

Research on Ideological and Political Teaching Use Cases and Teaching Strategies of Database System Principle Course

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ABSTRACT

The course is the basis of teaching construction in the universities. Strengthening course construction is an important guarantee for effectively implementing teaching plans and improving teaching level and quality of personnel. To explore the ways of imparting knowledge, cultivating ability and guiding value in university course teaching, so as to improve students' comprehensive quality. Analyzed the teaching process with the observation method and experience method, put forward a new teaching scheme, and verified the new teaching scheme with the practice method. On the basis of studying the existing literature, studied design principles of use cases for ideological and political teaching of professional courses. Taking the course of principle of database system as an example, constructed the teaching use case of "Chinese poetry database", uses this teaching use case to carry out teaching practice. Carried out the practical exploration of teaching strategy based on teaching use cases through integrating the first number class, daily classroom teaching, after-school homework and course assessment. The ideological and political teaching of professional courses based on teaching use cases has better realized the three-dimensional teaching objectives of professional course knowledge transfer, ability training and value guidance, improved the ideological and political teaching effect of database system principles, and improved the comprehensive quality of students.

Keywords: *Ideological and Political Teaching; Teaching Use Cases; Teaching Strategies; Personnel Training*

1. INTRODUCTION

In addition to the reform of teaching methods, teaching mode and teaching means, the construction and reform of university course ideological and political education from the perspective of course use cases is more conducive to the effective integration of course professional education and ideological and political education [1]. This paper explored the use case construction and teaching strategies of Ideological and political teaching in the course of principles of database system.

Database system principle is a professional basic course for computer science and technology, network engineering, software engineering, Internet of things engineering, data science and other majors. The course theory is abstract and the students are boring to learn it. From the two aspects of specialty and course politics, design teaching use cases that are easy for students to understand, guide students to participate in the construction of teaching use cases, and implement teaching strategies based on teaching use cases, so as to achieve the objectives of imparting knowledge, cultivating ability and shaping value to university students.

2. PRINCIPLES OF USE CASE CONSTRUCTION IN THE INTEGRATION OF A PROFESSIONAL COURSE AND IDEOLOGICAL AND POLITICAL EDUCATION

2.1. Scientific Principle

The construction of teaching use cases should not only ensure that the course materials conform to the development of the discipline, the basic and advanced requirements, but also conform to the teaching rules. In the use of teaching use cases, specific teaching objectives, teaching plans, teaching emphases and difficulties, as well as students' interests and other factors should be taken into overall consideration, so that the development and use of teaching use cases can not only motivate students' learning enthusiasm, but also facilitate the implementation of teaching objectives [2].

2.2. Deep Integration Principle

The construction of teaching use cases is not only the construction of course professional resources, but also the construction of course ideological and political resources, and the two should be deeply integrated and seamless.

2.3. Students Participation Principle

Constructivism believes that knowledge is not taught by teachers, but by means of meaning construction by learners in certain situations with the help of others and the use of necessary learning materials [3]. Therefore, it is necessary to involve students in building instructional use cases. By participating in the construction, students can know the course content in advance and lay a certain learning foundation for the follow-up study, which is conducive to the smooth implementation of the teaching process and improve the learning efficiency.

2.4. Principles of Stimulating Students' Interest in Learning

The designed teaching use cases should be able to arouse students' resonance, stimulate their interest in learning process, and improve their enthusiasm for learning, so that students can consciously study hard, think deeply and innovate.

2.5. Easy to Operate Principle

The design of teaching use cases should be easy to operate, easy to implement in the course of teaching.

3. THE USE CASE DESIGN OF IDEOLOGICAL AND POLITICAL TEACHING IN DATABASE SYSTEM PRINCIPLE

The teaching of Principle of Database System needs to build database examples to illustrate the concept of data model, SQL programming, database security, database integrity, data standardization theory, database programming and so on. On the basis of the former industrial database and enterprise database teaching cases, the course ideological and political database teaching cases can be added. In this paper, the basic ideas for the construction of ideological and political teaching use cases of the course Principles of Database System were as follows:

First, dig deeply into China's 5,000 years of history, and take patriotism, the core of the brilliant Chinese culture and national spirit formed in the 5,000 years of development of the Chinese nation, as the ideological and political material of the course. Five thousand years of Chinese civilization

contained a large number of patriotic poems, so we can build the Chinese poetry database, the database use cases can undertake to the student teaching of professional knowledge and ability, can also according to the poem content analysis, reflect the spirit of patriotism, the pursuit of excellence, such as education, at the same time, these poems to read catchy, increase students' interest and enthusiasm in learning, and achieve the deep integration and seamless connection between course professional teaching and ideological and political education [4].

