Research on the innovative teaching concept and strategy of university teachers

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Abstract: This research focuses on the innovative teaching ideas and strategies of university teachers. Firstly, it discusses the theoretical basis of the innovative teaching concepts, including pedagogy, psychology and educational informatization theory. Then, the innovative teaching strategies can be adopted by college teachers in practical teaching, such as student-centered, situational teaching, inquiry teaching, cooperative learning, mixed teaching and curriculum thinking policy. Finally, this paper analyzes the challenges that innovative teaching strategies may face in practice, such as the constraints of traditional educational concepts, the limitations of teachers' own abilities and the limitations of educational resources and facilities, and puts forward corresponding countermeasures to these challenges. This study aims to provide college teachers with an innovative teaching concept and strategy to promote the reform and development of education and teaching.

1. Introduction

With the development of society and the progress of science and technology, college education is facing the transformation from the traditional mode to the innovative education. In this process, teachers, as the leader of education and teaching, play a key role. This introduction aims to explain the importance and urgency of innovative teaching concept in college education, discusses the theoretical basis of innovative teaching idea and strategy research, and introduce the innovation teaching strategies involved in this paper and the possible challenges and countermeasures, in order to provide college teachers with beneficial teaching experience and enlightenment, promote the reform and development of education teaching.

2. Theoretical basis of innovative teaching concept

2.1 Pedagogy theory

The theory of pedagogy is a science that studies the phenomena, laws and principles of education. The basis of innovative teaching concept in pedagogy theory mainly includes the theory of

educational goal, educational process, educational method and so on. According to pedagogy, education aims at cultivating all-round development of talents, emphasizing individual differences, teaching students in accordance with their aptitude, and paying attention to students' initiative and creativity. In the process of education, teachers should pay attention to students' cognitive rules, play the main role of students, and create an environment conducive to innovative thinking and practice. In addition, in terms of educational methods, diversification, openness and practicality have become the important principles of innovative teaching.

2.2 Psychological theory

Psychological theory is a science that studies the phenomena, laws and mechanisms of human psychology. The theoretical basis of innovative teaching concept in psychology mainly includes cognitive psychology, developmental psychology and educational psychology. Cognitive psychology emphasizes the important role of thinking process, knowledge structure and cognitive strategy in learning, and advocates heuristic teaching, inquiry learning and project learning. Developmental psychology focuses on the characteristics and needs of individuals at different stages of development and provides individualized educational programs for innovative teaching[1]. Educational psychology focuses on the psychological characteristics, learning motivation, emotion and values of students in the process of educational teaching, providing psychological support for innovative teaching.

2.3 Educational informatization theory

The theory of educational informatization refers to the theory of applying modern information technology in the field of education to improve the quality and efficiency of education and teaching.

The theory of innovative teaching concept of educational informatization mainly includes the following aspects: first, the integration of information technology and education, integrating information technology into the teaching process, and giving full play to its advantages in teaching resources, teaching methods and teaching evaluation. The second is the theory of network education, which emphasizes the role of modern information technology such as Internet, cloud computing and big data in education and teaching, and provides a broad platform and resources for innovative teaching. The third is the theory of intelligent education, focusing on the application of new technologies such as artificial intelligence and virtual reality in education, and promoting personalized and intelligent education and teaching; fourth, network security theory education to ensure the stable and safe operation of innovative teaching.

3. Specific methods for college teachers to innovate teaching ideas and strategies

3.1 Student-centered teaching strategy

The student-centered teaching strategy is a new teaching concept that fully respects and pays attention to students' needs, interests and development. In this teaching strategy, teachers regard students 'individual differences, uniqueness and potential as important resources in teaching, and try to mobilize students' enthusiasm, initiative and creativity in the teaching process, so that students can become the master of learning[2].

