Study on the Reform of Students' Information Quality in the Whole Process Management

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Abstract. Summarized the results and innovations of the “Information Technology Applied Basic” Curriculum Reform Study, which won the first prize of teaching achievement. After the reform, developed an integrated information management system for teaching, established an entire process of student learning quality automatic storage and management, perfected the “lesson guidance + extracurricular supervision” teaching mode, Achieved the pertinence of teaching content, the openness of teaching mode, the advancement of teaching method.

Introduction

During the reform of “Information Technology Applied Basic”, we constantly innovated and improved the level of information quality of students. The cultivating effect of the information literacy of students are improved obviously.

The Main Content of the Reform

Optimized and Integrated Existing Teaching Content

In the reform, the teaching content of campus computer course has also been optimized and integrated. Before the class, the students have contacted computer more or less, and some of them are good at using some usual software. Based on these factors, we deleted the content which most students have grasped, integrated “Basic Computer Application” and “Computer Operation and Application” into one course, and set up the “Basic Information Technology” course which is closely related to the students' information literacy. We keep the basic computer operations, office software applications and other basic content in the course, and pay more attention to develop students’ skills of information technology application. We added a lot of important content, which are related to information equipment and information mode. They are computer software maintenance, establishment of a wired network, establishment of a wireless network, network management and maintenance, and information security, and multimedia application of technical skills training. The increase of these contents not only accords with the requirement of quality cultivation of talents, but also provides higher learning objectives to some students with good information technology foundation. We carried out a series of practical activities and extra-curricular activities to promote the transformation of knowledge and ability. Through the annual information technology competition, a large number of students have cultivated the capabilities of image video processing, hardware maintenance and network formation in all aspects. Through the annual organization of students to participate in the National Computer Rank Examination, students have achieved the national certification of computer level.

Improved the “Task-Driven” Teaching Method

The previous mission system focused on the achievement of skill goals, which meant more “imitate” for students to produce works that were the same or similar to the “finished product” required by the textbook or the teacher. After the reform, we increased the inquiry or comprehensive task, the
implementation of a real task-driven pedagogy, students learn and imitate to accumulate some basic knowledge, and then to create new works. Students are guided to collect material, and then use a variety of ideas and methods of processing into a personalized work. Implementation of the class “guide” and extra-curricular “supervision” of the combination of open teaching mode. That is, with a limited time class use case-based teaching to guide students to learn knowledge to improve their quality, and targeted practice to practice and develop skills; extra-curricular, through student self-learning, to complete the task, consolidate knowledge, strengthen skills and develop ability. Information textbooks are illustrated, easy to understand, easy to implement “autonomous learning” model. Students are encouraged to learn by themselves, develop their information quality. Students are gave full autonomy, and then by the teacher “after teaching”, that is, through judgments, tips, corrections, summarized to enable students to further deepen their knowledge.

The Actual Effect of Curriculum Reform

Based on the principle of studying along with practicing, we constantly summarize, revise and perfect the practice of our undergraduates and tertiary graduates from 2015 to 2017 in our school. According to the questionnaire survey, 89% of the students are satisfied with the reform of the curriculum, and gained more skills than the students before.

Identified the Student Information Technology Training Objectives and Tasks

Through extensive research and practice, we have identified the actual needs of enterprises for students' information technology. We have realized that only “close to the major and into the enterprise” can we find the direction of the reform and the basic courses can also be “actualized.”

Improved the “Task-Driven” Teaching Method

Aimed at the new “open curriculum” model, we paid attention to “211 Project” construction tasks, and constructed a series of training rooms, such as computer technology training room, network technology training room, multimedia technology training room and computer application (software) training room and other teaching supporting training conditions. At the same time, we developed a series of software to manage these training rooms, such as “open curriculum teaching management system” and “information technology training center open appointment system” to provide conditions for the teaching of courses and innovate the teaching model.

Improved the Ability of Teachers

Each teacher is required to be an “all-round generalist” of information technology in the new teaching objectives and teaching model. Along with the research and practice of the subject, the ability of teachers is improved obviously. In order to improve the quality of teaching, teachers seized various opportunities and utilized various ways to enhance themselves and improved their performance. And this is the important factor which ensured the success of the course reform. Teachers have made painstaking efforts and achieved good results.

Hatched a Number of Education Reform Projects and Teaching Achievements

On the basis of the research on the teaching reform, we have made great progress in summarizing and improving, teaching level and ability of scientific research. 8 teachers of staff awarded in teaching competitions both in campus and out campus, 21 teachers are qualified as “excellent” in the school teaching quality assessment. Five teaching reform projects and innovative projects for young teachers are incubated and finished. Two textbooks are written and published for national distribution, and were selected by many local colleges and universities, most of which gave us good respond.
Summary
After 5 years’ reform and cultivation, we unified the software system and formed an integrated information management system for teaching and management, guaranteed the development of curriculum practice, achieved the pertinence of teaching content, the openness of teaching mode, the advancement of teaching methods.

We integrated the development concept of comprehensive education with multiple social theories and informative teaching. The cognition of students and the talent cultivation plan are important references, an information technology curriculum system is established which is close to the student life and close to the enterprise post. It’s helpful to cultivate students' information literacy and reflect the technical characteristics of the application. We put forward a new teaching mode and teaching method which is suitable for the basic courses of information technology application for vocational and technical education. We named this mode “class instruction + extra-curricular supervision”.

Students are authorized to achieve and explore the integrated information management education system by student ID number. After logged in, each student can explore all parts of the high degree of integration of information such as the course open teaching management system, open booking platform, online examination system and supporting digital resources platform. The conversation between these systems is seamless and not needed to be authorized once more.

By the supporting construction of the hardware and software, information teaching environment record the process of students’ learning and automatically generate formation results. And the record is matching with the final result which is recorded in the online examination system. By this way, the objectivity and authenticity of the result are effectively ensured. By exploring the feedback on their online assignments, students greatly improved their learning autonomy, enthusiasm and accomplishment.

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References