Second, adhering to the principle of easy operation. The Chinese poetry database contained three tables, which were reader table (include fields: reader's number, reader's name, gender, id number, telephone number, note), poetry table (include fields: poem number, poem name, creative time, author name, poem content, note), poetry reading table (include fields: reader's number, poem number, poem reading, reflection, self-evaluation score). The three table fields of Chinese poetry database that were easy to understand and have a clear structure, which was very conducive to students' learning and understanding of the professional content of the follow-up courses. While learning the database, it can deepen students' cultivation of ideological and moral character such as adhering to the leadership of the Communist Party of China and patriotism. Third, follow the principle of student participation. When constructing the Chinese poetry database, the teacher can give the basic structure of the database and give some data examples in the form of Excel data sheet. In class for the first time, requires that all students in the Chinese poetry Excel database tables, on the basis of oneself through the library and Internet access to information, from the ancient, modern, and reform and opening up period to patriotic poem, each student to increase 3-5 records, and in the fields to fill out each feeling poem after reading comprehension. Through the patriotic poems and added to the Excel table lookup and fill in the process of poem feeling fields content, students can understand the structure of the Chinese poetry database, for subsequent analysis of all kinds of database, data model and SQL operations such as lay the foundation of professional knowledge learning and ability training, but also to achieve the patriotic feelings implanted to the student, it has a silent teaching effect.

4. IDEOLOGICAL AND POLITICAL TEACHING STRATEGIES OF DATABASE SYSTEM PRINCIPLE

4.1. Teach Good the First Lesson

As the ancient Greek philosopher Plato said, well begun is half outcome. Accordingly, the teacher wants elaborate design, plan layout, superior first lesson.

First, design course training objectives. Design course teaching objectives from three dimensions of professional knowledge, professional ability and learning ability, ideological and moral character. Specific speaking, the

principle of database system course to cultivate the students master data model, database, relational database, SQL language, database security, database integrity, data standardization, database optimization, database backup and restore, concurrent processing and other basic knowledge, master database design and database programming ability [5]. At the same time, teachers can also cultivate students' ability of independent study, cooperative study and inquiry study, and guides students to love the Party, love socialism, consciously enhance patriotism and scientific spirit of innovation and exploration, excellence and pursuit of excellence. Explain the above content clearly to students in the form of knowledge map.

Second, select some poems from the teaching and learning use case of Chinese poetry database, discuss and study with students, and improve students' ideological and moral character. Such as the choice of MAO Zedong's poem: "Child Aspired to go out of the village, to learn not famous to oath not return. Buried bones why hometown ground, life everywhere is green hill." Study and discussion can train student to set up lofty ideals and study hard for the prosperity and strength of the Chinese nation. For another some poems example, MAO Zedong's poem "The Seven Principles of the Long March" and Wang Jianping's poem "Prosperous China", all can cultivated students' heroism and optimism that they are not afraid of difficulties and move forward courageously, and under the leadership of the Communist Party of China, socialism with Chinese characteristics has made great achievements and the Chinese dream of national rejuvenation is gradually being realized, the Chinese people still need to stay true to their original aspiration, continue to work hard and achieve greater success. Through the study and discussion of the three poems mentioned above, it not only deepen students' understanding of database structure and data, but also motivates students to study hard for the cause of socialism with Chinese characteristics [6].

Third, discuss with students the general idea of learning. Make students clear the connotation of the theoretical homework, experimental homework, group project design or group theme learning of the course and the requirements of the time point to complete the homework, and let students make their own homework completion plan, which should be combined with enterprise database, industry database, Chinese poetry database and other teaching cases. Encourage students to improve their ability of autonomous learning, exploration learning and cooperative learning by completing homework.

