

Study on Improving the Ability of Innovation and Entrepreneurship for Science and Engineering Students in Colleges based on Ideological and Political Education

Bin Xu ^a, Haixia Zhang

College of Chemical Engineering and Safety, Binzhou University, Binzhou 256600, China

^a cnxubin@126.com

Abstract. Ideological and political education was put into practice for college students since 2017 in all professional courses and practical courses. In this study, 138 college students from colleges students majoring in the applied chemistry are selected as the research objects, with an average age an age range of 17-23 years. The post-graduate enrollment rate, the innovation and entrepreneurship training program, the papers published and authorized patents of students and the awards of subject contest of students in recent four years were counted and analyzed. The results effectively prove that ideological and political education can help to improve the ability of innovation and entrepreneurship for science and engineering students in colleges.

Keywords: Ideological and Political Education; Ability of Innovation and Entrepreneurship; Science and Engineering Students.

1. Introduction

Innovation and entrepreneurship education (IEE) is of great concern for college students to the Chinese government, with the aim to cultivate the entrepreneurial awareness, entrepreneurial spirit, and innovative entrepreneurial ability of college students, and the high-quality innovative talents with innovative thinking and entrepreneurial ability by training the basic entrepreneurial skills [1-3]. Ideological and political education (IPE) is extremely important in colleges and universities in China in the new era, which is carried out not only in the ideological and political theory course, but also in general-knowledge courses, professional courses and practical courses [4-5]. It is a crucial part of the new era to integrate the IPE with IEE for college students to train socialist builders and successors for the comprehensive development of moral, intellectual, physical, aesthetics, and labor skills [6].

In this study, 138 college students from colleges students majoring in the applied chemistry are selected as the research objects, with an average age an age range of 17-23 years. The post-graduate enrollment rate, the innovation and entrepreneurship training program, the papers published and authorized patents of students and the awards of subject contest of students in recent four years were counted and analyzed.

2. Results and Discussions

The ideological and political education is of great importance and is the lifeline of all work in colleges and universities in the new era. "Curriculum ideological and political education" puts forward quite high requirements for the quality as well as ability and level of teachers in various disciplines. Teachers should make all kinds of courses involved in the process of school education, and promote curriculum system and education teaching innovation, realize the "whole course education". As to the major of applied chemistry, "curriculum ideological and political education" was put into practice since 2017 in all professional courses and practical courses with the aim to train socialist builders and successors for the comprehensive development of moral, intellectual, physical, aesthetics, and labor skills.

The post-graduate enrollment rate, the innovation and entrepreneurship training program, the papers published and authorized patents of students and the awards of subject contest of students

majoring in applied chemistry in recent four years were counted and analyzed, and the results were shown in Figure 1~Figure 4.

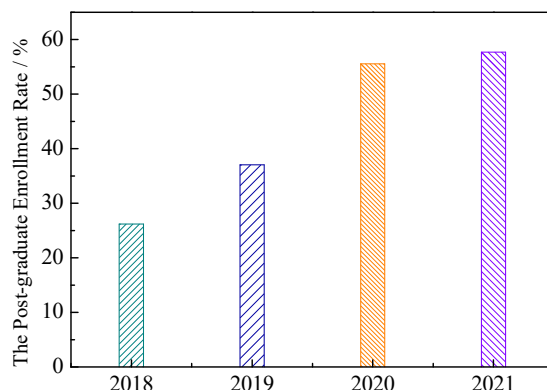


Figure 1. The Post-graduate Enrollment Rate of Students Majoring in Applied Chemistry

It can be seen from Figure 1 that the post-graduate enrollment rate increased remarkably in recent four years; the post-graduate enrollment rate was above 50 % since 2020. The results showed that the talents were highly recognized by many colleges and universities, especially their innovation ability.

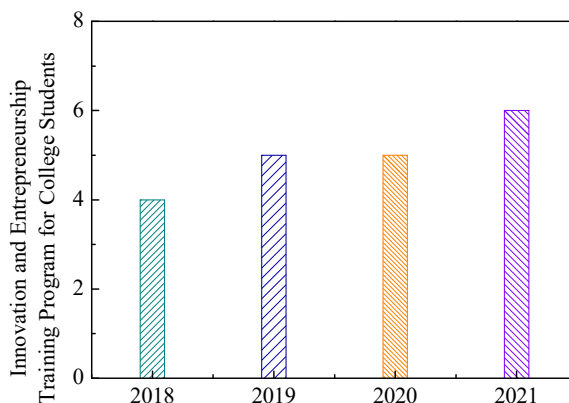


Figure 2. Innovation and Entrepreneurship Training Program for College Students Majoring in Applied Chemistry

It can be seen from Figure 2 that the innovation and entrepreneurship training program of students majoring in applied chemistry increased steadily in recent four years, which showed that the ability of innovation and entrepreneurship of our students majoring in applied chemistry is competitive among college students in China and the whole province.

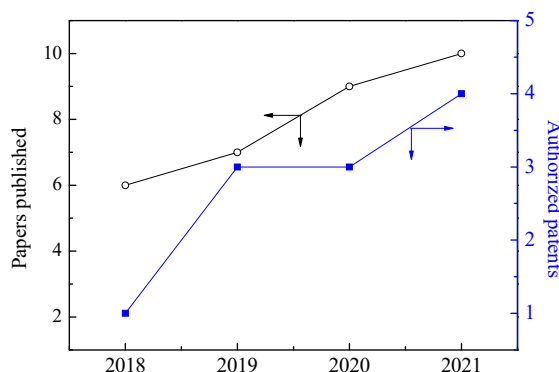


Figure 3. Papers published and authorized patents of Students majoring in Applied Chemistry

It can be seen from Figure 3 that the papers published and authorized patents of students majoring in applied chemistry also increased steadily in recent four years, which showed that the students have strong expressing ability for their innovative achievements.

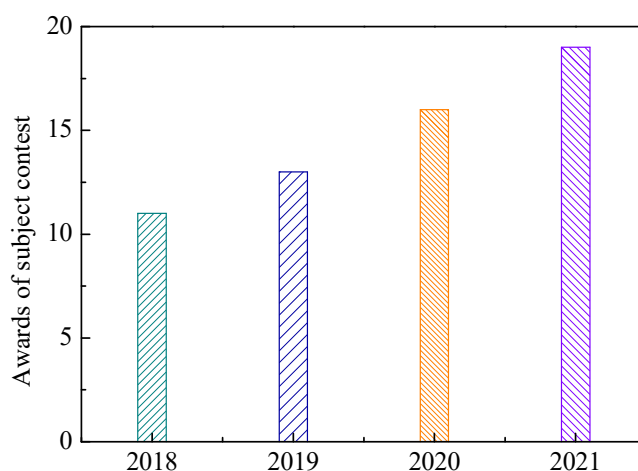


Figure 4. Awards of subject contest of Students majoring in Applied Chemistry

It can be seen from Figure 4 that the awards of subject contest of students majoring in applied chemistry also increased substantially in recent four years, which showed that our students have strong competitiveness in terms of innovation among college students both in China and the whole province.

3. Conclusion

After years of ideological and political education, the post-graduate enrollment rate, the innovation and entrepreneurship training program, the papers published and authorized patents and the awards of subject contest of students majoring in applied chemistry increased remarkably in recent four years, which showed a remarkable improvement in ability of innovation and entrepreneurship for science and engineering students in colleges. The results effectively prove that ideological and political education can help to improve the ability of innovation and entrepreneurship for science and engineering students in colleges.

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