Teaching Reform of Database Application based on Online and Offline Integrated Teaching

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Abstract: Online and offline integrated teaching is a new teaching idea and teaching mode in recent years. The "Database Application" is a common basic course with rich theoretical and strongly practical in the higher school of finance and economics. However, due to the limited teaching hours and teaching environment, the traditional teaching mode has been unable to meet the need of practical teaching. Integrating the traditional face to face teaching and online learning (that is mixed online and offline teaching) can not only improve students' learning interest and teaching effect, but also students' autonomous learning ability.

Key words: online and offline integrated teaching; database application; teaching reform

1 Introduction

Database technology is one of the most important technologies in computer application. The relevant knowledge and skills are of great practical value. It occupies an important position in the field of information management. Therefore, "Database application" has become an important public basic course in colleges of finance and economics. However, due to the rich content of this course and the small amount of teaching hours, the traditional single face-to-face classroom teaching mode has been unable to meet the actual teaching needs of today, which directly affects the teaching effect of this course and the learning enthusiasm of students. Online and offline integrated teaching, as a new teaching mode emerged in recent years, organically integrates traditional face-to-face teaching and online learning, which complement each other. It can not only improve students' learning interest and teaching effect, but also improve students' self-learning ability.

In view of the present process of the curriculum teaching and examination database application problems that exist in reality, this article proposed the online teaching concept as the instruction to optimize the curriculum teaching design database application, strengthen the network of online learning, highlight the learning process management and evaluation, carry on the teaching reform to the course of "Database application". The practice results show that the online and offline integrated teaching model can effectively arouse students' enthusiasm and initiative in learning and improve the teaching quality of "Database application".

2 Problems existing in the traditional teaching mode of Database Application

2.1 Lack of professional pertinence

At present, the teaching of "Database Application" in the school of non-computer science use the same class, the same teaching material, the teaching outline, the same lesson plans, the same question, and the same inspection standard, which leads to different students' learning enthusiasm and effect of this course is put in bigger difference, the test scores distribution imbalance between different professional, to some extent, examination of unfairness phenomenon exists.

2.2 No innovation in teaching methods

At present, slide projection is still used in the classroom teaching of "Database Application". Teachers explain the theory according to the content of the slide and demonstrate the specific operation accordingly, which lacks the necessary interaction between teachers and students. Although there is a large amount of information in classroom teaching, students' mastery of knowledge and skills is far from the goal of classroom teaching.

2.3 Single assessment method

At present, the course assessment method of "Database Application" is a single computer examination, which includes the assessment of basic theoretical concepts and the assessment of basic operations. However, a single examination score cannot fully reflect students' mastery of the course, nor can it reflect students' flexible application of knowledge and technology.

2.4 The teaching evaluation mechanism is not perfect

At present, the course "Database Application" lacks effective teaching evaluation mechanism, teachers' teaching quality and teaching effect have not been evaluated qualitatively or quantitatively, and no necessary reward and punishment measures have been taken, which makes some teachers lack a strong sense of responsibility and affects the teaching effect.

3. Teaching reform scheme of Database Application based on online and offline integrated teaching

Through the analysis and summary of the teaching and assessment status of database Application, we think that database Application should carry out the teaching reform from the three aspects of course teaching design, teaching process implementation and compound assessment, and give full play to the leading role of modern education and teaching technology.

3.1 Teaching design of database Application based on online and offline integrated teaching

3.1.1 Analysis of teaching objects

The course "Database Application" is open to students of various majors of economic management. Students of different majors have different demands on the teaching content and also have different learning difficulties. The teaching objectives of this course should be determined according to the students of different majors and in combination with the

direction of the major, emphasizing the practical application, teaching students according to their aptitude as much as possible, enabling them to acquire more truly useful knowledge and skills, and be able to flexibly use database technology to solve practical problems.

3.1.2 Teaching content design

Teaching design is the core of the online integration of teaching content, teaching effect is decided to online fusion of the key factors, the design content mainly includes two aspects: one is to make suitable for online learning courses teaching resources, mainly including teaching "short video" and interactive exercises for real-time learning effect inspection, the other is designed to stimulate students interest in learning teaching activities.

(1) Making course teaching resources.

