# Research on the transformation of in-class information learning mode based on deep learning -- A case study of computer courses in secondary vocational schools

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**Abstract:** With the innovative development of mobile learning technology, how to promote the organic integration of teaching practice and modern information technology, promote students to master professional knowledge efficiently and improve students' professional skills has become the focus of computer education personnel in secondary vocational colleges. In the computer professional curriculum system of secondary vocational colleges, computer course knowledge is relatively simple, which belongs to the required courses of the professional talents. In recent years, the mixed teaching mode is very popular in secondary vocational colleges. Integrating the advantages of online and offline teaching can improve the effect of computer teaching. Based on the perspective of deep learning, this paper further studies the current situation of the transformation of information learning mode in the computer course of secondary vocational schools, and puts forward some effective suggestions for reference only.

**Key words;** Secondary vocational computer; Informationization; Deep learning; Revolution; strategy

Introduction: Nowadays, mobile intelligent technology is developing rapidly, creating excellent conditions for the education and teaching reform of secondary vocational colleges. Under the traditional teaching mode, teaching work is often restricted by time and space. However, with the development of modern information technology, offline learning and online learning resources are integrated to a certain extent, breaking through the constraints of time and space to provide students with extremely rich course resources, which can create a good learning environment and enable students to explore independently. During the teaching of computer major in secondary vocational schools, teachers and schools should take into account the background of mobile learning and integrate the advantages of online and offline resources, so as to effectively improve the current situation of computer teaching in secondary vocational schools and achieve the ideal effect of computer course informatization teaching reform.

## 1. Overview of information-based learning methods

Information-based learning is guided by modern educational ideas and takes information technology as the carrier to achieve teaching objectives through information technology in order to achieve better teaching results. Information learning mode includes information teaching environment, information teaching objective, information teaching content, information teaching process, information teaching method and information teaching structure. Information computer learning mode has reformed the traditional learning mode. Its advantages lie in the following points: First, it can make full use of students' subjectivity. The multimedia teaching mode represented by multimedia has the characteristics of interactivity, multimedia, network and hypertext, so that students can change their role in the classroom, become the main body of learning in the classroom, and can actively construct knowledge. Second, it can enrich educational resources and information. Information-based teaching mode can provide diversified information for classroom teaching, enrich students' learning resources, create a diversified teaching environment, promote students' collaborative learning, and realize individualized teaching. Third, the use of information-based teaching mode can enable students to choose freely in terms of learning content and progress, so as to truly achieve "people-oriented", so as to achieve the goal of individualized teaching. Fourth, it can promote the collection and utilization of information. With the help of information means and information network, students can explore, obtain and use more information resources independently, so as to promote the continuous improvement of students' information quality.

## 2. It is necessary to change the way of information learning in the computer course of secondary vocational school

On the one hand, it is conducive to promoting the progress of educational concepts. Implement the combination of computer teaching concept and information technology in secondary vocational schools, improve the level of computer teaching in secondary vocational schools, cultivate students' independent innovation ability, and promote the all-round development of educational concepts. Teachers' educational motivation should first be based on "love", that is, teachers care enough about students and love students enough, adopt different teaching methods to mobilize students' enthusiasm for learning, encourage students to dare to question, dare to explore, so that teachers and students can communicate in a more relaxed and pleasant environment.

On the other hand, teachers should fully implement the teaching objectives. The computer is something that every secondary vocational school student is familiar with, and it plays a decisive role in cultivating students' creativity and practical ability. In the classroom, teachers should improve students' language expression ability and create an equal communication environment. Teachers should refine the teaching plan to each class, and all teaching concepts and teaching intentions are clearly presented, so that teachers and students can communicate with each other in the teaching process, and carry out related teaching work according to the requirements of the teaching syllabus. In the process of reforming the information learning mode in class, it is conducive to the realization of the in-depth development goal of computer

teaching in secondary vocational schools, and can provide rich resources and optimize teaching methods for computer teaching, so as to improve the overall teaching quality.

## 3. Current situation of computer learning in secondary vocational schools

(1) The content is too theoretical

Computer course belongs to a professional basic course, in the traditional teaching mode, more theoretical teaching, there are few opportunities for practical teaching. In such a single classroom teaching activity mode, students still lack perceptual understanding after completing the learning of knowledge. In the final exam, memorizing knowledge by rote will greatly affect students' enthusiasm for learning, thus affecting students' professional learning.