First of all, teachers should fully understand the students' interests, specialties and needs in the teaching process, and adjust the teaching content and methods based on this. Through communication with students, teachers can better grasp students' learning status and provide students with personalized education programs. At the same time, teachers should pay attention to

the emotional needs of students, and create a loose, harmonious and safe classroom atmosphere, so that students can study in a pleasant emotional state. Secondly, teachers should encourage students to ask questions and express their opinions to cultivate students' critical thinking and independent thinking ability. In the teaching process, teachers can use heuristic questions, group discussion and other forms to stimulate students' thinking and guide students to actively explore. In addition, teachers should timely give students feedback and guidance to help students overcome learning difficulties and enhance their self-confidence. Thirdly, teachers should design diversified and hierarchical teaching tasks according to the students' actual level and development needs. By setting up challenging and interesting tasks, teachers can stimulate students' interest in learning and mobilize their enthusiasm for learning. At the same time, the hierarchical tasks are helpful to cultivate students 'ability to solve problems and improve students' comprehensive quality. In addition, teachers should be good at using modern educational technology means, such as the network, multimedia, etc., to provide students with rich learning resources. These resources can help students to broaden their horizons, enrich their knowledge, and improve their learning effect. At the same time, teachers can also use educational technology to provide students with real-time and efficient teaching feedback to improve the quality of teaching. Finally, teachers should pay attention to cultivating students' independent learning ability in the teaching process. Teachers can guide students to make learning plans, and cultivate students' ability to explore independently, cooperative learning and evaluate learning results. Through independent learning, students can better develop their potential and realize personalized development.

3.2 Contextual teaching strategies

Context teaching strategy is a teaching method that takes the context as the core, closely links the teaching content with the real life, and guides the students to carry out learning through participation, experience, inquiry and other ways. This teaching strategy aims to provide students with a challenging, interesting and authentic learning environment, stimulate students 'interest in learning, and cultivate students' innovative ability and practical ability.

In the process of situational teaching, teachers should first fully explore all kinds of resources in real life, such as case, problem situation, role playing, etc., to create a vivid and real learning situation. These situations can come from various fields such as life, work and society, aiming to provide students with rich learning materials and real learning experience. Secondly, teachers should guide students to actively participate in the learning situation, and acquire knowledge and cultivate skills through personal experience, inquiry, discussion and other ways. Teachers can organize students to carry out practical activities in the form of group cooperation and project research, so that students can master knowledge and cultivate the ability to solve problems in practical operation[3]. In addition, situational teaching strategies also focus on cultivating students' thinking skills, communication skills and teamwork skills. In the process of situational teaching, teachers should guide students to think actively and express themselves actively, encourage students to ask questions and express their opinions, and cultivate students' critical thinking and innovative thinking. At the same time, teachers should also pay attention to cultivating students' communication and cooperation ability, so that students can learn to listen to, express, negotiate and cooperate in group cooperation and team projects.

In the process of situational teaching, teachers should be good at adjusting teaching strategies, and flexibly use various teaching methods and methods according to the actual situation of students and the teaching content of them. Teachers can provide students with rich learning resources and real-time feedback through modern educational technology to improve the teaching effect.

3.3 Inquiry-based teaching strategies

Inquiry teaching strategy is a teaching method that takes students as the main body and pays attention to cultivating students' independent learning, innovative thinking and problem-solving ability. In the teaching process, teachers should make full use of curriculum resources, design challenging and inspiring inquiry tasks, and guide students to carry out research-based learning, so that students can obtain knowledge, skills and emotional experience through inquiry and practice.

