Discussion on the Characteristics and Implementation Path of Innovative Teaching

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Abstract. On the basis of human's natural attributes, human's social attributes can be realized by the unity of their own motility and passivity. This paper discusses how to respect and give full play to students' natural attributes, correct the active and passive relationship in teaching, so as to tap students' maximum potential, then make them become the main body of teaching and scientific research, and realize the unity of human's natural attributes and social attributes.

The Background of Times

Reform Should Keep Pace with the Times

"We need to deepen educational reform, promote quality education, innovate educational methods, improve the quality of talent training, and strive to form an educational environment conducive to the growth of innovative talents." This is the instruction of General Secretary Xi to every educator. Innovation is the innovation of personnel training and knowledge application; innovation becomes a hard standard to measure the level of education, rather than simply emphasizing "discipline construction" and "scientific research articles".

Today, we should keep ourselves clean and get rid of the temptation of money worship. In the face of students who leave their parents and step into colleges and universities alone, they should completely devote themselves to teaching and educating people, and never just teach and not educate people. This is an eternal theme[1].

The Teaching Method of Infusions Has Shortcomings

National development strategy needs to absorb and apply culture in a timely and creative way in the process of cultural inheritance. Contemporary college students are the natives of the Internet, and "web celebrity" has become a synonym. In order to seek knowledge and realize their own ideals, their struggle is characterized by individuality and eclecticism. The Internet has broken the original image of teachers as the knowledge authority and the inexhaustible source of knowledge for students for a long time. It has cultivated students' characteristics of advocating equality, fairness, pursuing self-perception and self-value, being confident and innovative[2].

Therefore, students' curiosity makes them eager to learn what they cannot know, and they are problem-oriented to perceive knowledge in practice, so as to solve problems on their own. A teacher once said, "what do undergraduates do?" This sentence is not talking about students, but about yourself, don't forget "you are the people's teacher".

Then the growth of contemporary students needs to combine the traditional Chinese Confucius answering teaching mode with the traditional western Socratic answering teaching mode organically, and return the classroom to students, so that students can truly become the subject of learning and practice.

Innovation Becomes the Purpose of Teaching

The explosive development of information society depends on the correct and full play of people's subjective initiative, which is the highly respected expression of people's natural attributes. Knowledge is selectively absorbed and processed in learning, which lays a foundation for the creation
of innovations rich in individual connotation, just like marxism-leninism combined with Chinese social practice and gave birth to MAO Zedong thought, Deng Xiaoping theory, three represents, scientific outlook on development and socialism with Chinese characteristics for a new era.

Similarly, the methodology of human understanding of the world needs to keep pace with the times, no longer confined to traditional classroom teaching, but spontaneously to the sea of knowledge, showing their respective ability. In reality, many colleges and universities' teaching methods remain in the state of infusing, information is asymmetric, scarce and difficult to understand, and knowledge sources are single. The Internet has diversified the channels of knowledge dissemination (such as MOOC[4]). Instead of going to the library, the reference room or even the classroom, students simply stay in the dormitory to acquire the knowledge they need and then innovate spontaneously. So simple teaching and learning, boring "scripted" indoctrination students can accept it?

In order to realize innovation, colleges and universities not only provide students with a treasure house of knowledge to cultivate their thinking and ability, but also rely on students' nature and rationality to stimulate their natural potential and realize the blooming of a hundred flowers and the contention of a hundred schools of thought on the basis of ideology and politics.

Innovative Teaching and Its Concept

Connotation of Innovative Teaching

Innovative teaching is an interactive transfer of knowledge between learning and practice, motivated by students' subjective initiative. The past experience is a learning process, not a result. Experiential learning is a continuous process based on experience. It is the process of resolving conflict in the dialectical mode of opposition and the process of continuous interaction between individuals and the environment. Experience process is long, the knowledge experience long time reserve can talk about the practice of education, lack of timeliness[3]

Innovation is the sublimation of knowledge in practice and the result of individual labor recognized by the society. Innovative teaching realizes the organic combination of personality and practical activities, individual and collective. To this end, one is to respect individuality and carry forward; the second is to arouse the energy that nature has given him; third, to promote students in the common cause of mankind to play the greatest strength. Therefore, the teaching activities with the basic value orientation of cultivating students' innovative spirit and innovative ability will be the innovative practice based on experience. Its core is in the process of comprehensive implementation of quality education, the basic policy of undergraduate teaching is how to cultivate students' innovative consciousness, innovative spirit and innovative ability, rather than stay in the oral.

Students are the main body of learning and the main force of innovation, which is the basic form of innovative teaching. On the teaching platform, teachers give students the fulcrum of learning, let students look into the future, expand the wings of dreams, dare to participate in or spontaneously create scientific research projects, fill their minds with practice, and make learning spiral. Its value not only lies in students' learning methods and experience, but also embodies in guiding students to acquire the interest of putting what they have learned into practice, forming a mind structure that combines rich spiritual world and diversified professional skills, and finally generating the starting point of planning their life.

Outstanding Features of Innovative Teaching

The foundation of traditional cognitive theory is infuse behaviorism, which emphasizes "stimulus-response" and regards learners' cognition as a passive response to external stimuli. This kind of theory does not talk about learning and application "time effectiveness".

The aim of complete experiential teaching is "experience". Although it is clear that students are the subject of learning, there is a lack of practice to promote the further improvement of theory.

Innovative teaching is a teaching method under the guidance of constructivism of spontaneous innovation. The essence of innovative constructivism is to emphasize that learning is based on the
internal psychological process of the subject, and students are regarded as the subject of information processing, application and creation, and based on the individual's natural attributes, so as to obtain positive energy for their own use[4].

