

On Impact of Teaching Methods on Students' Creativity and Academic Achievement

Lv Jinghua ^{1,2}; Janaka Low ¹

¹Malaysia University of Science and Technology, Petaling Jaya, 47810, Malaysia

²Xi'an University of Architecture and Technology, Xi'an, Shaanxi, 710055, China

Keywords: Higher education, Teaching methods, Creativity, Academic achievement

Abstract: At present, higher education is constantly developing in the direction of conforming to the development of contemporary society and cultivating high-quality students. In their development, colleges and universities try to improve teaching methods and teaching environment, and strive to improve students' creative ability and academic achievements through the innovation of teaching methods. And teachers change their roles to be mediators and stimulators who guide students to participate in learning activities. This paper discusses the basic concepts of teaching methods, creativity and academic achievement, summarizes the impact of teaching methods on students' creativity and academic achievement.

1. Introduction

Innovation is extremely important in promoting the economic growth. In the 21st century, China is in the transition period from "Made in China" to "Created in China". and its technological innovation and progress cannot be separated from the support of high-quality talents. Schools should actively focus on the cultivation of students' creativity in the process of educational work, which needs to be combined with appropriate teaching methods ^[1]. Therefore, it is necessary to actively explore the impact of teaching methods on students' creativity and academic achievement, and implement targeted teaching methods to improve students' comprehensive quality and promote the development of social economy and national economy.

2. An overview of teaching methods

The so-called teaching is a series of activities that consciously guide learning, and it is also a process of mutual influence between students and teachers. The ultimate goal of teaching is to achieve the expected behavior and change the results. Teaching method is the detailed method in the teaching, including explanation method and practice method ^[2]. As far as the current common teaching methods are concerned, it can be divided into, according to the focus of teaching work, "teacher-centered" teaching methods and "student-centered" teaching methods. The former is widely used in China, because domestic education policy is from top to bottom, and it is most evident in compulsory education. While the latter is widely used in foreign countries, because they have mature literacy of democracy and freedom and emphasize humanistic spirit.

3. An overview of creativity and academic achievement

Creativity is one of the potential abilities of human beings, which can be cultivated through scientific training. The concept of creativity is still not clear at home and abroad. Chen Hong, domestic scholar, once proposed such a concept: creativity is an ability based on creative thinking and a ability to provide new, unique and valuable products to the society and the world according to the relevant goals and tasks. Academic achievement refers to the knowledge and skills that students acquire through learning in school. It is also regarded as a lasting behavioral result obtained by students throughout the learning process, and includes cognition, emotion, skills, etc. A variety of content can be unified as an indicator to measure students' learning result in school.

4. The influence of teaching methods on students' creativity and academic achievement

Based on the research on teaching methods and students' creativity in recent years, teaching methods play a great role in promoting students' creative ability. Moreover, when teachers with open teaching attitude implement teaching method that is more open to students, students are allowed to make mistakes in the learning process and adhere to the correct encouragement and support. It is helpful for students to actively participate in the exploration and solution of problems, and adhere to independent behavior. In this case, students' curiosity will be fully stimulated, and they can think diffusely when encountering problems, and their creativity can be cultivated.

In the process of carrying out daily teaching, students' creativity and practical ability can be effectively improved, and an effective foundation for students' subsequent employment can be laid. More attention should be paid to the cultivation of students' practical ability and exploration ability during daily teaching. For example, in the process of explaining some theoretical courses, we can innovate the teaching methods and change the traditional teaching methods that focus on classroom explanation. It is also very important to create a teaching method of exploring practical operation and theoretical teaching. Teachers guide students to carry out targeted practice and improve students' practical ability through practical activities. At the same time, teaching can be carried out in the way of school enterprise joint teaching to guide students to improve their hands-on ability through off campus practice or practical operation. At the same time, under the effect of this teaching method, students can better understand the theoretical knowledge, and gradually transform the classroom theory into the process of actual production, which also plays a very important role in improving students' creativity and employability.^[3]

In addition, students' creativity can be improved through innovative activities in the school, and the purpose of cultivating students' comprehensive quality and ability can be achieved. During the period of daily teaching, regular campus activities with characteristics can be carried out in combination with students' majors, and the activities are mainly group activities and innovative practices. At the same time, it is necessary to ensure that the contents of the activities are highly compatible with students' majors. In the process of group activities, students should be encouraged to actively participate, and give play to their own practical ability, practical operation ability and imagination. Under the effect of such teaching activities, students' creativity can be further exerted, and the purpose of improving students' practical ability can be achieved, and students' sense of unity can be gradually cultivated, so that they can better apply theoretical knowledge to the process of practical life, and the purpose of improving students' learning enthusiasm can be achieved.^[4]

In the process of students' participation in learning, their academic achievements are affected by their own factors and family factors. For students in colleges and universities, their learning and living environment and accepted teaching methods will also affect their academic achievements. Relevant research shows that the external environment such as school equipment and curriculum design has a certain impact on students' academic achievement, but it is far less than the impact of

teachers with excellent quality and good teaching methods on students' academic achievement. ^[5]