First of all, teachers should pay attention to cultivating students' independent learning ability in the teaching process. Teachers can provide students with rich learning resources and diversified learning methods, and guide students to independently choose learning content, make learning plans, and evaluate learning effects. At the same time, teachers should also pay attention to the learning process of students, guide students to master the methods and strategies of independent learning, and cultivate students' interest and motivation in learning[4]. Secondly, the inquiry-based teaching strategy emphasizes the students' cooperation. Teachers can organize students to conduct learning activities in the form of group cooperation and team projects, so that students can learn to listen to, express, negotiate and cooperate in the cooperation. Teachers should pay attention to the interaction between students, give timely guidance and feedback, and improve students' communication skills and teamwork ability. Thirdly, the inquiry-based teaching strategy focuses on cultivating students' innovation. Teachers should encourage students to ask questions, express their opinions, and cultivate students' critical thinking and innovative thinking. At the same time, teachers should provide students with a relaxed and free learning environment, so that students dare to try and innovate, and cultivate students' creativity and practical ability. In addition, teachers should also pay attention to cultivating students' problem-solving ability in the process of inquiry teaching. Teachers can design challenging and inspiring inquiry tasks, and guide students to gradually form the methods and strategies to solve problems through practice, inquiry, reflection and other ways. Teachers should pay attention to students 'inquiry process, give timely guidance and feedback, and improve students' ability to solve problems. Finally, teachers should pay attention to cultivating students' ability of summary and induction in the process of inquiry teaching[5]. Teachers can guide students to summarize and summarize the knowledge, skills, emotions and experience in the learning process, and form a systematic learning results. Teachers should pay attention to students 'summary and induction process, give timely guidance and feedback, and improve students' learning effect.

3.4 Cooperative learning strategies

Cooperative learning strategy is a student-centered teaching method, which integrates students in groups, discusses and completes learning tasks together, cultivating students' teamwork, communication, coordination and leadership. In the teaching process, teachers should make reasonable groups, clarify cooperative tasks and division of labor, and guide students to support and learn from each other. This teaching strategy helps to improve student communication, coordination and teamwork skills, while promoting mutual understanding and inclusion among students.

First of all, teachers should be reasonably grouped in the teaching process to ensure that each group member has a certain complementarity in ability, character, knowledge structure and other aspects. Teachers can adopt different group forms, such as randomization, voluntary grouping and mixed grouping, according to students' characteristics and learning objectives[6]. At the same time, teachers should pay attention to the cooperation atmosphere within the group and guide students to establish a good cooperative relationship. Secondly, teachers should clarify the cooperation tasks and division of labor in the teaching process, to ensure that each student has their own responsibilities and tasks. Teachers can provide students with specific cooperative task guidance,

such as discussing problems, completing projects, and solving problems, so as to guide students to gradually form a sense of cooperation and team spirit. In addition, teachers should pay attention to the communication and coordination between students in the teaching process. Teachers can guide students to learn to listen, express, negotiate and compromise, and improve students' communication and coordination skills. At the same time, teachers should solve the contradictions and conflicts between students in time, and maintain the classroom order and the smooth progress of teaching activities. Teachers should also pay attention to cultivating students' teamwork ability in the teaching process. Teachers can organize students to conduct learning activities in the form of group cooperation and team projects, so that students can learn to support and learn from each other in cooperation. Teachers should pay attention to the interaction between students, give timely guidance and feedback, and improve students' teamwork ability[7]. Finally, collaborative learning strategies can also help to promote mutual understanding and inclusion among students. In group work, students can learn to respect and understand others, and develop their own empathy and tolerance. Teachers should pay attention to the emotional communication between the students, guide the students to establish a good emotional relationship, and promote the mutual understanding and tolerance between the students.

3.5 Mixed teaching strategy

Hybrid teaching strategy is a teaching method that combines traditional face-to-face teaching with networked and digital teaching, aiming to provide students with a more flexible, efficient and personalized learning experience. In the teaching process, teachers should make full use of information technology, provide students with rich online learning resources, and carry out diversified teaching activities. The mixed teaching strategy gives full play to the advantages of network teaching, provides students with conditions for independent learning and personalized learning, and pays attention to the interaction and guidance between teachers and students.