The teaching resources of Database Application mainly include teaching "short video", real-time interactive exercises, test questions for knowledge points and unit tests, and practical operation questions for extracurricular extension training.

(a) Chapter content "fragmentation". In the course "Database Application", the teaching chapters are very clear, consistent and logical, mainly including basic theoretical concepts, databases, tables, queries, forms, reports, macros, modules, etc. According to the characteristics of the chapter content, combining with the specific teaching objects and teaching requirements of different majors, the knowledge points of the corresponding chapter content should be "fragmented" so as to explain clearly in the corresponding teaching "short videos".

(b) Record short teaching videos. According to the content of each chapter of "fragmentation", combined with task-driven teaching strategy, according to the basic ideas of teaching task introduction, theoretical concept analysis, technical method explanation and practical application examples, the corresponding teaching "short video" is recorded. In order to make students pay high attention when watching teaching videos and achieve the best teaching effect, the 7 ± 2 principle of psychology should be referred to. The length of each teaching video should be controlled at about 8 minutes, not too long, or it will directly affect the learning effect of this part of content.

(c) Design real-time interactive exercises. Real-time interactive exercises are used for students to conduct interactive exercises in the process of watching teaching "short videos" to test the learning effect of students on the corresponding knowledge points in real time. The questions mainly include multiple choice questions, judgment questions, filling-in questions and other objective questions. The 3-5 questions is appropriate. Relevant exercises are provided after each teaching "short video" to consolidate students' understanding of the current knowledge points. Relevant unit test questions are provided after the completion of each learning task every week to comprehensively test the students' mastery of each knowledge point of the week.

(d) Build the curriculum test question bank. In order to make the test and examination results more scientific and reasonable, the course teaching group needs to select typical test

questions according to the chapters, build the course test question bank, strive to cover the knowledge points of the course comprehensively, and update and supplement the test question bank irregularly. The question types include single choice, multiple choice, judgment, fill in the blanks, operation questions, etc., in order to comprehensively examine the basic concepts and basic techniques of the database.

(e) Design extended training exercises. The extended training is entitled "choose to do", which aims at examining students' comprehensive application ability of database technology from multiple angles and in an all-round way. In the design of the extension training questions, we strive to combine the daily practical application background, flexibly use database-related technologies to solve practical problems, promote the transformation of database knowledge and skills into database products, and make students feel that the course "Database Application" is useful and good at learning.

(2) Organize online learning resources.

The course teaching resources on the online learning platform will be published weekly according to the course syllabus and teaching plan of Database Application. According to the teaching objects, teaching aims, learning tasks and test requirements, all kinds of teaching resources (including video, teaching courseware, real-time interactive exercises, unit testing and test, expand training topic and experimental database, etc.) are gradually open to all students according to the teaching week, for students to arrange their own online learning time, complete release of learning tasks in class.

(3) Design teaching activities.

According to the teaching resources, teaching objectives, teaching means and learning tasks of Database Application course, various colorful teaching activities are carried out to enable students to complete the teaching video watching, online testing and expansion training within the limited time. In addition, students can conduct real-time discussion and interactive communication with classmates and teachers on hot and difficult issues through the course interactive platform, so as to achieve mutual learning and common improvement.

3.2 Implementation of the teaching process of Database Application based on online and offline integrated teaching

The teaching process of database Application based on online and offline integrated teaching is mainly divided into three parts: teachers release online learning tasks in advance, students carry out online autonomous learning and offline interactive classroom learning, which make full use of online learning platform, combined with the traditional classroom teaching, take the task driving mode, step by step to complete the teaching task in stages, and in the process of study, improve students' self-learning ability.

3.2.1 Release online learning tasks

Task driven learning can effectively improve the students' learning enthusiasm and initiative. Teachers in the classroom to highlight the relevant chapter knowledge teaching tasks, learning objectives, the key difficulty, scheduling, and the inspection way, release the next

online learning tasks, so that students formulate specific feasible study plan in combination with their own learning situation. The published online learning tasks should be specific and clear, with strong operability, so as to facilitate online development and improve learning interest.

