



Learning-centered teaching principles

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Abstract

At present, undergraduate education in China's teacher-centered teaching mode is constantly being questioned and is facing a "learning-centered" teaching reform, this paper applies constructivist theory to construct the basic principles of learning-centered classroom teaching, aiming to promote the practice of learning-centered classroom teaching in colleges and universities.

Keywords: Learning centered, constructivism, pedagogical principles

Introduction

The concept of "student-centered" covers four aspects: student development, student learning, student participation, and learning effectiveness. The concept of "learning as the center" fully embodies the people-oriented approach, lays a theoretical foundation and points out the direction for the in-depth promotion of curriculum teaching. To this end, the teaching of undergraduate courses in colleges and universities should adhere to the basic principles of "student development as the center", "student learning as the center", "student participation as the center" and "learning effectiveness as the center".

Adhere to the principle of student development as the center

Taking student development as the center refers to the main purpose of promoting student development as the judgment standard for achieving the goal of talent training and the main purpose of teaching quality evaluation, transforming traditional knowledge telling into cultivating students who can learn, think, analyze and solve problems, and have a sense of innovation and the ability to innovate. The traditional classroom pays more attention to the teaching of professional knowledge, so that the high-level goals such as value shaping and ability training in the "trinity" of value shaping, ability training and knowledge transfer in colleges and universities are only formal. Adhere to the center of student development, aiming to promote the all-round development of people and achieve personalized training. Therefore, curriculum teaching must adhere to student development as the center, promote the "trinity" of value shaping, ability cultivation and knowledge transfer college talent training goals are implemented in the curriculum, teaching materials, and classroom terminals, so as to realize the return of education and teaching.

Sub-principle 1: Learning objectives pay more attention to competency development and take into account students' differences

China's new national medium- and long-term education reform and development program plan also clearly states: "Adhering to people-oriented and promoting quality education is the strategic theme of educational reform and development, and is the requirement of the times to implement the party's education policy, the core is to solve

the major problems of who to cultivate and how to cultivate people, the focus is on all students, promote the all-round development of students, and strive to improve students' sense of social responsibility in serving the people of the country, the innovative spirit of courage to explore and the practical ability to solve problems". It can be seen that capacity development is more important than the transmission of knowledge, and in "learning-centered" teaching, the learning goal is not only the acquisition of knowledge, but also the cultivation of ability, especially the ability to solve problems, the ability to collaborate and the ability to innovate. It is conducive to the independent development of students.

Sub-principle 2: Inquiry-based principles that emphasize learning

The principle of inquiry that emphasizes learning is to emphasize that learners should have an inquiring spirit in the learning process. In the learning process, in a similar way to scientific research, the research methods and research processes of simulation scientists creatively solve various problems, such as through thought inquiry, project research, scheme design, simulation experience, Experimental operations and social surveys explore various issues closely related to scientific and social life. Inquiry-based learning can fully mobilize learners' subjective initiative, activate their thinking, and turn the learning process into a vivid process of knowledge construction. So as to stimulate learners' imagination and creativity, and cultivate learners' innovative quality and innovation ability.

Adhere to the principle of student learning centered

Taking student learning as the center is to take learning as the core goal of the teaching supply system, teaching is the means, and learning is the goal. Adhere to student learning as the center, that is, based on the teaching content of professional courses, build a professional experiential learning scene, instructor-led, student-oriented, learning-centered, so that students through experience, exploration, thinking, practice, discussion and other diversified ways to carry out deep learning, teachers are no longer just lecturers of knowledge, but need to play more key roles, teachers are learning guides, promoters, Organizers and administrators, at the same time, teachers are also the designers of learning

activities, the creators of learning environments, and the tutors of the learning process, and teachers play the role of leading, designing and guiding, with the ultimate goal of allowing students to learn to construct learning. This can be achieved through teaching and practical activities taken by teachers in the classroom and through students' active learning, thinking and practice.

Sub-principle 1: Adhere to the teaching principle of advocating self-directed learning

Constructivism believes that learning is the process of meaning construction that learners take the initiative, and the key to the occurrence and quality of learning lies in whether students learn, not whether teachers teach. Self-directed learning requires individuals to have a conscious awareness and response to questions such as why, whether, what, and how to learn. Independent learning is learning-centered, emphasizing that students are the main subjects of information processing and active constructors of meaning, rather than passive recipients and indoctrinated objects of external stimuli. Students need to make learning a part of themselves, and let independent learning become "able to learn" - "want to learn" - "can learn" as well as the ideal progression of "persistent learning". In self-directed learning, the role of the teacher is to provide students with clues to solve problems, pay attention to developing students' self-directed learning skills, and encourage students to suggest new reading, thinking, projects or curriculum activities. Require students to show their creativity, thinking, works, etc., and encourage students to challenge your ideas with respect. Other students' ideas or ideas presented in readings or other course materials, setting problem-solving activities in small groups, and having each group discuss their solutions with the class, and so on.