First, teachers should make full use of information technology in the teaching process to provide students with rich online learning resources. Teachers can make use of the Internet, multimedia and other modern educational technologies to provide students with rich learning resources, such as online courses, teaching videos, teaching documents and so on. These resources can help students to broaden their horizons, enrich their knowledge, and improve their learning effect. Secondly, the mixed teaching strategy emphasizes the interaction and guidance between teachers and students. Teachers can communicate with students in real time through online platforms, online discussion areas and other channels, understand students' learning status, and provide timely feedback and guidance for students[8]. At the same time, teachers should pay attention to students' personalized needs and provide students with personalized learning support and services. Thirdly, the mixed teaching strategy focuses on cultivating students' independent learning ability. Teachers can guide students to make learning plans, and cultivate students' ability to explore independently, learn cooperatively and evaluate learning results. Through independent learning, students can better develop their potential and realize personalized development. In addition, teachers should also pay attention to cultivating students' critical thinking and innovative thinking in the teaching process. Teachers can use the network teaching platform to provide students with training resources of critical thinking and innovative thinking to guide students to think and explore. At the same time, teachers should give students timely feedback and guidance to help students overcome learning difficulties and enhance students' self-confidence. Finally, teachers should also pay attention to improving their information technology ability in the process of mixed teaching. Teachers should master all kinds of modern educational technology means, such as network, multimedia, etc., to provide students with efficient and high-quality teaching services. At the same time, teachers should

pay attention to the development trend of information technology, and constantly update their knowledge and skills to adapt to the development needs of education and teaching.

3.6 Course policy thinking is omitted

Curriculum thinking policy is a kind of teaching method that integrates ideological and political education into course teaching and cultivates students' correct world outlook, outlook on life and values. This teaching strategy aims to enable students to establish a correct outlook on life and values, cultivate students 'sense of social responsibility and innovative spirit, and lay a foundation for students' all-round development.

In the teaching process, teachers should fully explore the ideological and political education resources in the curriculum, and combine the ideological and political education with the subject knowledge. Teachers should pay attention to students' emotional needs, and create a relaxed, harmonious and safe classroom atmosphere, so that students can study in a pleasant emotional state. At the same time, teachers should pay attention to cultivating students 'critical thinking, guide students to learn to analyze, judge and choose, and cultivate students' sense of social responsibility and innovative spirit. Teachers should pay attention to stimulating students' interest in learning in the teaching process of curriculum thinking and policy[9]. Teachers can use case analysis, problem guidance, and group discussion to form a recognition and perception of the content of ideological and political education in the process of participating in the course teaching. In addition, teachers can also use modern educational technology means, such as network, multimedia, etc., to provide students with rich ideological and political education resources, improve the teaching effect. The curriculum thinking policy slightly emphasizes the interaction and guidance between teachers and students. Teachers should pay close attention to students' learning status and provide timely feedback and guidance for students. At the same time, teachers should pay attention to students' emotional needs and provide students with personalized education programs. Curriculum thinking policy also helps to cultivate students' teamwork ability.

4. Challenges and countermeasures of innovative teaching strategies and countermeasures

4.1 The bondage of traditional educational concepts

Traditional educational concepts believe that teachers are the disseminator of knowledge and the guide of students, and emphasize the authority of teachers in the teaching process. This concept makes teachers pay too much attention to the transmission of knowledge, and ignore the individual differences and needs of students. Teachers often adopt the unified teaching methods in the classroom, and fail to pay full attention to the personalized development of students. In addition, the traditional educational concept puts too much emphasis on examination and grades, which is easy to make students produce pressure and affect students' interest and enthusiasm in learning. In order to cope with this challenge, teachers should change their ideas, establish a student-centered education concept, pay attention to students 'interests and needs, and create a learning environment conducive to students' development.

First of all, teachers should pay attention to the individual differences of students and respect their interests and needs. Teachers should understand the characteristics of each student and provide them with personalized educational programs. Teachers can communicate with students to understand students' learning status and provide students with targeted teaching guidance. Secondly, teachers should change their teaching methods and adopt diversified teaching methods. Teachers should be good at using modern educational technology, such as the network, multimedia, to provide students with rich learning resources. At the same time, teachers should pay attention to

cultivating students 'independent learning ability, guide students to make learning plans, and cultivate students' ability of independent inquiry, cooperative learning and evaluation of learning results. Thirdly, teachers should adjust the educational evaluation standards and pay attention to the overall development of students. Teachers should abandon the concept of too much emphasis on examination and grades, and pay attention to students' physical and mental health, emotional needs and personality development. Teachers should adjust the educational evaluation method, combine the process evaluation with the final evaluation, and pay attention to the overall development of students.Teachers should pay attention to students 'inquiry process, give timely guidance and feedback, and improve students' inquiry ability and innovation ability.