(2) The method is relatively monotonous

Traditional computer teaching is teacher-based, and the relationship between "teaching" and "learning" is very unbalanced. Students often passively accept knowledge, and teachers also help students interpret relevant knowledge under the guidance of textbooks. However, students are only in a passive state of acceptance, and it is difficult to highlight their main role. In addition, the content of traditional blackboard writing is relatively simple and abstract, which brings difficulties to students' understanding.

(3) Improper selection of content

Generally speaking, most teachers engaged in computer application technology courses are "old teachers", this kind of teachers tend to refer to their own years of teaching experience when selecting textbooks, so that the teaching content is theorized and lacks practical application value. At the same time, the development of computer technology is also very fast, if the introduction of new technology into computer textbooks, not only takes a long time, but also the publication cycle of textbooks will be greatly limited, resulting in the update of textbooks can not meet the needs of students. In addition, the computer course is still based on the teaching mode of technical training, which requires students to learn computer knowledge at the same time, but also to train students basic operation skills. However, the current school in the process of promoting teaching, does not integrate the content and characteristics of education, resulting in the connection between theory and practice is insufficient.

## 4. Deep learning-based in-class information learning mode change strategy

(1) Understand the characteristics of the curriculum and carry out quality education

In the teaching of computer courses, the practicability of computer should be highlighted. At present, the goal of teaching computer courses in secondary vocational schools is to train applied and skilled computer talents, take it as the center, strengthen basic knowledge, strengthen practical skills, expand computer knowledge and improve computer science literacy. When offering computer courses, secondary vocational schools should pay attention to training students with good theoretical knowledge and strong practical ability, especially technical skills network construction and maintenance personnel. In teaching, the theory and practice should be combined, and the ability training should run through the whole professional teaching. Therefore, in the teaching of computer courses, we must increase the content of practical training under the premise of "necessary" and "sufficient". The school can set up a special course selection team, composed of leaders of various disciplines and related teachers to form a course analysis group, define the basic requirements of computer courses and related teaching content, formulate teaching plans and efficient arrangement of class hours, give priority to teaching and learning, abandon the obsolete content, increase the cutting-edge teaching content, In order to ensure the latest development results and standards of computer courses, so as to achieve the comprehensive development of students.

(2) Strengthen innovative practice and improve assessment methods

In the new era, the traditional curriculum system has been greatly challenged in terms of teaching methods and contents. Examination is a good test means, it can test students' understanding of the basic knowledge of the network and memory ability, the use of "examination paper system", including the content of the experiment, are combined on a piece of paper. This evaluation method has its defects, it is difficult to conduct a comprehensive test on the comprehensive quality of students, thus limiting the students' subjective initiative and potential, and has a great adverse impact on the training of computer innovation talents in the new era. If there is no experiment, some students will pay too much attention to the theory and ignore the experiment, which is unfavorable to the future development of students. Therefore, in order to reflect the demonstration effect of computer courses, schools should reform the examination methods, and comprehensively evaluate students through experimental examination, final examination, test examination and comprehensive practice of examination results. The process of the experimental test includes the selection of topics, the formulation of experimental plans, the development of experimental demonstration, the analysis of the results and the writing of the experimental report, which is scored by the teacher according to the experimental content and the experimental situation, and it is included in the total score of the computer course. After many experiments, the results show that the positive evaluation has played a certain role in promoting students' learning, achieved a good teaching effect, and improved the passing rate of the exam, which has been praised by the majority of teachers and teachers.

The implementation of computer information practice teaching, the goal is to let the students really experience the application of computer technology process, rather than rote memorization. For example, when students practice using Word, they can first teach some basic theories and let them practice by themselves. When the practice is over, the teacher will arrange the students to do the homework. When students finish their homework, the teacher checks it once in class and gives unified guidance on its problems to ensure that students consolidate what they have learned in practice and apply what they have learned to practice, so as to maximize the effect of computer

teaching.

(3) Combining multiple models to improve the teaching effect

Modern computer course teaching emphasizes on highlighting students' subjective status, and should help students solve the problems of "what to learn" and "how to learn". As the computer course belongs to the professional course, the course content is varied, and relatively boring, so the teacher should refer to the students' professional knowledge mastery level, carefully design the teaching strategy, timely adjust the classroom teaching plan, pay attention to activate the students' learning interest, inspire the students to explore and think independently, and promote their learning ability. At the same time, in the classroom, teachers should actively carry out case teaching, use teaching method, discussion method and problem method to inspire students' thinking and attract students' interaction. In the past teaching, due to the disconnection between computer theory and practical operation, students' practical operation level is generally poor, which is difficult to meet the work needs in the new era. Therefore, in the new period should make full use of a variety of software, the establishment of "online" and "offline" combined teaching mode, in order to achieve better teaching results. Teachers can provide students with a large number of videos in class, comprehensively promote the course teaching work, and according to classic web marketing cases, constantly improve and optimize the works. In this process, micro-course resources, public accounts, wechat groups, software platforms and so on have played a very good role in promoting the improvement of students' learning standards.

