The Application of Task - Driven Teaching Method in ERP Experiment Teaching

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Abstract. This paper analyzes the characteristics and shortcomings of the traditional teaching mode of ERP experiment course, and proposes a teaching reform model based on task-driven teaching method. This teaching method is a teaching model which aims at accomplishing specific tasks. That is a model takes students as the center under the teacher’s guidance. It can inspire students’ enthusiasm of participating in learning, developing their mutual cooperation, exploring the ability of innovation. This paper explores how to apply task-driven teaching method in teaching practice from the two aspects of task design and task implementation, and evaluates the teaching effect of this teaching method.

The Concept of Task - Driven Teaching Method

"Task-driven" is a teaching method based on constructivist teaching theory. It is that the students focus on the task under the guidance of the teacher and use the learning resource actively. They are driven by strong motivation to explore independently and learn interactively. It requires creating a task and teaching situation which drive the students to explore in the learning with a real task. In this process, students will gain the sense of achievement continuously, which can arouse their desire for knowledge. Gradually, the students cultivate a virtuous cycle of learning. So their independent and pioneering self-learning ability is improved. "Task-driven" teaching method has changed the tradition of teacher centered and one-way transmission of knowledge into multi-dimensional interactive teaching philosophy of student-centered, problem-solving and task-based. It takes inquiry learning to keep the students in a positive state of learning, so as to develop the students’ self-research, integrating resources and teamwork abilities.

The Characteristics and Status of ERP Experimental Course

The Characteristics of ERP Experimental Course

ERP (Enterprise Resource Planning) is based on the information technology. It makes use of modern enterprises advanced management ideas to integrate all enterprises resource information which includes logistics information, financial information and human resources information to provide enterprises with an all-round and systematic management platform for decision-making, planning, controlling and business performance evaluating. Its core idea is to build close connection between information and business process. With the development of information technology and the strengthening of enterprise informatization, more and more enterprises are paying attention to the construction and use of ERP. Enterprises need a lot of
ERP talents. In order to adapt to this development trend, the university has developed a series of ERP application courses, such as "ERP" sand table, "ERP" training, "ERP" confrontation and "ERP" information system. ERP teaching content covers the enterprise financial management, supply chain management, production management, cost management, human resources management and so on. Actually, ERP course is implemented according to the characteristics and module of professional course. For instance, ERP supply chain management is launched for logistics professional students, ERP financial management system is launched for the financial management professional students, ERP human resources management system is launched for human resources management professional students. In the module teaching, students focus on dealing with their own professional module and process the modules involving simply.

The Situation of ERP Experiment Teaching

At present, most colleges and universities have launched ERP experimental courses. These courses rely on ERP software system to deal with the business. Therefore, many teachers spend a lot of time on explaining the application of software systems, while ignoring the connection between the business and its application in solving practical problems of business. In this mode of teaching, teachers explain and demonstrate, while students learn through imitation. The teaching process is very boring, and students lack sense of achievement. When the course is over, the students are impressed by operating procedures and the system interface, and half of business process has been forgotten. They can't comprehend the essence of ERP: the integrity and overall of business process, the integration of information. The limitations of traditional EPR experimental courses are as follows:

1) The limitations of teaching content:
   The module teaching is implemented according to profession, so students only learn their own profession-related modules, but ignore the other closely related modules. Therefore, the students lack global perspective.

2) Limitations of teaching methods:
   The current teaching methods are demonstrating by teacher and students imitating as the main method, which is assisted with case teaching. Students do the experiment step by step according to the detailed description of experimental materials and teachers’ experimental steps. This traditional experimental teaching method is effective for the students to master the experimental content, strengthen the experimental operating skills and verify the basic course theoretical knowledge in a limited time. However, the students do not know much about the preparation before the experiment. They consider less about the idea of the experiment design. They can’t creatively change the experiment steps and conditions, and they can’t analyze and discuss the experiment result correctly. In the process of experiment teaching, the students are more passive, which is not conducive to arouse students’ initiative and inspire their creative thinking.

3) Assessment Methods are Single
   At present, the assessment method used by most colleges and universities is “performance of normal experimental work + the end of the test results”.

   Because of the large number of students, teachers can’t check whether each students’ experimental operation is correct or not. The students’ normal performance will not be recorded, which led to many students do not attach importance to the usual experimental operation. In the final examinations, due to the examination time is limited, teachers can only select several major knowledge points from several major modules test the students, which lacks comprehensive examination on the knowledge.
Teaching Process Design of "Task - Driven Teaching Method" in ERP Course

The Principles of Task Plan and Design

Task plan and design is the key to the success of the implementation of task-driven teaching method. Teachers should integrate the knowledge points into each task according to the specific content of teaching. In the process of teaching, teachers should give the students easy and simple assignment first, and then difficult and complicated one, which forms a gradually and progressively process.