4.2 Limitations of teachers' own abilities

Innovative teaching strategies require teachers to have high teaching quality, educational technology application ability and educational teaching research ability. However, some teachers cannot adapt to the requirements of innovative teaching due to the limitation of their own ability. In order to cope with this challenge, teachers should strengthen their own ability, actively participate in education training and education and teaching research, and improve their education and teaching ability.

First of all, teachers should strengthen the study of educational and teaching theory. Teachers should study the teaching theory, understand the basic laws and methods of education and teaching, and master the basic methods of education and teaching research. Teachers can read books and participate in training to constantly enrich their education and teaching theory knowledge and improve their education and teaching quality. Secondly, teachers should take an active part in education and teaching practice. Teachers should pay attention to education and teaching practice, and constantly improve their education and teaching ability through practice. Teachers can participate in education and teaching reform projects, carry out education and teaching research and other ways, constantly enrich their own education and teaching practice experience, improve their education and teaching ability. Thirdly, teachers should master the application ability of educational technology. Teachers should understand the development trend of modern educational technology and master the application methods of various educational technology means. Teachers can constantly improve their ability to apply educational technology by attending educational training and communicating with peers to provide students with better teaching services. Finally, teachers should pay attention to education and teaching research. Teachers should actively participate in education and teaching research, understand the basic methods of education and teaching research, and master the basic skills of education and teaching research.

4.3 Restrictions on educational resources and facilities

The implementation of innovative teaching strategies requires corresponding educational resources and facilities. However, due to the limitation of educational resources and facilities, some schools are difficult to meet the needs of innovative teaching. To meet this challenge, schools should increase their investment in educational resources and facilities, and provide students with rich learning resources and an innovative teaching environment. At the same time, teachers should also be good at making use of existing resources, give full play to creativity, overcome difficulties, and achieve the goal of innovative teaching.

First, schools should increase their investment in educational resources and facilities. Schools should fully realize the importance of innovative teaching, and take the investment of educational resources and facilities as the focus of school development. Schools can add libraries, laboratories, multimedia classrooms and other facilities to provide students with rich learning resources and

innovative teaching environment. Secondly, schools should encourage teachers to make use of existing resources, give full play to their creativity, overcome difficulties, and achieve the goal of innovative teaching. Teachers should be good at using existing resources, such as network, multimedia, etc., to provide students with rich learning resources. At the same time, teachers should give full play to their creativity, overcome the difficulties, and achieve the goal of innovative teaching. Teachers can use a variety of teaching methods, such as group discussion, case analysis, problem guidance, etc., to stimulate students 'interest in learning and cultivate students' innovative ability and practical ability. In addition, the school should also pay attention to cultivating students' innovative ability and practical ability. Schools can organize students to participate in practical activities and carry out research by means to develop students' innovative ability and practical ability. At the same time, schools should pay attention to students' physical and mental health, provide a good learning environment for students, and create a learning atmosphere conducive to the development of students.

5. Conclusion

This paper systematically studies and discusses the innovative teaching ideas and strategies of university teachers, and emphasizes the importance of innovative teaching ideas in today's education development. By putting forward a series of specific teaching strategies, and combining with the possible challenges in the actual teaching process and countermeasures, it provides beneficial teaching methods and ideas for college teachers. However, the implementation of innovative teaching strategies still needs to be explored and practiced to meet the changing educational environment and needs of students. It is hoped that the research results of this paper can play a certain role to enlighten and promote the teaching reform and development of college teachers, and make a contribution to the cultivation of high-quality talents with innovative spirit and practical ability.

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