

An Attempt at Curriculum and Teaching Reform of Educational psychology Based on Constructivism

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Abstract: This paper aims to explore how the curriculum of Educational psychology based on constructivism can promote teaching reform. Firstly, the basic concepts and theoretical foundations of constructivist learning theory were introduced. Then, it analyzes the problems existing in the traditional education model, and puts forward the application of Educational psychology curriculum based on constructivism in teaching reform. Specifically, by comparing the differences in teaching methods, teaching content and teaching evaluation between the experimental group and the control group, this study verified the positive impact of the constructivist based Educational psychology curriculum on students' learning interest, thinking ability, creativity and other aspects. Finally, the main findings of this study and their practical significance for teaching reform were summarized.

Keyword: Constructivism; Curriculum of Educational psychology; Subject teaching

Currently, society is undergoing education reform, and the education system is facing more and more challenges. Traditional education can no longer meet the needs of modern society for talents. Therefore, educational reform is imperative. In this context, the curriculum of Educational psychology based on constructivism emerged at the historic moment. It is student-centered and focuses on students' independent learning and independent growth, which has great practical significance. This paper aims to explore the application and practical significance of Educational psychology curriculum based on constructivism in educational reform.

1. Overview of Constructivism Educational psychology Theory

1.1 The Basic Concept and Development Course of Constructivism

Constructivism is an educational theory that emphasizes learners building their knowledge and understanding through interaction and experience accumulation with their surroundings. Believing that knowledge has not been imparted to students. It is formed through the interaction between students and the external world.

The theoretical origin of constructivism can be traced back to the 1960s, when some psychologists began to question traditional teaching methods. They believe that traditional teaching methods place too much emphasis on the transmission of knowledge. Neglecting students' personal experiences and social interactions. Therefore, they proposed a new teaching method called "constructivist teaching method".

In the development process of constructivism, some important theories and concepts have been proposed. The most important concept among them is the concept of "meaning construction", which means that students construct their own knowledge and understanding through communication with the external world. In addition, there are such concepts as "Social constructionism", "contextualism", and "reflective learning", which are important contents of constructivism.

Over time, constructivism has gradually become an independent field in philosophy. And it has been widely applied in fields such as education and psychology. Today, constructivism has become a mainstream educational philosophy, accepted and adopted by more and more teachers and scholars.

1.2 The core viewpoints of constructivist learning theory

Constructivist learning theory is an educational theory that focuses on students, individual differences, active participation and Cooperative learning, and problem solving. Its core viewpoints include:

1. Individual differences

Constructivists believe that each student is unique, with different cognitive styles, hobbies, and learning styles. Therefore, teachers should respect the individual differences of students. Adopting different teaching strategies and methods, tailored to the needs of different students.

2. Active participation

Constructors believe that students should be the main participants in learning. And cannot become a machine forced to accept knowledge. Therefore, teachers should encourage students to actively participate in classroom discussions, raise questions, share experiences, etc., in order to promote students' initiative and initiative in thinking about problems.

3. Collaborative learning

The builder believes that: collaborative learning among students. Can promote knowledge sharing and exchange among classmates. At the same time, it can also cultivate students' social skills and teamwork spirit. Therefore, teachers should encourage students to carry out Collaborative learning in groups to solve problems and complete tasks together.

4. Problem solving

Constructivists believe that problem solving is the core process of learning, which can help students understand and apply the knowledge they have learned. Therefore, teachers should guide students in the process of raising, exploring, and handling problems, in order to enhance their independent problem-solving ability and creativity.

In a word, the core idea of constructivist learning theory is to focus on students, pay attention to individual differences, encourage

active participation and Cooperative learning, and emphasize problem solving. These viewpoints are of great guiding significance for both teachers' teaching practice and students' learning.

1.3 Research Status and Development Trends of Constructivist Learning Theory at Home and Abroad

Constructivist learning theory is a kind of educational concept that focuses on students, pays attention to individual differences, encourages active participation and Cooperative learning, and emphasizes problem solving. It has been widely applied and developed internationally, becoming a mainstream educational theory. In China, constructivism has also received increasing attention and research. In recent years, more and more domestic scholars have delved into the theoretical research of constructivism and explored its guiding and application significance in classroom teaching. In the future, education will continue to evolve with the development of society, and constructivism will be more widely applied and developed. At the same time, teachers also need to constantly study. To better meet the needs of modern education.

2. Curriculum Design and Implementation Strategies of Educational psychology Based on Constructivism

2.1 Principles of student-centered instructional design

Constructivist learning theory advocates student-centered learning. Teachers' teaching design should revolve around students. Therefore, in course design, it is necessary to pay attention to the following guidelines: first, pay attention to the individual differences and needs of students. Teachers should understand the individual differences of students' Learning styles, hobbies, cognitive level and so on, and carry out personalized teaching design according to these differences. Secondly, teachers should create a teaching environment and context that is conducive to student participation and cooperation. It emphasizes active participation and Cooperative learning. In addition, constructivists also emphasize the cultivation of students' ability to deal with problems and Critical thinking, so teachers should guide students to participate in the process of raising, exploring and dealing with problems.

2.2 Case Study on the Application of Constructivist Teaching Method in Various Disciplines

Constructivist teaching method is a student-centered, practical and exploratory learning teaching method. The author takes four subjects of high school Chinese, mathematics, English, and physical education as examples, and their application cases are as follows:

In the practice of Chinese language teaching, students can be guided to independently explore language patterns and cultural connotations through reading and creating literary works, and improve their Chinese literacy. For example, teachers can encourage students to collaborate in groups and create a novel or poem together, encouraging them to fully unleash their creativity.

