

Research and Discussion on Loose-leaf Teaching Mode

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Abstract: Currently, in order to meet the needs of personalized education, the loose-leaf teaching model has attracted people's attention. This article studies the theoretical basis and design principles of the loose-leaf teaching model, and analyzes its advantages and challenges through case studies. It provides direction for subsequent teaching and plays an important role in promoting teaching reform.

Keywords: Loose-leaf teaching; Personalized education; Modularization; Diversification; Initiative

1. Introduction

The loose-leaf teaching model is a student-centered teaching method that emphasizes personalized learning. It divides the teaching content into small units, each of which is an independent learning task or activity. Students can choose different learning units according to their own learning progress and interests and study at their own pace. The model focuses on cultivating students' autonomous learning ability, problem-solving ability and cooperative learning ability to promote their all-round development.

The loose-leaf teaching model is getting more and more attention and has become a global educational trend. The remarkable feature of this model is that it emphasizes the importance of students' individual differences and personalized learning, encourages students' active participation and autonomous learning, which helps to meet students' diversified learning needs and improve learning results. At the same time, the loose-leaf teaching model also changes the role of teachers, requiring teachers to transform into the guide and supporter of learning.

The study of the loose-leaf teaching model is of great significance for education reform, promoting students' initiative and self-learning, promoting teachers' role transformation and professional development and the innovation and application of educational technology.

2. The Theoretical Basis of Loose-leaf Teaching Model

The loose-leaf teaching mode is a student-centered teaching mode that gives full play to students' enthusiasm and pays special attention to practice and innovation. Its theoretical basis mainly includes constructivism learning theory^[3], cognitive load learning theory^[4] and personalized education theory^[5], as shown in Figure 1.

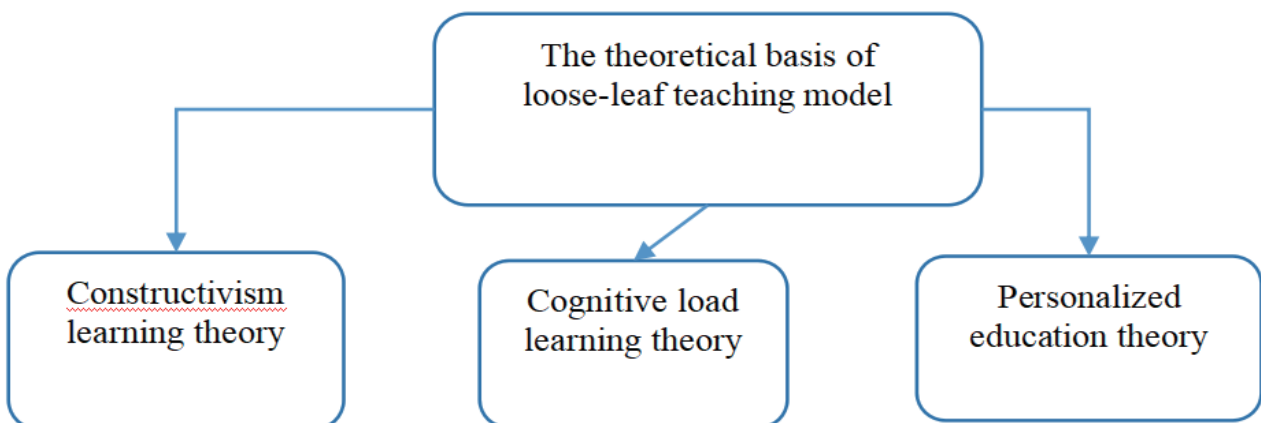


Figure 1 The theoretical basis of loose-leaf teaching model

Constructivism learning theory, cognitive load learning theory and personalized education theory all emphasize that students are the main body and meet individual needs. In loose-leaf teaching, students complete tasks and achieve goals through autonomous personalized learning and cooperative inquiry and teachers play the role of mentors and assessors to provide necessary support and feedback. The common denominator of these theories is the teaching of modularization and diversification and is that meet individual requirements and develop a scientific evaluation system. Therefore, the loose-leaf teaching model conforms to the principles of these theories, which can improve students' autonomous learning ability and creativity, promote all-round development and achieve maximum potential.

3. Design Principles of Loose-leaf Teaching Mode

The loose-leaf teaching model focuses on students' autonomous learning and practical inquiry, designs teaching content in a modular and task-driven way, and pays attention to students' individual needs and characteristics. At the same time, it pays attention to feedback and evaluation, adopts a variety of evaluation methods, timely and targeted, and provides personalized guidance and services. Support services are also an important part of the model, which is user-centric, provides quick response and problem solving and provides a friendly and easy-to-use service interface.

