

Application of Inquiry Teaching Method in Biology Teaching in Colleges and Universities

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Keywords: Inquiry Teaching Method; Biology Teaching; The Teaching Reform

Abstract: with the rapid development of the era, and the teaching method in our country is also undergoing changes. At present, the country is actively adopting inquiry teaching method in the course teaching, this method has been used as a kind of new teaching methods in the course, this method is consistent with new curriculum standard after new curriculum reform with remarkable characteristics, that is, applicability. Therefore, each subject in colleges and universities in the process of teaching are actively using this method. This paper elaborates from the following aspects. First of all, it analyzes the application significance and application steps of the inquiry teaching method, that is, in the biology teaching in colleges and universities. At the same time, it analyzes the specific application of the inquiry teaching method in the biology teaching in colleges and universities.

Nowadays, the colleges and universities in China are actively using inquiry teaching method, which is especially popular among biology teacher in colleges and universities, at the same time, more and more college students recognize this method with acclaims. Besides, this method is known as one of the main teaching method in the current university biology class, and has achieved significant effect. The major reason lies in the fact that the inquiry teaching method has significant practical significance, which will benefit the development of biology teaching practice.

1. The Significance of the Application of Inquiry Teaching Method in Biology Teaching in Colleges and Universities

For inquiry teaching method, it has significant realistic meaning, therefore, it is necessary to know about this approach in a timely manner, especially its application in the biology teaching in colleges and universities, including two aspects, first, to deepen our understanding of inquiry teaching method through the use of inquiry teaching in the process of biology teaching in colleges and universities. Secondly, through the use of inquiry-based teaching methods, teachers can constantly improve the application of inquiry-based teaching methods in the process of biology teaching in colleges and universities. Based on this, inquiry-based teaching method can play a more effective role in the teaching practice of biology in colleges and universities, which is endowed with meaningfulness.

1.1. It is Conducive to Enrich the Teaching Method System of Biology in Colleges and Universities

At present, most colleges and universities carry out biology teaching based on the specific standards of the new curriculum, making its teaching effect more and more remarkable. Through this reform, the development of education will be promoted. This involves the reform of teaching methods, and the content is taken as a key point to grasp. People put the inquiry teaching method as a new teaching method, and it is formed with reform of teaching method. With the continuous reform of new curriculum, this method can meet the specific requirements put forward by the new teaching material in biology and based on the use of this method, biology classroom atmosphere is becoming more and more active. Meanwhile, students can actively participate in the teaching

process. As for the inquiry teaching method, it pays more attention to the comprehensive development of students themselves, and relies on the learning method of independent inquiry to achieve the goal. If a teacher can actively use the inquiry teaching method in the biology teaching, a relatively complete teaching methods based integration system and other teaching methods like discussion-based teaching, problem-based teaching method, case teaching, etc., can be developed. In addition, this method can achieve integrated effect, which fails to be achieved by other teaching methods. namely in the biology teaching practice. Therefore, if teachers can use the inquiry-based teaching method in college biology, the teaching method system of college biology will become more and more diversified.

1.2. It is Conducive to Improve the Teaching Effect of Biology in Colleges and Universities

According to the research findings, at present, most colleges and universities have the following phenomena, that is, in the biology class, these phenomena are mainly demonstrated as follows: Some students are unwilling to learn and have a psychological resistance to learning. Based on this situation, it is necessary for teachers to take active measures to mobilize students' autonomy and enthusiasm. Finally, the teaching effect of biology class is becoming more and more significant, which is also a relatively important problem that needs to be solved by biology teaching teachers in colleges and universities. Since the emergence of inquiry teaching method, the traditional teaching method with teachers and text books as the center has changed, the subject status of the students is particularly important. At the same time, the essence of this method is to achieve cooperation and mutual assistance between students and explore the autonomic activities. As a result, the way of learning of students is changed. Finally, the ability of students is constantly improved, so that they can actively find and analyze problems, and finally achieve the purpose of solving problems. In order to achieve this goal, teachers need to take measures to actively mobilize students to enable students to conduct active learning, which can also promote the development of their personality. Correspondingly, the past classroom mode in biology with tediousness was thoroughly changed, making the inquiry teaching methods more and more vigorous and the teaching efficiency in biology classroom is improved so as to ensure that the achievement of teaching effect in biology in colleges and universities [1].

1.3. It is Conducive to Promote the Comprehensive and Coordinated Development of College Students

Teachers provide services to students no matter what methods they use in the process of teaching. As a result, students are developed in every aspect. The real goal of education is to improve the development of students in every aspect and to make sure that teachers use this method more effectively. The multiple aspects of the development of students mentioned here are as: To continuously improve the knowledge of students, which include the improvement of the comprehensive quality of students, including students' attitudes, emotions obtained by students based on their continuous efforts. If teachers expect to adopt inquiry teaching in biology class in colleges and universities, they need to guide students to explore independently, based on the use of the means of learning, students' main body role has been played out in the whole learning process, so that students can carry on the experience, explore independently, Students can cooperate and help each other, and finally students can complete the study of biology knowledge more effectively [2]. At the same time, they can apply what they have learned to solve practical problems, especially it is conducive to the improvement of students' various abilities, which include the followings: Analytical thinking skills, interpersonal skills, practical skills and so on. At the same time, students' innovative consciousness and enterprising spirit can be cultivated, which greatly improves the comprehensive quality of students and makes all aspects of college students get efficient development.

