation demonstrating can highlight the actual operation process; provide students with opportunity to operate<sup>[10]</sup>. Through leaving hands-on training after class, submitting results online, sharing achievements and setting up discussion can assess students' ability to master the knowledge. The education technology, to a certain extent, boosts the students' novelty, induce their desire to explore, develop ideas, strengthen the imaginary thinking and cultivate innovation enthusiasm.

### **Stimulate the student's study ability**

The training of students' study ability has always been the goal during the teaching process. Many aspects of the education teaching process should be considered when study from what respective to cultivate and motivate students' study ability, for example: students' analysis ability, critical thinking ability, dialectical thinking ability and divergent thinking ability while observing real problems. The application of multimedia information technology can help students to extensively touch the frontiers of science, break the mystery of scientific research, train innovative consciousness and improve their ability of analysis and critical thinking ability. While inspiring the students' ability in research, we use learning methods of cooperation and discovering to strengthen their dialectical thinking ability and divergent thinking. Such as brainstorm, so as to allow a variety of different views to produce thinking collision. And in a short period it can also make every student in the same class obtain various and deep understanding to the same complex questions. This is good for students to develop critical thinking and complex problem solving ability.

As afore said, courseware and the teaching plan, the teaching management information system, teaching management information monitoring and construction of the information teaching staff will ultimately be reflected on the students. How to further apply the education technology in developing the student's thinking innovation, inducing students' innovation enthusiasm and stimulating the students' study ability will ultimately end in the practical teaching. In the process of teaching practice, education technology is favorably complementary to the traditional teaching practice. In the teaching process, we should increase mutual exercise, liberal operation, social practice and other practical teaching content so as to truly combine the core knowledge with ability development<sup>[11]</sup>. Thus, in establishing a new professional colleges and universities teaching mode we should not only consider the traditional education technology images such as the blackboard and platform, but also consider from sight, hearing and touch to develop a three-dimensional teaching situation in which teachers teach, guide, assist and test through media, meanwhile students learn and master knowledge via these auxiliary measures. The teaching process can not leave the teaching environment. Through applying educational skills, we can construct various teaching environment, such as multimedia classroom, multimedia classroom with computer network, electronic reading room, campus network, distant learning system based on Internet, etc. The combination of the facilities and the software make the abstract study melt into realistic life. The multimedia technology, network technology and virtual technology can create and display various learning environment close to be real. Students realize the cooperative learning in the heuristic and experiencing teaching process. Thus, they will remodel learning enthusiasm and master learning awareness, decrease and reduce shortcomings such as inflexible and limited evaluation mechanism resulted from exam-oriented education. Only with the real application of education technology, can we optimize the learning process and give full play to students' initiative and creativity, further create ideal learning environment for cultivating higher vocational students' creativity, practice ability and study ability, eventually develop useful skilled talents for the modernization construction.

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