In the teaching with student-centered method, students always maintain the desire to explore problems, participate in the solution of relevant problems independently, and maintain divergent thinking when encountering problems. Thus teachers need to actively implement the student-centered teaching method, leaving more time for students to think, judge and solve problems, so that students can get the opportunity to exercise their creative ability. After repeated practice, they can effectively strengthen their creative ability. Under the traditional autocratic teaching method, teachers engaged in educational work will set aside more time to urge students to participate in learning tasks, sort out and evaluate the completion of students' learning tasks. Students are under high pressure for a long time and can always effectively complete the tasks assigned by teachers. In this way, students should have obvious advantages in terms of academic achievement, such as professional knowledge and professional skills, but their creative ability has not been cultivated and trained, and the problems they encounter are always solved unsatisfactorily. Finally, the free-style teaching method will make students in a relaxed learning state and engage in learning tasks without constraints. Therefore, students always try to use new methods to complete learning tasks and strengthen the training of creative ability to the greatest extent. However, in this way, students do not get the effective guidance of teachers and are in the process of blindly exploring problem-solving methods, and they fail to achieve the desired effect in academic achievement ^[6].

5. Countermeasures and suggestions for the selection of teaching methods

Teaching methods have a profound impact on the creativity and academic achievement of students in colleges and universities. By analyzing the effects of different teaching methods, it is clear that the "student-centered" democratic teaching method should be used in the education of colleges and universities, and assisted with free-style teaching, so that students can have enough time to think about problems independently in their daily learning, and get the training of creative ability in the process. Teachers in colleges and universities are responsible for selecting the starting point, for providing benign guidance to students and helping students obtain corresponding learning achievements, so that students can improve their creativity and academic achievement. ^[7]

For teachers in colleges and universities, they should also pay attention to the summary and reflection of their own teaching methods in the process of daily teaching, and actively communicate with teachers in other colleges and universities. Relevant researches show that the users of democratic teaching methods are mostly female teachers. Therefore, male teachers should correctly recognize the information and actively learn and improve their shortcomings. Only when teachers in colleges and universities can actively summarize and improve their teaching effect can they continuously improve their teaching methods and better achieve their teaching goals. ^[8]

If conditions permit, an education quality feedback mechanism can be established to encourage students to put forward the aspects that need to be improved or need to be improved in the teaching methods and methods in the daily learning process from their own perspective. At the same time, students can put forward good teaching suggestions or teaching methods, forms of activities, etc., which will help to make the follow-up teaching plans more suitable for the actual situation of students, help students better learn all aspects of knowledge, and improve their comprehensive ability. It can also promote the corresponding teaching work to be more targeted and effective. ^[9]

6. Conclusion

It can be seen from the above, there is a direct relationship between teaching methods and students' creativity and academic achievement. Different teaching methods have different effects on

students' creativity and academic achievement. The "student-centered" teaching method can cultivate students' creativity and ensure students' academic achievements. Compared with authoritarian teaching methods and free-style teaching methods, "student-centered" teaching method has significant advantages. Therefore, educators should correctly recognize the positive significance of teaching methods, explore the application of teaching methods in daily teaching activities, and devote themselves to cultivating high-quality talents for the development of social economy and national economy.

References

- [1] Zhou Rong, Li Shijin. *On the Improvement of Students' Creativity with STEM Teaching: A Meta-analysis Based on 42 Experimental Studies* [J]. *Open Education Research*, 2019, 25(3):12.
- [2] Liu Hongxiang. *Research on the Academic Evaluation of College Students to Promote the Cultivation of Creativity* [D]. Hunan Normal University, 2019.
- [3] Chen Ye. *Research on the Influence of Teaching on the Academic Achievement of College Students' Learning with Technical Support* [J]. *Educational Research*, 2021, 4(7):18-19.
- [4] Wang Rong. *Cultural Differences and Black-and-White Comparison: A Guide to African-American Students in a Wealthy Suburb* [J]. *Research on Higher Education Of Nationalities*, 2020, 8(6):9.
- [5] Cheng Li, Zhang Xiaowei, Zhang Kai, et al. *The Effect of Creative Classroom Atmosphere on Literary Achievement of Gifted Children in Grades 3-5: The Mediating Role of Creative Thinking* [J]. *Chinese Journal of Special Education*, 2019(12):7.
- [6] Yan Ying. *Evaluation Methods and Characteristics of Academic Achievement of Canadian High School Students -- Take Ontario High School as an Example* [J] *Basic Education Curriculum*, 2020 (1): 10.
- [7] Qian Quan, Xiao Leifeng *Academic achievement motivation, reading teaching and its impact on students' reading performance: a comparative study between China and Finland based on PISA 2018* [J] *Educational Measurement and Evaluation*, 2021 (4): 9.
- [8] Ding Muyu *Discusses the academic achievements of students with different learning methods and quick fingering in calculus* [J] *Journal of Huwei University of Science and Technology*, 2008, 27 (2): 95-110.
- [9] Liao Yuanguang, Zhang Qingli. *Post design analysis of the impact of problem based learning on students' academic achievements and high-level thinking ability* [J] *Quarterly Journal of Contemporary Education Research*, 2013, 21 (4): 1-40.