

Research on Cultivating Critical Thinking in High School Biology Teaching

Wenjing Feng*

Tongshan Middle School, Xuzhou City 221000, China

Abstract

Nowadays, China's knowledge economy is developing very fast, and the training of high-quality talents has become an important core of China's education, especially since the reform and implementation of the new curriculum standard, comprehensively improving the biological core quality of students has become the key point of teaching. With the rapid development of Chinese society, the increasing demand for talents, the traditional teaching methods cannot meet the social demand, and the teaching reform is urgent. Use critical thinking in high school biology classroom teaching to promote the divergence of students' thinking, the thinking innovation, the meta-cognitive ability of thinking, and cultivate students' core literacy.

Keywords

Critical Thinking; Biology Classroom; Core Literacy.

1. Introduction

Nowadays, China's knowledge economy is developing very fast, and the training of high-quality talents has become an important core of China's education, especially since the reform and implementation of the new curriculum standard, comprehensively improving the biological core quality of students has become the key point of teaching. With the rapid development of Chinese society, the increasing demand for talents, the traditional teaching methods cannot meet the social demand, and the teaching reform is urgent. High-quality talents with development ability and innovation ability and so on are the main force of Chinese social development. Therefore, how to cultivate the quality of talents is paid great importance to by the majority of educators. Critical thinking [1]As a new teaching method favored by most teachers, this paper gives some suggestions on the critical thinking cultivation of students in the current process of high school biology teaching.

2. The Concept of Critical Thinking

Critical thinking refers to making independent judgment and thinking according to their own thinking. This thinking is based on the thinking as a logical method, combining with people's daily thinking, practical actions, psychological development and so on. Critical thinking is due to the critical intellectual skills and spiritual composition, in the formation of problem questioning, verification, solution and innovation in the process of cultivating critical thinking. Critical thinking is one of the thinking mode of active thinking, critical thinking of critical thinking logic is very strict, and strong autonomy, therefore, the social demand for critical thinking talent is large, in terms of education and teaching, teachers put students' critical thinking training as a key research, cultivate a batch of high-quality talents.

2.1. It is Suggested to Pay Attention to the Evaluation of Wrong Examples

In the process of high school biology teaching, teachers should analyze the reasons of students' mistakes from all perspectives for students' mistakes, promote students' constantly active and

open thinking, and develop critical thinking habits. For example, when teachers teach the topic of "genetic and chromosomal relationship between organisms", the question can be set as: "What sperm types of genotypes of AaCc can produce?" For this question, many students will answer four types. The students think that this question is relatively simple, so they give the wrong answer without thinking, and the reflection process of students after learning their wrong answer is the process of cultivating their critical thinking. As time passes, students constantly cultivate their own critical thinking in the process of continuous reflection and thinking in this wrong example, and gradually form the learning habit of independent thinking.

2.2. Teaching is Recommended in Combination with Controversial Issues

In the process of high school biology curriculum teaching, to cultivate students' critical thinking, we need to create an attractive learning situation for them[3]Therefore, the teachers can appropriately introduce some controversial problems in the teaching, guide the students to analyze and reflect on the problem, ponder repeatedly, and constantly think, find out the problems and find ways to solve the problem. Under the reasonable guidance and encouragement of the teacher, the students slowly learned to think about their own problems, constantly found, and finally formed a thinking divergence. For example, teachers in teaching the role of the growth element, teachers can emphasize the principle of teaching key plants: unilateral light plants, easy to make the uneven growth of the light side, the growth element of the backlight is less, the plants on the backlight side grows faster, and the growth of the plants on the side of the light side is slower. Since plants on the backlight grow faster than those on the light side, the plant bend towards the light side. At this time, the teacher can ask the question: "Before the textbook mentioned that the growth of plants will be inhibited by a high concentration of growing xin, so, is it inconsistent with the rapid growth of many plants?" Or ask, "Is the light side of the plant less growth hormone due to light decomposition or transferred to the backlight side of the plant?" The teacher raises the questions and causes the students to think. At this time, the teacher can not immediately give the correct conclusion, but should let the students talk about their own ideas, students express their views, when the discussion, the teacher to give the correct guidance, provide some enlightenment for students, so that students to further explore the answer with critical thinking.

2.3. It is Suggested to Take the Critical Spirit of Scientists as a Teaching Demonstration

It is critical that many scientists urge their continuous research and finally come to significant inventions. For example, because he dared to criticize the theory of integrated genetics, he constantly studied the law of free combination and separation of genes; and Darwin had the courage to criticize, and finally overturned theories such as idealism and metaphysics. In the teaching process, teachers can take these as teaching demonstrations, encourage students to dare to criticize and criticize, and these scientists can shock students 'hearts, play a good exemplary role, and effectively promote the cultivation of students' critical spirit.

3. Conclusion

In general, in the process of high school biology teaching, teachers should abandon some usual old routines, keep pace with The Times, find out students' psychology, properly use technology products, so that the vast majority of students can actively participate in classroom teaching, and create a relaxed and happy learning atmosphere. On the other hand, teachers should change their ideas, take students mainly, supplemented by teachers, correctly guide students to take the initiative to learn, take the initiative to think, often encourage students, increase students 'confidence, so as to forge independent learning ability, is more conducive to students' thinking divergence, gradually form critical thinking.

References

- [1] Chen Hong Lei, Xia Guangzhong, Liu Nana, Hu Hui. The Cultivation of the Critical Thinking Ability of Middle School Students in High School Biology Teaching [J]. Modern Education Science, 2014 (04): 159-161. (In Chinese).
- [2] Wu Yajie, Chen Li, Zhao Hong. Inquiry into the Teaching Model of Critical Thinking [J]. Electrical Education Research, 2014,35 (11): 71-77. (In Chinese).
- [3] Chen Hong Lei, Xia Guangzhong, Liu Nana, Hu Hui. The Cultivation of the Critical Thinking Ability of Middle School Students in High School Biology Teaching [J]. Modern Education Science, 2014 (04): 159-161. (In Chinese).