(4) Introduce specific questions and exercise practical ability

Students apply basic computer knowledge, which is difficult to show by abstract theory alone. Therefore, teachers should link problems with students' practical problems, so that students can learn better and master the corresponding skills. In the teaching process, should speed up the establishment of computer teaching room, network wiring room and assembly training center, to provide students with practice places, teachers in the teaching process will be theory and reality organically linked, so as to deepen the understanding of the abstract concept in the computer class. For example, now in the office, the use of the printer is very high, but many offices have one, so it must be shared this printer. In the traditional teaching method, teachers only briefly explain two or three times, but students still have a vague understanding of the principle of printer sharing and the specific sharing operation process. However, after the change of teaching method, teachers can take students to operate in the classroom, let students do the network by themselves, and install the driver of the shared printer. In this way, students can integrate abstract knowledge into their own minds.

(5) Strengthen social practice and lay a solid employment foundation

In classroom teaching and computer operation, it is often restricted by many factors such as teaching materials and experimental equipment. With the development of The Times and the continuous innovation of science and technology, students should constantly improve their ability to adapt to society and cultivate their awareness of subject innovation. Therefore, after completing the basic computer courses, teachers can take students to the campus network center to understand the campus network system, so that students can master the combination program of the router, switch and other preparatory devices. At the same time, it is necessary to strengthen cooperation with computer companies and enterprises and other departments to establish off-campus practice bases. Usually, the school can arrange students to practice in enterprises, apply the knowledge they have learned in school to work, and consolidate their theories and enrich their network knowledge through practice. After the completion of the practical training, the teacher should ask the students to write the internship report and work experience, so as to ensure that the students can reflect on the shortcomings in the basic courses of computer network and social activities, and adjust the learning plan according to the actual situation, master the computer technology, and lay a solid foundation for the future job hunting.

(6) Information technology teaching, comprehensive grasp of knowledge

Under the conditions of information technology, in order to better carry out computer teaching in secondary vocational schools, we must adhere to self-study, take the initiative to participate in training, constantly update computer science knowledge, establish scientific education concepts, reform teaching methods, and master more scientific and cutting-edge computer theories and operational skills. On the basis of computer specialty in secondary vocational schools, combined with electronic whiteboard and other new information technology, combined with micro-class video, software programs and other teaching resources, to achieve online, offline mixed teaching. For example, the Internet-based "Website construction and promotion" course, in order to enable students to preliminarily master the network production, Dreamweaver8 preliminary application, website upload and publicity, and apply it to the field of e-commerce. In the class, teachers use the interface of websites such as Taobao and Jingdong, as well as websites of companies such as Apple and Xiaomi, to ask students "How are these pictures made?" "What are the methods and techniques of advertising?" ", guide students to think and discuss, the teacher comments on the students' answers, and use PPT to explain, for example, the basic components of the web page include text, pictures, hyperlinks, etc., and solve problems through practical exercises. In addition, in order to make students fully grasp the content of this course, the teacher should provide them with extra-curricular review materials.

(7) Combine micro-class teaching to attract teacher-student communication

Secondary vocational school students have poor cultural basic skills and poor learning habits. The results showed that very few said they were able to pay attention in class. In computer classes, many students only remember the first step and forget the next step because they are so logical. For example, graphic mixing, this course requires students to master the basic knowledge and skills of Word, teachers can choose the topic of interest to students as a lead, such as making campus brochures, so that students can gradually add pictures, art words, clip art, graphics and other content to the document, now can be text collocation, as long as the cover insert, A beautiful campus pamphlet is done. Micro lessons are closely related to the teaching purpose and content of computer courses, with distinct themes, clear

goals and “short and concise”, which can allow students to form “concentrated learning experience” in class. In this way, students can watch the video intently. Chapter based project assignments, on the other hand, encourage students to practice in practice.

Conclusion: To sum up, with the rapid development of computer technology, there is a growing demand for computer technology in various fields. Secondary vocational schools should pay attention to training high quality, strong skills of computer application talents, to provide sustainable talents for the society. Therefore, when promoting the teaching of computer courses, secondary vocational schools should attach importance to in-depth teaching, provide students with excellent learning conditions and experience through diversified teaching methods, and provide students with internship opportunities, so that students can constantly consolidate their own computer courses in practical work.

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