2. Application of Inquiry Teaching Method in Biology Teaching in Colleges and Universities

When carrying out biology teaching in colleges and universities, teachers need to follow specific

steps if they want to use inquiry teaching method[3].From the perspective of the whole process of biology teaching, it includes three aspects: setting up biology teaching situation, introducing biology teaching, timely instructing and evaluating, etc.In order to better complete the three steps that need to give full play to student's main body status in the whole learning process, the teacher, at the same time, should take measures to improve the students' interest in exploring to enhance the inquiry learning ability of students[4], in this way, the teachers in the college can achieve more scientific and reasonable application based on inquiry-based teaching in biology teaching, thus making the education in biology more effective.The followings are explained in a detailed manner.

2.1. Creating A Situation to Stimulate Students' Interest in Exploration

If teachers want to use inquiry teaching method when carrying out biology teaching, they first need to create a situation for students. The situation here refers to many aspects that can influence students' learning, and even affect students' acceptance of new knowledge, new technology and new ability. In addition to the external environment that influences students' learning [5], the situation mentioned here also includes students' own thinking, students' attitude and students' emotions. When inquiry-based teaching method is used, it needs to be completed in the way of problem solving. Therefore, teachers need to carefully design problem situations to better carry out biology teaching based on this. When creating a situation for students, teachers need to ask targeted questions. Only in this way can students' attention be attracted, and eventually students are introduced into this situation, which is related to biological problems. That is to say, teachers create a relatively complete problem situation for students to ensure that their exploration activities are carried out effectively, and students become more and more interested in the exploration activities. When teachers create problem situations for students, they need to have a good grasp of three aspects of problem situations, namely purpose, adaptability and vividness[6].In other words, the teacher needs to control the difficulty of problems that are raised based on the mastery level of students in biology. By setting lively and curious biological problems, students' interest in inquiry activities can be stimulated [7], so that they can choose appropriate methods to solve the inquiry problems, and finally the goal of biology teaching can be realized. In the creation of the situation, picture based teaching, multimedia based teaching are frequently used by teachers to achieve better results.

2.2. Introducing Teaching and Advocating Cooperative Learning among Students

The so-called introduction teaching refers to the introduction of biology teaching content into students' inquiry learning activities based on the situation created by teachers, which meets the needs of students and social practice. In order to implement it more effectively, we need to start from two key points. First, we need to choose the appropriate teaching content. Second, choose appropriate forms of inquiry learning activities for students[8].For the choice of teaching content, we need to ensure that the needs of students can be satisfied, and the needs in social practice can be met. Based on this, students' learning autonomy can truly play out, students can "apply what they have learned in to practice", that is, to use the knowledge to solve practical problems. Correspondingly, the teaching effect will be more efficient. In addition, in the process of the whole inquiry activity, the teachers will conduct more targeted and purposeful guidance for students. As a result, it is easier for students to acquire knowledge, teaching time is used more rationally, and the quality of teaching is getting higher and higher. In order to ensure that students carry out inquiry learning activities more effectively, it is necessary to choose the appropriate form, that is, to guide students to actively carry out cooperative learning. It is well known that knowledge has the characteristics of the limitless and the thought is confined due to differences of the individuals, there are certain contradictions between the two, at the same time, the diversity of knowledge is more significant. Students should give full play of the power of team members if they are to complete the inquiry activity. That is to say, it is difficult for students to carry out exploratory activities with their own strength, and ultimately students cannot grasp knowledge more comprehensively and knowledge is extensive in biology [9]. Therefore, groups, cooperation and mutual assistance should be adopted when carrying out inquiry activities. Under the guidance of

teachers, students can actively discuss, exchange and learn from each other, so that they can grasp the knowledge more comprehensively.

2.3. Timely Guidance and Evaluation to Grasp the Direction of Students' Inquiry

When teachers carry out inquiry-based teaching of biology in colleges and universities, they need to play the guiding role of teachers, so as to ensure the smooth development of inquiry-based activities. In the use of inquiry teaching method, we should give play to students' autonomy and make them actively explore, but this is not "laissez-faire", we need teachers to give appropriate guidance. In this process, teachers need to design targeted and enlightening biological questions for students, so as to make students to conduct actively think, so as to improve students' abilities in all aspects. In addition, teachers need to timely evaluate students in order to improve teaching quality. After the completion of the exploratory activities, an effective outcome evaluation is needed [10], and finally students can summarize the success or failure of the exploratory activities. It will lay a good foundation for the development of biology teaching or biology inquiry activities.

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