In mathematics teaching practice, students can be guided to discover mathematical laws and application value through the operation and exploration of practical problems, and improve their mathematical thinking ability. For example, teachers can design some interesting math games or puzzles. Let students experience the joy brought by mathematics in games.

In the process of English teaching, teachers can train students' comprehensive English abilities through various means such as listening, speaking, reading, and writing. For example, teachers can organize activities such as role-playing English works for students and encourage them to actively participate in English communication.

In physical education classes, sports training and competitions can also be used to cultivate students' physical fitness and teamwork spirit. For example, teachers can organize students to participate in collective team competitions. Encourage students to cooperate with each other and complete tasks together, such as football and basketball.

2.3 How to apply constructivist concepts for teaching evaluation and reflection improvement

Constructivism theory mainly emphasizes students' active participation and Cooperative learning, so students' feedback and participation should be emphasized in teaching evaluation. At the same time, teachers also need to reflect on their current teaching methods. Continuously improving teaching quality. The specific measures are as follows:

Adopting multiple evaluation methods: In addition to traditional exam evaluation, various evaluation methods such as group discussions, work presentations, and oral presentations can also be used to comprehensively evaluate students' learning outcomes.

Establish a feedback mechanism: Teachers can collect feedback from students, such as questionnaire surveys, individual conversations, etc. Timely understand the changes in students' academic performance and their psychological demands. Provide reference for teaching improvement.

Continuous reflection and improvement: Teachers should reflect and summarize their teaching methods. The quality of teaching is constantly improving, students' interest in learning is constantly stimulated, and learning efficiency is constantly improving.

3. Practice and Effect Evaluation of Education Reform Based on Constructivism

In the educational reform, the curriculum of constructivist Educational psychology plays an important role. But its effectiveness needs to be evaluated and verified through experiments. The experiment we designed mainly has three experimental steps to explore the effectiveness and promotion value of Educational psychology curriculum based on constructivism in educational reform.

Select schools or regions to conduct teaching reform experiments and compare and analyze the effectiveness.

In order to evaluate the effectiveness of Educational psychology curriculum based on constructivism in educational reform, several schools or regions can be selected as experimental objects to compare their educational reform practice in a multi-dimensional way. This article proposes the following four dimensions:

*Teaching mode: Compare the teaching methods of the experimental group and the control group. See if the teaching mode that pays more attention to students' active participation, Cooperative learning and problem solving has been adopted.

*Teaching content: Compare the teaching content of the experimental group and the control group to see if there is more emphasis on students' personalized needs and independent exploration.

*Teaching evaluation: Compare the teaching evaluation methods of the experimental group and the control group. See if there is more attention paid to student feedback and participation.

*Student grades: Compare the grades of the experimental group and the control group to see if there is a significant improvement.

Conduct a questionnaire survey on the teacher and student groups separately

In order to understand the feedback and satisfaction evaluation of participants on constructivist education reform, multiple methods such as questionnaires and interviews can be used to collect feedback. Specifically, investigations can be conducted from the following aspects:

*The level of understanding and understanding of education reform based on constructivism;

*Satisfaction with teaching mode, teaching content, teaching evaluation, and other aspects;

*Evaluation of the degree of improvement in students' academic performance;

*Expectations and suggestions for education reform based on constructivism.

In order to make the survey results more scientific, separate surveys should be conducted on the teacher and student groups. When conducting a questionnaire survey on the student group, consideration should be given to students' understanding ability, knowledge accumulation, and other aspects.

Statistical analysis of experimental results

Through the statistical analysis of the experimental results, we can summarize the effectiveness and promotion value of Educational psychology curriculum based on constructivism in educational reform. Specifically, analysis can be conducted from the following aspects:

*Effectiveness of teaching mode: compare the teaching modes of the experimental group and the control group to see which teaching mode can promote students' active participation, Cooperative learning and problem-solving ability.

*Effectiveness of teaching content: Compare the teaching content of the experimental group and the control group to see which teaching content better meets students' personalized needs and independent exploration.

*Effectiveness of teaching evaluation: By comparing the teaching evaluation methods of the experimental group and the control group, we can determine which teaching evaluation is more effective in promoting student feedback and participation.

*Effectiveness of student performance: By comparing the performance of students in the experimental group and the control group, determine which teaching method significantly improves students' academic performance.

*Popularization value: by summarizing the experimental results, we can see what promotion value of the Educational psychology curriculum based on constructivism has in educational reform.

4. Conclusion and outlook

Based on constructivist learning theory, it plays a crucial role in educational reform, and its advantages are mainly reflected in the following three points: firstly, it focuses on examining the subject status of students. Emphasizing the cultivation of students' active participation, Cooperative learning and problem-solving ability can promote students' active learning; Secondly, it advocates personalized teaching, respects students' differences and diversity, and can better meet students' personalized needs; Finally, it emphasizes the role transformation of teachers, shifting from traditional knowledge imparters to learners and collaborators. It can promote the professional development of teachers and improve the quality of teaching.

However, the existing teaching model still has some shortcomings, such as the lack of deep thinking and Critical thinking of students, and the uneven distribution of teaching resources. Therefore, it is necessary to further deepen research and explore more suitable paths and strategies for education reform based on constructivism that are more suitable for China's national conditions. At the same time, it is also necessary to strengthen teacher training and research to improve their educational and teaching levels.

The development trend of education reform based on constructivism in the future will pay more attention to the comprehensive development of students and the cultivation of social practical abilities. At the same time, it will also pay more attention to educational fairness and improve the quality of education. We should actively promote education reform based on constructivism, continuously innovate educational teaching models and methods, and make China's education industry more powerful.

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