Task design should follow the following principles:

(1) The difficulty of the task should be moderate. If the task design is relatively simple, students will lose interest; if the task is too difficult, only few students can complete, and the students will fear about it. It is not conducive to the follow-up teaching work.

(2) Pay attention to the logic among knowledge points. The basic task placed in the first place, and the difficult one. In this way, the students can use the learned knowledge to solve problems.

(3) The design of the task should contain the basic teaching knowledge points. Simple tasks should contain 1-3 knowledge points, and complex tasks can contain more than 5 knowledge points and can be completed in groups.

(4) Pay attention to the integrity of the business process. The teachers should give assignment according to the natural order in which the business actually occurs.

The Complicated Task Design

Complex tasks can be designed into a comprehensive experiment. The students can be grouped, and each student in the group can play different role to complete the task. For example, the enterprise receives an order from a customer, and it should be completed on the fixed date. The students are required to organize different departments to complete this task in the ERP platform. In order to complete this order, the production planning department should carry out MPS and MRP calculation to determine whether the company has the ability to complete the order, or accept orders. If orders can be accepted, then the procurement department should purchase raw materials, warehousing departments should keep storage, payable departments should make sure about the accounts payable, inventory department should predict the procurement costs. After the raw materials are put in storage, the production department arranges the production according to the production process and the MRP calculation. The finance department accounts for the production cost. Then the finished product is picked up, dispatched and sold by the sales department. The finance department checks the accounts receivable. The inventory department calculates the cost of sales. In order to complete this complex task, students need to play the roles of planner, salesperson, warehouse manager, accountants, cashier, buyer, production personnel and so on. The following modules of ERP software will be used, such as production, sales, purchasing, accounting and inventory. This process fully embodies the ERP integrated thinking, which will train students to solve complex problems.

The Steps of “Driven-task” Teaching Method

Task-driven teaching method requires the following steps: Teaching goal analysis; create task situations and stimulate student interest; presenting tasks; explaining and demonstrating; completing the task; summary and evaluation (Fig. 1).
(1) Create task situations, stimulate student interest and show tasks. Before assigning tasks, the teachers should tell students the learning objectives, such as the problems should be solved, the tasks should be completed, the situation of the company, the roles of each module, basic theory knowledge and ERP operation knowledge.

(2) Teacher demonstrate to inspire students. For a whole new task, the teacher should supplement the theoretical knowledge for the students and demonstrate the basic ERP system operation, explain the basic operating procedures and operating rules, so that students will know how to start corresponding module, how to set up the experimental conditions.

(3) Assignment of Task
General speaking, for students, simple tasks can be completed independently, while complex tasks can be completed by groups. In the process of completing the task, students will encounter difficulties. They are likely to ask the teacher, and teachers should let the students themselves to think, find the materials and related information. The students should learn how to make full use of the resources provided by the universities, and solve problems independently. If there are some problems can’t be solved, the students may ask teachers for help.

(4) Summary and Evaluation
If the teacher only assigns tasks, and does not check and evaluate the results, it is easy to dampen the students’ interest and enthusiasm in learning. Therefore, the final step of the task-driven teaching method is displaying and evaluating the result of the students’ performance.

The evaluation should be given according to the tasks’ characteristics, such as some tasks need to issue statements, some tasks need reports. In the final session, teachers should review the results of the experiment, show a representative of the experimental report and publish standard operating procedures.

The Effect Evaluation of Task-driven Teaching Method in ERP Experiment Course

The comparative method is used to evaluate the effect of task-driven teaching method. The specific measurement is to choose an experimental class and a tow class in accounting and auditing majors. Task-driven teaching method is adopted in experimental class, and traditional experimental teaching method is adopted in tow class. At the end of the course, the following information for evaluation indicators was collected from two classes: 1, the students' learning motivation satisfaction; 2, the student's usual performance; 3, the student final exam results. By comparing data, it is found that task-driven teaching method has better teaching effect than traditional teaching method, and the students in task-driven teaching method class performance better in experiment and final test. Through the interviews with students, it is found that the students in task-driven teaching method class can fully understand the content of practical teaching, and the knowledge is impressed them deeply. They have a global view of the whole process. They can clearly understand the status of each task in the whole business process. Their teamwork capabilities have been strengthened, they can complete complex tasks efficiently.

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