Sub-principle 2: Design and build learning environments that stimulate and support self-directed learning

The "student-centered" classroom should build a good learning environment for students, provide students with a beneficial learning atmosphere, effective resources and tools, and through "operation", "internship", "practice", "investigation", "investigation" and other activities, multi-angle Thinking on multiple levels, better understanding knowledge and independent learning in the process of problem solving, and constantly obtaining the "satisfaction" and "sense of achievement" of success "and other positive emotional experiences that motivate and support students to become active meaning constructors." The "student-centered" classroom encourages a democratic and interactive classroom atmosphere, guides and encourages mutual respect and appreciation among students, and allows students to establish friendly communication and mutual assistance relationships, so as to achieve their own progress or improve their intelligence level, and fully realize the unity of cognition and emotion. In addition, teachers should be good at using the library, the Internet and the resources around them, including tools and software, integrate them into learning resources, tell students how to search and apply various useful resources for learning, and how to use tools and software to carry out Cognition, reflection, inquiry, communication, cooperation and other activities to learn.

Sub-principle 3: Collaborative principles that promote learning

Advocate the collaborative principle of learning, that is, emphasize the adoption of various forms of collaborative learning methods, such as discussion, negotiation, cooperation, competition, role play, etc., to jointly explore, communicate and question each other on issues related to a course, promote cooperation and interaction between learners and other learners and with teachers, so as to generate new and higher-level understanding of knowledge in the contrast of multiple perspectives, and cultivate learners' critical thinking and divergent thinking skills in collaboration to improve learners' collaborative skills, collaborative personality, and collaborative spirit.

Sub-principle 4: Principles that reinforce the use of learning media

Giving full play to the role of modern information technology and teaching media as tools is a strong guarantee for proactive knowledge construction. Modern media technology can not only provide real situations, typical cases and massive information, but also promote learners' cognitive processes and communication exchanges, with the help of learning media such as MOOCs, online resources, audio-visual CDs, various courseware and other media resources. Effective use and integration can also develop the ability to collect, collate, analyze and judge information and the ability to conduct scientific research.

Adhere to the principle of student participation

Student-centered participation means to protect students' right to know, participate and choose, and to ensure students' active participation and effective participation in the teaching process and evaluation process. In the learning-centered classroom, student-teacher interaction, student-student interaction, and teamwork are the main forms of learning. Teachers are neither the only providers of learning knowledge nor the only answerers, students can learn more knowledge and gain more specific learning experience through interaction.

Sub-principle 1: The principle of self-directed learning by students

In the "learning-centered" classroom, students no longer rely solely on teachers to complete learning tasks, but also encourage and promote students to acquire effective learning strategies and skills through reflection and communication, so as to provide strong support for students' independent learning.

Sub-principle 2: Principles of diverse teaching strategies

In teaching, diversified teaching strategies should be used, allowing students to participate in a variety of learning activities and obtain more learning experiences, so as to continuously mobilize students' interest and motivation in learning, and adapt to students' differences in learning preferences and initial abilities. In the "student-centered" classroom, teachers guide students to think deeper through deepening heuristic questions, let students gain new perspectives and inspiration through peer discussions, and gain opportunities for knowledge transfer and application by participating in learning tasks, so as to promote students' in-depth learning and knowledge application.

Sub-principle 3: Principles of diverse teaching activities

The "student-centered" classroom allows students to participate in learning activities that encourage reflection,

collaboration, inquiry and innovation, and consciously cultivates and develops students' problem-solving, collaboration, innovation and other abilities in the activities, so that students can learn to discover, research and solve problems, learn to cooperate with others, learn to help, learn to seek help and resources, and become practitioners with critical spirit and innovative spirit. Therefore, in practice, some science teachers do not present formulas or methods directly to students, but design some activities for students to explore formulas by themselves. Others help students learn to cooperate with others by designing a variety of group learning or cooperative learning tasks based on learning content and goals.

