Reasonable Application of Information Technology in Vocational Education

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Abstract—**This paper focuses on the current status of information technology (IT) application in vocational education. It analyzes the advantages and problems about the informational teaching mode. The keys of reasonable IT application in vocational curriculum are establishing advanced IT teaching philosophy, accurately positioning IT teaching objective, optimizing IT teaching content, applying a variety of IT teaching methods and implementing multiple evaluations of IT teaching effects.**

Keywords—Information Technology(IT); Vocational Education; Teaching Mode; Reasonable Application

I. INTRODUCTION

The extensive use of computer simulation technology, multimedia technology, virtual reality technology and distance education technology has made learners overcome the barriers of space and time. It also makes them actively organize their time and speed up their learning process. Especially, the distance education based on Internet will open up a global reach of knowledge dissemination channels. This will realize the dialogues between learners and teachers in different regions. It will greatly improve the efficiency of education and provide a relaxed and rich learning environment [1].

II. IT APPLICATION STATUS IN VOCATIONAL EDUCATION

Vocational education aims to cultivate the first-line application-oriented talents such as production, technology, management, service and so on. It has the following characters, such as openness, practicality, times and others. The openness means implementing an elastic education in teaching objectives and teaching time [2]. In recent years, as the development of computer technology and network technology, the information technology has improved continuously in China. The further integration of IT and education has made more and more means of information technology be applied in the vocational education. For now, the informative teaching mode has shown great advantages in vocational education. However, there are also some problems.

A. Advantages of Informative Teaching Mode

1) Diversification of Teaching Resources

As the development of Internet technology, vocational education content has broken through the traditional textbook and teachers' lesson content. Teachers and students can use the information network to enrich the teaching content and broaden their horizons. At the same time, students can share excellent teaching resources and discuss with others. It will improve the quality of learning. Varieties of information offered by the Internet platform stimulate the study interests of students strongly. It also potentially raises the students' ability about analyzing and solving problems. This has a profound impact on personalized education, creative thinking and role relationship transformation between teachers and students during the teaching process.

2) Learning Autonomy

In the traditional teaching mode, teachers play the role of instillers and monopolists during the teaching process and students passively accept the knowledge offered by teachers. However, in the modern teaching method which is integrated with information technology, teachers play the role of organizer, guide and supervisors during the process. In this learning environment, students are able to access a lot of excellent learning resources through the Internet platform. According to their own circumstances, they select required learning materials, flexibly schedule learning progress and truly become the main body of teaching activities. In this way, they can raise the efficiency of learning and autonomy of studying.

3) Interactive Teaching Forms

In the traditional teaching mode, the teaching methods and contents are pre-arranged by teachers and knowledge is passively accepted by students during the whole teaching process. There are litter interactive communications between students and teachers during the classes. In the informative teaching mode, according to their own circumstances, students can ask questions through the network platform, and then teachers will answer the questions online. This realizes the one to one counseling. Meanwhile, teachers and students can raise their own views on the course then discuss them. During this interactive process, students' learning motivation is enhanced potentially. Teaching and learning realize double win in this way.

B. Problems in Informative Teaching Mode

1) Low Utilization Rate Along with Abundant and Complex Information Resources

Currently, majority of vocational institutions have established campus network which has basically covered teaching buildings, office buildings and dormitories. It is quite convenient to use all kinds of electronic resources. However,

due to the limited level of integration and management of informative teaching materials and most of teachers lacking skills of advanced information technology, the advantage of informative mode has not been correctly recognized. Teachers are still accustomed to traditional teaching method, ignoring the importance of information resources in teaching. This leads to the low utilization of informative resources.

2) Low Informative Ability of Teachers and Students

Informative teaching require students acquiring basic knowledge of computer networks, a certain knowledge base, learning ability, passion, innovative and being able to change the traditional passive acceptance mindset. However, most of students in vocational colleges have poor cultural foundation. They use the Internet for other purposes, such as playing games, watching movies, chatting and so on. Their active learning capacity is weak and is not able to use informative resources to enrich themselves. Excessive autonomy during the teaching process cannot guarantee learning effects. The low informative ability of teachers is another reason. Many teachers are unable to develop and use modern teaching methods. They use the multimedia as one single information transmission tool. This fails to break the traditional teaching mode limit.

3) Backward of Teaching Evaluation

Currently, effective teaching evaluation lags behind. It mainly regards whether teaching objectives have been accessed, students' grades and students' evaluations to teachers as the criteria. Students' test scores as one aspect of evaluation has occupied a large part. Students' evaluation to teachers is realized by scoring. During this process, most of students score teachers only by their personal preferences instead of objective evaluations. This cannot truly feedback the merits or deficiencies of teachers during the teaching progress.

III. RATIONAL APPLICATION OF IT TEACHING IN VOCATIONAL EDUCATION

IT teaching in vocational education courses is based on multimedia equipment and integrated with network teaching. It changes the forms of textbooks and makes them into multimedia teaching, personalized teaching, learner autonomy teaching, teaching resources globalization, co-operative teaching activities, surrounding virtualization teaching and so on [3]. In this way, the teaching efficiency will be raised up. In order to reasonably apply IT teaching in vocational education, it is necessary to give full play to the leading role of teachers and simulating independent learning ability of students. Then integrate teaching with IT effectively, give full play to the advantages of IT education, innovate teaching ideas and reform traditional classroom teaching to new media IT teaching. This trend has become the research focus of vocational education programs.

