

Study on Effective Ways of College Students' Innovation Capability Cultivation

Guang Yang^{1, a}, Chenghao Han^{2, b}

¹ Changchun University of Science and Technology, Changchun 130022, China

² Jilin Jianzhu University, Changchun 130118, China

^aguangyang1975@126.com, ^bhanchenghao1972@yahoo.cn

Abstract

The paper elaborates the status and function of innovation capability cultivation in college education. Through practicing teaching procedure reform, creating a good environment for talent growth and innovation, establishing a sound innovation capability cultivation mechanism, setting up innovation practice base and so on, students' innovation consciousness and capability can be enhanced. The paper explores the ways for college students' innovation capability cultivation from the combination of practice and theory.

Keywords

College student Innovation capability Effective ways.

1. Introduction

The cultivation of college students' innovation capability is an important aspect of college talents cultivation. Enhancing college students' innovation education is a vital move to implement the policy of improving self-innovation ability and building an innovative country and is the inevitable requirement for adapting to our country's economic society transformation and is an important mission of modern college education. At present, both international and domestic colleges attaches great importance to cultivate students' scientific innovation capability, hope to comprehensively improve students' innovation consciousness and innovation capability through carrying out innovation education and actively explore effective ways for improving college students' innovation capability through opening up innovation entrepreneurship course, setting up innovation base, enhancing practice teaching, strengthening the communication between colleges and enterprises and so on.

2. Effective Ways for Cultivating College Students' Innovation Capability

To cultivate students' innovation capability mainly relies on education reform. Colleges should establish a people-oriented education philosophy, pay attention to student subject, care for students' growth, keep digging students' potential and realize students' comprehensive and sustainable development; at the same time, colleges should lead students to be positive and set a lifetime goal to apply their knowledge in making contribution to the country and create an academic atmosphere of daring to be the first so as to make each student have the imagination space and wings and the start-up force of innovation.

2.1 Actively Create a Vibrant Innovation Atmosphere

Innovation behavior needs the environmental support and vigorous innovation atmosphere. Colleges first need to set up innovation lab center for students, give students sufficient experimental opportunities establish a platform for students' innovation practice, launch an advanced management system and motivation system, and encourage students to innovate and provide them with technical guidance and finance support. Secondly, colleges should often hold all kinds of scientific culture events, academic seminars, skill competitions and the like so as to make campus have an atmosphere full of passion, wisdom and creation. In addition, college students should take initiative to build their

own innovation team. They can take a dormitory as an unit to establish their own dormitory culture and take a class as an unit to establish their own class culture and take an association as an unit to establish their own association culture and so on. Meanwhile, students should walk out of campuses to participate in social investigation, combine theory with practice and find, thing and solve problems in social practice and give timely feedback in actual activities to form the final achievements.

2.2 Hold All Kinds of and Multi-level Innovation Competition and Improve Students' Innovation Consciousness and Capability

In order to make students' innovation vision more broad, it is necessary to encourage students to participate in all kinds of and multi-level innovation competition. On one hand, students can learn other ones' advantages to offset their own weakness during the competition process, find their own shortcomings and stimulate their innovation passion; on the other hand, students can gain experience from competitions and form a good innovation atmosphere.

At present, Changchun University of Science and Technology has established an campus scientific culture event competition system including "Challenge Cup"," Electronic Design Competition", "Freescale Intelligent Automobile Competition" and "Photoelectric Design Competition". The competition participants make acquaintance with the friends from different colleges in China and in the meantime receive guidance and help from corporate experienced professionals. The competitions stimulate students' innovation passion and improve students' innovation consciousness and capability.

2.3 Hold More Academic Seminars and Conduct More Academic Exchanges

Colleges should hire celebrities, scholars and experts from all fields to give lectures so as to make students to have contact with latest technology and knowledge, open the wind of students' creative mind, have contact with social celebrities, ignite the fire of hope for students' future and at the same encourage students to strive to create. Meanwhile, colleges should more often send students out to study, visit and participate in academic exchange or pursue advanced study and improve teacher's knowledge and talent. In this process, the knowledge of each discipline naturally will integrate and supplement each other and further improve teachers' and students' knowledge system and open the wings for their innovation. Colleges should regularly hold academic exchange for students' work and enhance the understanding between students so as to make students learn from each other and open their horizons.

2.4 Actively Carry out Class Teaching Reform and Elaborately Design and Control Each Link and Detail of Teaching Execution

Teachers first need to pay attention to cultivate students' innovation capability mentally and consciously insert all kinds of links and details while designing and executing teaching. Before classes, teachers can select several cases which are novel regarding content, full of interest, are appropriate regarding difficulty and typical based on teaching content so as to attract students to participate in case discussion and trigger innovative thinking. Teacher need to make an overall time arrangement based on the difficulty level and content length of the case. In order to ensure the smooth execution of class discussion, teacher also need to make meticulous and thorough arrangement for environment arrangement, process arrangement, evaluation key points and rewards and punishment measures. In short, teacher themselves should have solid profession basis and certain social practice experience and keep improving their own personalized case teaching capability on the basis of earnest study and summarization.

3. Conclusion

To cultivate college students' innovation capability has become an inevitable trend in colleges teaching reform. At present, domestic colleges have gradually carried out relevant studies and explorations and gained some valuable experience. At the same time, college students' innovation capability cultivation is also a system project. It needs to analyze factors which restrict the development of students innovation activities, create innovation atmosphere, reform course system,

teaching method, teaching content and establish innovation capability cultivation mechanism and so on based on the different characteristics of each college and establish an innovation education system which is suitable for colleges' own characteristics. College should train students' ability to find, analyze and solve problems through carrying out innovation activities, enrich their scientific knowledge, broaden their horizon, stimulate their interest in scientific innovation study so as to comprehensively improve their quality and innovation capability.

References

- [1] DONG Chang-hong, LIANG Xu, HUANG Ming. Exploration of Effective Ways of Strengthening College Students' Scientific and Technological Innovation Capabilities, JOURNAL OF SHENYANG COLLEGE OF EDUCATION, vol.11
- [2] (2009)No.6, p. 68-71.
- [3] JIANG Tian-hua, LEI Xue-wen, WANG Shuai. Training ways of college students' scientific and technological innovation ability, Journal of Architecture Education in Institutions of High Learning, vol.21(2012)No.3, p.129-132.
- [4] LU Wei-jia, ZHANG Hou-jun, SHI Xian-feng. The Students' Entrepreneurial Education and Entrepreneurial Ability in Universities, Journal of Nantong University (Education Sciences Edition), vol.24(2008)No.2, p.72-74.
- [5] SONG Zhi shuai, ZHAO Jinhua. On Effective Way to Foster College Students' Innovation Ability, JOURNAL OF HEFEI UNIVERSITY OF TECHNOLOGY (Social Sciences) , vol.24(2010)No.5, p.142-145.