Sub-principle 4: Adhere to the pedagogical principle that collaborative learning plays a key role in meaning construction

Collaborative learning is a learning activity supported by specific learning situations conducted by learning groups of individuals who share common practices, beliefs and philosophies. Collaborative learning does not focus on the learning and training of specific skills and knowledge in isolation in traditional school learning scenarios, but it focuses more on the interaction between learning groups, providing students with opportunities to actively participate and engage in meaning-building negotiation through practice. Examples include requiring students to join an organization on campus, assigning group projects and presentations, encouraging students to participate in group discussions while preparing for exams and completing assignments, and so on. Through this collaborative learning environment, members of the entire learning community critically examine theories, ideas, and hypotheses, negotiate and debate, and jointly complete the construction of what they have learned. At the same time, communication between collaborators helps learners build new and deeper understandings, and learners can better monitor their own understanding and thinking processes. It is more conducive to achieving a common understanding of problems, promoting the construction of meaning for learners, and promoting students' high-level thinking learning activities.

Sub-principle 5: Adhere to the pedagogical principle of providing necessary assistance to learners

Constructivism holds that giving students autonomy to learn does not mean that everything students do is effective and that they need to be properly helped when they encounter difficulties. The appropriate here means that the assistance provided by teachers cannot bind the learner's thinking, let alone tell ready-made answers, but should mainly play a role in consultation, demonstration, and questioning. Guide or dial, motivate, the role of coaching. By constantly provoking students to think deeply, teachers question and point out students' deficiencies in their concepts in discussions, assignments, explorations, reports, and proofs. When students make progress, teachers should give them appropriate praise and motivation in time, so that they can experience the joy of success and maintain the motivation to keep improving. At the same time, in order to effectively help students correct mistakes, teachers should pay attention to creating an appropriate external environment to help and promote students' self-reflection.

Adhere to the principle of focusing on learning outcomes

Focusing on students' learning effectiveness refers to paying attention to learning effects, and there are two meanings here: (1) taking teaching goals as the guide, concretizing them into every link of teaching design to ensure the effective achievement of teaching goals; (2) Pay attention to the learning effect, provide timely feedback for the implementation of teaching, and ensure the effectiveness of teaching and learning. Through quality control and feedback mechanism, guided by high-level goals such as value shaping and ability cultivation, the integration of teaching content, the diversity of teaching methods, the authenticity of teaching scenarios and the process of teaching evaluation are highlighted. Encourage students to continuously improve their learning behavior.

Sub-principle 1: Evaluation aims to promote and improve learning

The purpose of "student-centered" classroom assessment is to promote and improve learning, so learning evaluation should pay more attention to the learning process, timely identify problems in students' learning through various formative assessments, and give effective feedback and guidance.

Sub-principle 2: Encourage student participation in the evaluation principle

"Student-centered" classrooms should adopt a multi-subject assessment approach, and in addition to teachers, students and their peers should be encouraged to participate more in the assessment to ensure the comprehensiveness of the assessment and promote students' reflection on their own learning. "Student-centered" classrooms should provide students with evaluation standards that correspond to learning objectives and involve students in the development of evaluation standards, thereby motivating students to be more responsible for their own learning behavior.

Sub-principle 3: Diversified evaluation principle based on competency evaluation

In addition to using objective tests such as fill-in-the-blank questions and multiple-choice questions to evaluate students' knowledge memory and comprehension level, it also evaluates students' knowledge application level and comprehensive ability by examining students' problem solving, theme exploration, performance and achievement in learning projects. It is important to note that the goal of evaluation is to improve and refine student learning. Only by meeting this goal first can teachers adopt as diverse a variety of assessment methods as possible.

Sub-principle 4: Adhere to the teaching principle of free evaluation

It is more important to evaluate how learners construct knowledge than to evaluate the resulting cognitive outcomes. It is therefore important to integrate evaluation into the process of pedagogical activities. In order to avoid bias caused by predetermined goals, the objectives of evaluation should be relatively free, not standard references, and it is best to evaluate in a rich and complex teaching environment. In such teaching activities, teachers design various tasks and topics for students, and students themselves clarify the essence of the problem and seek solutions to it. In the process of problem solving, students should constantly monitor and evaluate their understanding

of knowledge, judge their own progress and gaps with goals, and adopt various corresponding strategies, which require learners to complete independently and cooperate with others, thus reflecting the autonomy of learning

The corresponding teaching principles are given above from the four different goals of learning-centered, and it should be noted that "learning-centered" teaching does not unconditionally meet the needs of students. When combining the characteristics and needs of students, we must not forget that the goal of teaching is to promote students' learning and development, not to teach students what they want to learn. It should also be emphasized that "learning-centered" classrooms are still classrooms conducted under a specific teaching plan, and need to take on specific teaching tasks to help students achieve specific learning goals within a certain number of lessons. Therefore, teachers should not be too dogmatic when borrowing various "student-centered" classroom teaching principles, should make flexible and appropriate adjustments and innovations according to specific conditions, effectively adhere to the needs of students and learning rules, ensure that students can participate in learning in the classroom, and avoid greatly reducing the efficiency of teaching in order to pursue students' autonomy.

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