Obviously, the core difference of the three teaching methods lies in the space-time difference between learning and innovation. The former teacher-centered theory, teaching first, learning and practice separated; the middle school is student-centered, learning stays in the experience stage; the latter is student-centered and advocates the application of learning in order to promote learning and innovative development.

The Implementation Path of Innovative Teaching

According to the above ideas, the author has carried out the following work in the teaching practice of polymer chemistry.

Clear Goals

Economic marketization, school education should have hematopoietic function, what pay more attention to is the contribution of discipline major to the society. For this reason, freshmen start to guide students' expectations of their major as soon as they enter the school, encouraging them to leave a lot of things to the school in their four years of life. It's not about what to learn, it's about how to live your life to the fullest. Not in how to survive, but how to play their role, in the society will have a reasonable positioning. Then, the student begins to plan the life; "Not afraid to fail, to explore, to figure out why you're doing it and how you're doing it?" become the subject of their thinking and practice.

Change Roles

Students learn to define goals and teachers have a tutorial system for students. Students are no longer passive recipients of external stimulation, nor are they merely active constructors of information processing or knowledge meaning in theoretical learning. Instead, they are constructed into subjects of learning, innovation, re-learning and innovation in various ways. Even senior students can become "teachers" of junior students. According to the tutorial system, students participate in the research of the subject according to their own ideas and solve the "why" problem. The teacher presents the most advanced and cutting-edge scientific research to students, and gives them honors or rewards, so as to cultivate the entrepreneurial spirit of "independence and self-reliance".

Spontaneous Learning

Innovative teaching breaks the restriction of academic system and major, and teachers become students' real mentor. For example, the teacher first describes the theoretical points of the textbook in detail and in depth, and inspires the students to grasp the essence and experience the knowledge points of each chapter in time. Students continue to digest and perfect theoretical knowledge from the shallow to the deep, so that the teaching materials learned by thin become thick, and then by thick become thin, to achieve the condescending effect.

Assessment is the summary of teaching, the content of students to summarize, the way to achieve mutual examination. The content of the textbook is allocated to students according to the chapters, and each part of the content is collected as the test question bank, from which 60-80% of the assessment content will be generated, and the remaining 40-20% will be raised by the teachers according to the circumstances.

As for the experimental course, teachers' proposition and students' independent design are adopted. According to the proposition, the student designs the experiment plan, and the teacher grasps the safety only then carries on the experiment. The purpose of experimental teaching is to make students analyze the phenomenon and conclude "why". That is to say, whether the experimental results are "success" or "failure" in the traditional sense, as long as you really know the "why" is success; Otherwise, it is a real "failure"[5].
Implementing Innovative Practices

In innovative teaching, the content of the course is no longer limited to the scope of the outline, but is designed or arranged to experience tasks of different levels and themes. The task requirements and progress requirements are clarified and corresponding assessment is conducted. Students choose scientific research topics according to their interests and study independently.

Encourage students to learn by analogy. Students can choose any course according to their own needs. At the same time, forum is opened to contend with a hundred schools of thought, so that the learning efficiency and influence degree are increasingly improved, even higher than the effect of teachers' teaching.

Strengthen ideological and political work, call on students to look to the world, the country rise and fall of the individual dream relying on the motherland. "One Belt And One Road" and 2025 strategies bring new opportunities and challenges to students. Students' enterprising spirit, sense of responsibility and spirit of hard work have become the main theme of today's education. To grasp the time in school, improve professional skills and cultivate excellent psychology are the abilities that contemporary college students should have in face of challenges.

Implement the Role of Fulcrum

First, teachers should make clear the relationship between scientific research and teaching. Teaching is the foundation and guarantee of scientific research development, while scientific research is the power and source of teaching development. There is no time limit between scientific research and teaching, and students are always the subject of teaching and scientific research. The student-centered theory emphasizes the active innovation experience of learners, but it does not mean that learners should be left alone. In innovation practice, students will encounter all kinds of difficulties or setbacks, which is indispensable. Teachers should respect the different characteristics of each student, provide the most appropriate guidance for each student, and enhance the confidence of students. At the same time, teachers should be good at summing up and reflecting, and strengthen students' sense of urgency to complete innovative practice.

Preliminary Study on Implementation Effect

Students are a vital force in the development of science and technology. Learning is the cornerstone for students to give full play to their intelligence and talents to realize their dreams of science and technology. The duty of teachers is to protect students' interests and hobbies to the greatest extent, so that students show a positive creative spirit.

First, pay attention to human rights, teachers and students treat each other equally. Secondly, fulfill the natural attributes of human beings and give full play to the talents of students. Thirdly, realize the organic combination of natural and social attributes of human rights.

Taking innovative teaching, teachers and students to get along with friends, each other no longer for teaching content outside the affairs of energy. The teacher is free and easy in teaching, the student listens to the class actively earnestly, and occasionally ask questions they do not understand, manifests between the teaching and the study upward, the harmony.

In scientific research practice, in 2017, a student improved an organic synthesis process that required repeated heating, which was tedious and complex and took tens of hours to complete, to room temperature reaction for several hours, and applied for a national patent. In 2018, another student built a reaction device to achieve stable anion polymerization in an inert solvent. These not only ensured the demand that the student graduates, more after graduation choose a profession, take an examination of grind laid a foundation.

Conclusion

The preliminary results show that compared with previous teaching methods, innovative teaching can stimulate students' enthusiasm and initiative in learning and improve the teaching effect more
effectively, especially in behavior change and thinking improvement. To some extent, innovative teaching embodies the spirit of The Times and the requirements of the essence of current education.

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