4.2. Classroom Teaching of Integrating the Ideological and Political Teaching Use Case

In the process of classroom teaching, the teaching use cases of Chinese poetry database were closely integrated. The industry database can be used as a teacher's explanation case, and the Chinese poetry database can be used as a classroom student's exercise case. For example, after teaching the command of "CREATE TABLE Student(Sno char(11) not

null unique, Sname varchar(20) not null, Ssex enum ('male','female'), Sbirthday date, Snative varchar(20), Snation varchar(20), Sphone char(11))ENGINE=InnoDB; ", proposed "the reader table (reader's number, reader's name, gender, id number, telephone number, note)" how to create, and discuss with students the primary key of the reader table, the type of each field with the width of the design, make students understand the structure of the data table, how to design the data table fields and to create a data table, and finally by the students to write reader table creating command "CREATE TABLE Readers(Rno char(11) not null unique, Rname varchar(20) not null, Rsex enum ('male','female'), RID char(18), Rphone char(11), Rmemo text) ENGINE=InnoDB;".

For another example, when explaining the query command, the teacher explained the corresponding query command of the industry database, and can put forward some queries combined with the "Chinese poetry database", such as: how to query the name of the poem that students have read, the content of the poem, the number of times of reading, the feeling after reading, and self-evaluation scoring? This is a personalized question, each student read different poems, and query results were different. Through the query commands and query results given by different students, further discussed students' feelings after reading, self-evaluation and scoring, guide students to think deeply about the connotation of the poem they read, deepen their understanding of the patriotism of the poem.

According to the promotion of teaching plan of the database system principle course, to strengthen the students with professional knowledge in the classroom teaching and further discussion with patriotism fusion, to make the students in the learning of database principle professional knowledge, at the same time, to deepen the Chinese nation excellent traditional culture in five thousand years -- an understanding of the patriotic poem, was deeply implanted in the student mind and patriotism thought system.

4.3. Homework after Class

Homework is divided into two parts: one is based on homework assigned by the teacher and the other is designed by the students themselves. The homework based on the textbook summary referred to the content of completing the basic theory, basic knowledge and basic ability of the course. The homework designed by the students themselves referred to the question design based on the textbook or the Internet, combined with the Chinese poetry database, and the answer to the question. The homework assigned by the teacher was about 5 questions per class, and the questions designed by the students were 3-5 questions per class. Through this homework design, the students not only completed the basic knowledge of the course, but also further developed the students' ability to analyze and solve problems.

4.4. Course Assessment

Adhere to the combination of process assessment and final assessment, knowledge assessment and ability assessment, professional assessment and ideological and political assessment. The success, of course, ideological and political teaching reform can only be guaranteed by satisfying the above three combination learning evaluation scheme. At present, the learning evaluation scheme of most professional courses adopted the process score accounts for 20%-30% of the total score of the course, and the final exam accounts for 70%-80% of the total score of the course. The processing score included attendance, theoretical homework and experimental homework, and the final exam evaluated basic knowledge, basic concepts, noun explanation, essay questions, etc. Although this evaluation scheme can assess students' grasp of the basic knowledge of specialized courses and cultivate their analytical ability, it is not enough to cultivate students' comprehensive ability, innovation ability and course ideology and politics.

In order to improve students' all-round ability, it is necessary to increase the connotation of process examination and the proportion of process examination as well as the change of final examination question type. Increase the proportion of the process score to 50% of the total course score. The process assessment includes not only attendance, theoretical homework and experimental homework, but also some stage quizzes, project design and theme learning, etc. Through the process quizzes, students are encouraged to grasp the basic knowledge in the process learning. By 2 to 3 weeks project design or theme learning, with 3-5 group as the unit, let the student through independent exploration, cooperation study and mutual discussion, fusion course education group scheme and speech in class, and by students self-evaluation, group members mutual evaluation, outside the classroom evaluation, teacher evaluation and group project design or subject learning achievement. In this way, students' comprehensive ability and innovation ability can be better promoted. The final examination will reduce the examination of basic knowledge, increase the number of comprehensive essay questions and open questions, and incorporate the ideological and political issues into the examination questions, such as "how to improve the technical level of China database", "How to ensure the security of China database system?", and so on.

5. CONCLUSION

From constructing ideological teaching cases, the depth of the fusion course education in the whole process of teaching, while in improving students' professional knowledge and professional ability, lead the students to deepen patriotism, believe the leadership of Communist Party of China, firmly believe the socialist and the pursuit of excellence in professional ideology and moral character, so as to better cultivate qualified socialist successors.

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