In short, the loose-leaf teaching mode focuses on student-centered, practical inquiry and interactive communication. Through autonomous learning and practical inquiry, students can better display their creativity and innovation ability and cultivate their independent thinking and problem-solving ability. The model also emphasizes task-driven and autonomous inquiry, pays attention to user needs and tasks, respects personality differences, encourages independent thinking and practice, emphasizes cooperation and interaction and focuses on practice and inquiry. At the same time, feedback and evaluation and support services are also important links and components of the loose-leaf teaching model, which focus on timely, specific and clear feedback, provide personalized guidance and services, optimize service content and methods and improve service quality and efficiency.

4. Case Study of Loose-leaf Teaching Mode

The loose-leaf teaching mode is a student-centered teaching method that emphasizes autonomous learning and practical inquiry. The model has been widely used in the field of education both at home and abroad.

The "Calculus(I)" course of Tsinghua University adopts the loose-leaf teaching mode, which guides students to study autonomously and think deeply through three links: self-study before class, interactive exploration in class and homework feedback. The content of Shanghai Jiao Tong University's Higher Mathematics course is divided into several modules, which is convenient for students to arrange their own learning progress. Meanwhile, teachers also design personalized teaching tasks and activities to meet students' individual needs. The National University of Singapore's "Biology Basis" course adopts the online self-learning method. Combined with experimental exploration, students can watch video explanations, interactive questions and answers and discussion boards on the online platform to better understand biological knowledge. The course of Introduction to Anthropology of University College London uses a loose-leaf textbook teaching model, which combines readings, assignments and comprehensive reports to give students an in-depth understanding of the conceptual, theoretical and historical background of anthropology.

These cases have achieved good teaching effect and response, which are with the characteristics of student-centered, interactive exploration and practical exploration. However, there are still challenges in ensuring the depth, breadth and systematicness of teaching content, assessing students' self-learning and inquiry abilities and ensuring teaching quality and service level.

5. Advantages and Challenges of Loose-leaf Teaching Model

The loose-leaf teaching model is student-centered and emphasizes practical inquiry and interactive communication. It allows students to choose what, when and how to study autonomously and cultivates independent thinking and problem-solving skills. The mode improves the learning efficiency and quality, and helps students to deeply understand knowledge points and master relevant skills through autonomous learning and practical inquiry. The loose-leaf teaching model adapts to individual needs, meets the diverse needs of students and allows students to make autonomous choices and adjustments according to their own interests and abilities. Finally, the model promotes cooperation and innovation and cultivates students' cooperative spirit and innovative ability. In short, the loose-leaf teaching mode has many advantages and is of great significance to the reform and development of education.

The loose-leaf teaching model has many advantages, such as student-centered, practical inquiry and interactive communication. However, it also has challenges. Its technical requirements are high. It requires a lot of resources to maintain technical facilities and services. Teachers need to have the corresponding technical ability and management ability, otherwise the teaching quality and effect will have a negative impact. The evaluation method should be improved, and scientific and effective evaluation method and

index system should be established to evaluate students' learning achievement and development level. It is necessary to strengthen management and supervision, establish a sound service system and management mechanism, timely discover and correct existing problems to ensure the quality and effect of teaching.

6. Conclusion and Prospect

The loose-leaf teaching model is student-centered and focuses on autonomous learning and practical inquiry. The teaching content is divided into multiple modules, which allows students to choose different learning modules according to their learning progress and interests and learn at their own pace. This model focuses on students' cooperation and interaction, provides diversified learning resources and environment, guides students to actively participate in practical operation and research and improves practical ability and inquiry ability.

In the future, the loose-leaf teaching model will be more widely used and studied. And researchers will further improve its design principles and service measures to adapt to the development of The Times and the needs of society.

References:

- [1] Zhuli Wang, Constructivism Learning Theory and Application: On the application of Information Technology in Teaching[J]. Modern Distance Education, 2009(03): 21-28.
- [2] He Kekong, On the Educational Thought and Philosophical Foundation of Constructivism--Reflection on Constructivism[J]. China University Teaching, 2004(07): 15-21.
- [3] Gang Lin, Li Zhang, Yi Zhang, et al. Research on Project-oriented Flipped Classroom Teaching Model Based on Constructivism--A Case Study of College Students' Entrepreneurship Guidance and Practice Course[J]. Chinese Journal of ICT in Education, 2020(23): 5-10.
- [4] Winnie, P.Y., & Brewer, G.A. (2013). The Role of Worked Examples and Problem Solving in Developing Schemata for Math Problem Solving: An Example from Geometry[J]. The Journal of Mathematical Behavior, 32(1): 77-91.
- [5] Lea, S.E.G., & Spears, R. (1990). Individual Differences in Cognitive Style: An Investigation of the Impact of Mode of Presentation on the Validity of a Test of Critical Reasoning[J]. British Journal of Psychology, 81(3): 377-392.
- [6] Roberts, B.W., & DeVecchio, W.F. (2000). The Rank-order Consistency of Personality Traits from Childhood to Old Age[J]. Journal of Personality and Social Psychology, 78(1): 153-164.