Based on STEAM Education Concept-Constructing “Craftsman” Innovative Talents Training Mode

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Abstract: As our country enters a new era, the government is increasingly aware of the importance of education, especially the application of new educational methods in teaching. However, a series of problems in the current higher education have led to the failure of colleges and universities to meet the due standards in cultivating “craftsman-type” innovative talents, and there will also be differences in learning ability and interest among different students. Therefore, we need a new educational concept to improve the learning interest and learning ability of college students. Contemporary teaching teachers should adopt new teaching methods in the process of class teaching to help students find their own learning methods and find the direction of their efforts.

Keywords: STEAM educational concept; “Craftsman Type”; Innovative talents; Cultivation mode

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1. Introduction

Reform of education also puts forward higher requirements for teachers and trains innovative talents of “craftsman type”. It needs a suitable educational concept to support it. In order to enable the country to have more innovative talents, STEAM educational concept is needed for teaching. Among them, “STEAM” is composed of four words, they are: science, technology, engineering and mathematics. These four words not only represent a subject, but also show the most basic concepts used in the subject, which are then transformed into teaching methods, requiring students to be serious,
rigorous and realistic in each subject. In the process of learning, cultivate one’s own innovative consciousness and craftsman spirit.

2. The Problems Existing in the Current Educational Concept

In the traditional teaching mode, students’ learning is only to cope with the examination, and they do not deeply study the real knowledge in class. Teachers also transfer knowledge from a single aspect. Such teaching mode will limit students’ vision and pattern. Moreover, teachers’ theory is greater than practice in teaching and do not provide more practical opportunities, so students’ learning is only the understanding of book knowledge and does not have much practical experience. On the other hand, students are more inclined to accept knowledge passively and cannot actively learn content other than textbooks. In the long run, students will be lazy in thought, lose interest in learning, and gradually become tired of learning, with poor initiative. In addition, educators often neglect the cultivation of students’ innovative consciousness, which is especially important. It can not only help students improve their initiative in daily study and life, but also find more problem-solving methods and ideas. Unfortunately, the evaluation standards at this stage make teachers pay more attention to the final examination results of students and ignore the efforts and progress space made by students in the learning process. Such teaching methods and educational concepts obviously do not conform to the teaching development trend in the new era. Moreover, teachers are more self-centered in the classroom teaching process, regarding students as a participant and ignoring the dominant position of students, which is not conducive to the cultivation of students’ independent thinking and self-innovation ability.

3. The Importance of STEAM Educational Concept

STEAM educational philosophy plays a very important role in education. It can not only help students find their own learning methods, correct their learning mentality, solve non-knowledge problems in the learning process and find measures that need improvement, but also cultivate students’ interest and practical ability in combination with learning skills of classroom content to create their sense of responsibility. The learning atmosphere in the school is relatively relaxed and pleasant. The students’ psychology is easily interfered by the outside world. Students who are not strong in bearing capacity will be impacted psychologically to a large extent and cannot complete the learning tasks they should complete. The STEAM educational concept can broaden students’ innovative thinking and guide them to consider problems from a new perspective in the process of answering questions. STEAM educational philosophy can help college students form correct three views and prevent them from forgetting their
duty as students and going astray in the process of studying. In addition, STEAM education concept can help students to establish a more complete learning system and comprehensively consider the importance of learning. The application of STEAM education concept in teaching can also enhance students’ initiative and enthusiasm in learning. It can be seen from this that the beneficiaries of STEAM’s educational concept are not only a single student, but also have a positive and upward promotion effect on the whole country at a deep level.

4. Specific Implementation Measures of STEAM Educational Concept

(1) The Method of Case Teaching

Case teaching method is a very effective teaching method in the early teaching methods in the United States, with relatively dynamic and open characteristics. Educators give cases and then combine audio, images, videos and other methods to teach students knowledge. Case teaching method can greatly improve students’ enthusiasm and initiative in learning knowledge. From the past situation, what they lack is practical experience, and case teaching method can make up for this deficiency to a certain extent. In fact, this method is more to instill students with a learning and thinking ability, in order to more powerful digestion and absorption of knowledge.

In addition, case teaching method can also be combined with group discussion. After the teachers asked the questions, the students were divided into several groups. The students analyzed the cases in groups and discussed the final results. Then they sent a representative to elaborate the views of the group as a whole. Teachers can analyze and summarize the cases by sublimating the viewpoints summarized and analyzed by each group, and judge the group closest to the correct answer. The combination of case teaching method and group teaching method can help students develop innovative thinking and ability. It not only enhances the students’ independent thinking ability, but also strengthens the team cooperation ability among students. Finally, it also highlights the concept of mathematics in STEAM’s educational concept.

(2) Change the traditional teaching mode and regard students as the center of classroom teaching

The traditional teaching mode takes teachers as the center of classroom teaching, allowing students to carry out divergent learning. However, this kind of teaching mode often ignores the students’ inner thoughts, resulting in many of their more innovative views that cannot be expressed. They just blindly understand and remember the knowledge points conveyed by teachers, fail to exert their imagination, fail to raise their own problems, and lack interaction with teachers. In order to keep up with the
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development trend of the new curriculum reform, educators need to turn the teaching center of the classroom to the students, give the students sufficient time and space to explore their own problems, so that the students can actively learn knowledge and express and transmit their most real thoughts, thus improving the learning efficiency of the students in the classroom. The student-centered teaching method can help students master the initiative at the technology level and cultivate their innovation ability.

(3) Enrich classroom activities and strengthen communication between teachers and students

The curiosity of the students in the student age is often the strongest. Teachers can plan the classroom according to activities to arouse the curiosity of the students and enhance their interest in learning. It is not difficult for us to see that students are not interested in the traditional teaching mode, and STEAM’s educational concept is to guide students’ learning status from all aspects. For example, we can enrich classroom activities in class, and increase communication between students and students and teachers. In this way, teachers can not only teach students their learning ability at the first time, but also can understand the problems existing in the current stage.

(4) Cultivate the Innovative Spirit of “Craftsman”

In order to cultivate students’ innovative consciousness and craftsmanship spirit, teachers can play examples of innovative talents with craftsmanship spirit to students in the classroom teaching process, so that students can further feel the importance of innovation consciousness and craftsman spirit in their daily learning. Through the analysis and summary of success stories, find out some bright spots, so as to apply them to their daily study and cultivate their innovation consciousness and craftsman spirit.

5. Conclusion

STEAM is one of the most effective educational concepts nowadays. Based on this idea, students’ innovative consciousness of “craftsmanship” is cultivated and we must proceed from the specific problems existing in the educational concept at this stage. This paper analyzes the importance of STEAM education concept to the cultivation of “craftsman” innovative talents, so that more talents can be cultivated for the country by adopting teaching methods such as case teaching method, changing teaching center, taking students as the main body, enriching classroom activities, strengthening communication between teachers and students, and cultivating students’ craftsman spirit and innovative consciousness.
Works Cited