A. Accurately Positioning IT Teaching Objectives

Advanced IT teaching philosophy is able to correctly guide the IT teaching practice, help teachers accurately locate IT teaching objectives and then promote teaching progress. The objective of IT teaching is not focused on the activity of classroom, neither of whether teachers pay their efforts on IT

methods. It aims at raising the ability of students and teachers during the teaching process [4]. Its fundamental goal is to display teaching content better and make it vivid for students to master. Therefore, while teachers are making their courseware, they should grasp the goal of teaching, not including fancy and gorgeous materials. They should focus on how to make students better master course content. Teachers should properly design multimedia courseware interface, clearly show lectures, reasonably control teaching rhythm, integrate artistic effect and teaching content naturally and finally show the work and rest teaching rhythm. Through preparing the learning courseware on class and study courseware off class, distinguishing differences of students' self-learning processes, teachers can enhance students' master of the course and realize the teaching goal effectively. Meanwhile, teachers should cultivate the ability of students about using the IT. As the old saying goes, teach a man fishing rather than giving a fish.

B. Optimization of IT Teaching Content

Traditional curriculum teaching always focuses on teaching theoretical knowledge. It pays little attention on how to cultivate students' ability about solving practical problems. Some teachers simply copy the content of books to the courseware. In this situation, the screen replaces blackboard and keyboard and mouse replace the chalk. Teachers show a lot content in the screen, ignoring whether the students have mastered the content. They mechanically play courseware and teach the content which is out of the acceptance of students. Therefore, students just watch the screen without thinking by themselves. Then they master scanty knowledge, become poorly self-controlled and easily distracted. These lead to teaching and learning serious derailment. The interactivity has not been shown in the teaching process. The organic combination of information technology and teaching content has not been realized. In the IT teaching mode, effective combination of teaching content and IT, optimizing teaching material, deleting outdated content of books and adding new knowledge should be focused on. Based on the talent requirement changes of society and market, teachers should make timely adjustments to teaching content. In this way, all courses have the flexibility to adapt to market demand. At the same time, with the help of computer simulation software, students can enhance the skill training. Based on the current national emphasis on vocational skill contests, it is beneficial for combining the contest software and test database with teaching content. This will be good to cultivate the vocational skill of students.

C. Diversification of IT Teaching Methods

The IT teaching mode should make excellent multimedia courseware, develop a variety of micro-video and micro-course, construct open teaching web site to show teaching resources and facilitate the exchange of teachers and students online. Micro-course and micro-video are conductive for students' mobile learning. Its characteristic is flexible and open. Students can use short or fragment time to study. Therefore, teachers should pay more efforts to make the boring course to micro-course and micro-video. This method will show knowledge more intuitive and vivid to students. Especially for those

important and difficult points, this method will make them easy for students to understand. It can improve students' participation degree and learning enthusiasm and finally realize the teaching goal. In addition, the mobile terminal has become a modern recreation tool of young people and also a learning tool. Teacher should make full use of this tool to actively explore diversified informative teaching methods. Besides of fully exploiting internet, the campus network and local net (LAN) platforms, micro-chat, QQ and other carriers can also allow a variety of mobile terminals to accept learning content anytime. According to their own needs, students can study more actively and openly. This will also facilitate the interactive communication between students and teachers. Through the interactivities, teachers can get the feedback about problems more timely and answer questions at any time. In the way, the teaching results will be effectively achieved.

D. Diversification Evaluation of IT Teaching Effectiveness

In order to correctly evaluate the effectiveness of IT teaching, reasonable evaluation criteria needs to be established. It should also realize the diversification of assessment people, evaluation methods and evaluation contents. The IT teaching evaluation criteria focuses on development of teachers and students. The diversification of assessment people require that they are not only students but also include the teachers who evaluate themselves and assess other teachers, society and employment companies. In this way, teachers can clearly understand their own shortcomings during the teaching process and correct them timely. Therefore, they can better play the leading role in teaching. The assessment, coming from society and employment units, will make teachers accurately position the teaching objectives, optimize teaching content and guarantee the teaching effectiveness. The evaluation diversification of multidimensional content should not only examine the test scores, classroom performance and assignment operation, but also include the content of other aspects to make the teaching evaluation more reasonable and reflect the real teaching circumstance. For example, using of

staged assessment, teachers can keep abreast of students' master of knowledge and learn the students' willingness about learning. It is beneficial for teachers to improve their teaching methods. For another example, combination of self-assessment with peer review team, students can know their own inadequacies and improve themselves with reasonable measures. Also, teachers can know the students' status and make some adjustments to teaching plans for individual differences. In the way, the teaching plan will be more suitable for students' development. Therefore, in the IT teaching mode, using multiple evaluation methods will facilitate the development of students and teachers.

IV. CONCLUSION

Nowadays, with the popularity of IT and vocational education rapid development, new problems and challenges emerge constantly in the IT education, which requires us establish advanced teaching philosophy, accurate position teaching objectives, optimize teaching content and use a variety of teaching methods during the IT vocation education teaching progress. We also need to implement multiple evaluation of teaching effectiveness and give full play to the role of IT in teaching vocational curriculum.

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