3.2.2 Carry out online independent learning

According to the learning tasks published by teachers in class, students watch short teaching videos in their spare time in a planned way, and complete interactive exercises, knowledge point tests, unit tests and other learning tasks in real time. In order to timely answer students' questions in the online learning process, the course tutor adopts the online method of weekly regular time to interact with students in real time and answer questions. Students can also communicate with each other through the course learning group, discuss the problems in learning, exchange learning experience and learning experience.

Teachers can look at the students' records and relevant statistics through online learning platform, including the study of teaching a short video, interactive exercises completion, knowledge, and unit test situation and situation of interaction between teachers and students, etc., at the same time can also understand the interaction between students, students concern about the hot issues of the course, etc. Teachers can use platform statistics and course learning group information to comprehensively understand students' online learning situation, the utilization of course teaching resources and students' mastery of knowledge points, so as to improve teaching resources and enrich classroom teaching content.

3.2.3 Complete offline classroom learning

Online learning is the main part of students' course learning, while offline classroom learning is the teacher's summary of students' online learning and the release of online learning tasks in the next stage. In class, teachers answer questions face to face according to the statistical data of the online learning platform and the discussion topics of the course learning group, analyze and summarize the common problems of students in the online learning process, and explain them in depth. In addition, teachers can get a comprehensive understanding of students' online learning by means of random check, on-site question and in-class assessment, so as to further optimize the course teaching design.

3.3 The combined examination of database Application based on online and offline integrated teaching

To more comprehensively and objectively evaluate the effect of teaching about Database Application and test the quality of teaching, examination mode should reform for traditional single final exam, record online learning and online test results into the course of comprehensive evaluation, at the same time weighted handling daily unit tests and periodic testing result, course overall scores are no longer confined to the traditional classroom performance and final examination results, but also need to highlight and strengthen course learning process management, intensify process assessment, strengthening students' self-learning ability, comprehensive improve the composite evaluation mechanism, make

assessment results more scientific and fair.

The course assessment system of Database Application should not only assess the learning effect of students, but also the teaching process and effect of teachers. By strengthening the daily classes (including the school faculty leadership class and peer expert lectures, etc.), we will further improve the teachers' classroom teaching and online teaching assessment and evaluation system, actual need to combine school college at the same time, establish the reasonable rewards and punishment mechanism, make every teacher has a sense of urgency, make full use of the new technology of modern education teaching, to innovative teaching methods, optimize teaching design, improve the teaching process, improve the database application course teaching quality and teaching effect.

4 Conclusion

This paper analyzes and summarizes the problems existing in the teaching and assessment of database application course. Based on the existing research results, it puts forward the teaching reform plan of database application course, which integrates online and offline teaching. It hopes to give full play to the outstanding advantages of online and offline teaching mode, strengthen the main position of middle school students and teachers in the teaching process The leading role is to better solve the problems such as the weak pertinence of the teaching content, the lack of innovation in teaching methods, the lack of scientific assessment methods, and the lack of perfect teaching evaluation mechanism in the course of database application, so as to comprehensively improve the students' self-learning ability and the teaching quality of the course and realize the optimization of teaching effect.

With the continuous development of modern educational technology, the teaching reform of "Database application" will be further deepened. Teachers need to innovate teaching methods constantly in the teaching process, improve teaching effect, stimulate students' learning enthusiasm and initiative, so as to meet students' application demands for database technology.

Acknowledgment

Reference

[1] Zhang SP. Teaching Reform and Practice of Database Application [J]. Microcomputer Application, 2019(8):29-31.

[2] Zhang H. Preliminary Study on the Teaching Reform of Database Application [J]. Modern computer, 2019(3):87-88.

[3] Pang LY. A Practical Exploration into the Reform of Teaching Paradigm in University Courses [J]. Journal of Changchun Education Institute, 2018(3):48-50.

[4] Xiao DF, Yang H. Discussion on the Teaching Reform of Database Application

Technology for Non-computer Majors [J]. Journal of Guilin Academy of Aerospace Industry, 2010(2):244-245.

[5] Liu C. Foundation of Database Application (2nd edition) [M]. Shanghai: Shanghai Jiao Tong University Press, 2016.

[6] Wang PS. Research on "DataBase Application" Teaching Reform[J], Journal of Educational Research, 2019,4(12):1-5.