

The influence of academic performance on innovation ability of college students

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Abstract: Innovation is prevalent in the market. However, the standard of judging excellent students is often measured by academic performance, which cannot directly reflect the ability market demand. Even someone thinks good grades limit open thinking. This paper explores the influence of academic performance on the innovation ability. Data from the questionnaire were used for analysis. The finding is there is no correlation between innovation ability and academic performance. This paper suggests that universities adjust standards for excellence to foster innovation.

Keywords: Academic Performance, Innovation Ability, Market

1. Introduction

Innovation ability is of great significance to social development. Good grades are considered to have innovation ability. However, some people think college students' high grades limit their thinking. Good grades restrict their open thinking.

I want to know whether the students do well in college are the ones with high creativity? On this basis, I conducted a research on the relationship between academic performance and innovation ability.

In this paper, we randomly select four schools in each of four regions and use drawing analysis method to clearly analyze the relationship between college students' academic performance and students' innovation ability. Academic performance is asked directly from school to ensure the accuracy of the data. Innovation ability adopts the divergent temperament test in the Williams creativity test system, because the analysis of questions is more comprehensive, authoritative and reliable than the team competition awards.

It is true that students with high academic performance in engineering major have higher innovation ability. On this basis, I would like to explore whether this conclusion can be applied to college students of any major? Or is it because the assessment of science and engineering majors focuses more on abstract thinking and practical ability, resulting in this proportional relationship? I speculate that there is no correlation between innovation ability and academic performance of all college students.

Exploring the relationship between academic performance and innovation ability is helpful to know whether the current training standards for students are out of line with the needs of the social market and whether the high grade requirement makes the students' thinking restricted or even become more and more conformist.

The innovation-driven development strategy is an important measure to build a strong country in science and technology proposed in the party's 20th report. The cultivation of college students' innovation ability is a systematic project, which requires many elements such as policy, organization, system, talents and funds. This article is based on the perspective of collaborative innovation, analyzes the current college students' innovation ability training in collaborative concept, coordination mechanism, working system and safeguard measures problems, build the culture, organization, system, teachers, platform, site 6 guarantee for the integration of college students' innovation ability cultivation system, to strengthen college students' innovative talents training relative system working ideas and reference measures.

2. Literature Review

Innovation has a positive impact on enterprise development. Some studies show that the green technology innovation ability of enterprises has a significant positive effect on the enterprise's competitiveness (insert1). At the same time, creative people are more likely to adjust their mindset after failure (insert4). Therefore, many companies prefer to recruit more creative employees by means of self-evaluation(insert2). And more and more studies have explored how corporate social responsibility affects employees' creativity, hoping to improve their

creativity(insert3). Innovation are not only good for the enterprise, but also the country. Some researchers give suggestions on how to improve students' creativity. For example, they suggest that schools should offer more creative courses. Curriculum design has a partial positive impact on the fluency, flexibility, originality and refinement of creative potential development (insert5).

However, the school favors students with higher academic performance. Studies show that students who are creative tend to have higher grades (insert correlation). On the contrary, do students with high grades always have innovative thinking? In fact, students with high academic performance in engineering majors have higher innovation ability (insert). Maybe the research is just because the performance of engineering majors focuses more on abstract thinking and practical ability, so there is direct correlation between them. No one has studied whether the academic performance of students in other majors is also positively correlated with innovation ability. I think for economics students, most of the problems they solve have no fixed answers. They may need innovation ability more than engineering students. So the result is same?

Of particular importance to my investigation is to prove whether there is a direct correlation between academic performance and innovation. Innovation ability mainly includes the ability to analyze and solve problems independently. The criteria to judge the innovative ability of college students are that they can actively learn and think in the competition. In the face of new things or new problems, they have a strong curiosity and rich imagination that can take the initiative to learn and consult others (insert).

Previous studies show that creativity can be improved. Creativity training can improve students' creative ability for a short time, but in 4 weeks it will slightly decreases after training (insert6). Based on this, I speculate that innovation ability can be cultivated. If you want to maintain and improve creativity, you need to constantly train yourself. However, the school's measurement of excellence tends to be more rigid, which makes students tend to get template answers, unable to break through and train their innovation ability. It may restrict their open thinking. Therefore, for most college students under current education, what is the relationship between their academic performance and their ability to innovate? Does the school approach really promote creativity and meet the needs of the market and the country? This is a question worth discussing.

3. Proposed Methods and Possible Findings

Qualitative and quantitative studies were carried out using mixed methods. First, 200 junior students from four universities were randomly selected for questionnaire survey and selected six junior students in three stages of each major ranking to conduct interviews. Secondly, questionnaire design. Quantitatively, the Innovative Behavior Scale (insert) was used to measure innovative behavior ability and collect academic performance. Qualitatively, I will compare innovation ability of three types of students through the innovation competition awards, thinking whether the main reason for this phenomenon is personal goals or intellectual level. Finally, SPSS was used to draw pictures, evaluate the validity and reliability of the data, and analyze the relationship between academic performance and innovation ability.

From reading the references, we know that innovation ability can be cultivated. And most schools give awards based on academic performance, so it is possible that Academic performance had no effect on the ability to innovate. However, one limitation of the study is that innovation competitions tend to take place in groups, which can mask or exaggerate individual innovation abilities.

The school uses performance to test whether students have mastered knowledge, which may make students pay more and more attention to achievement that may reduce the motivation of students to develop innovative ability, and have less positive effect on students' future life.

References:

- [1] Miller, D. (2022). Replication as a means of assessing corpus representativeness and the generalizability of specialized word lists. *Applied Corpus Linguistics*, 2(3), 100027.
- [2] CAI Jigang. (2017). Research on research paper writing for Chinese non-English majors. *Foreign Language Teaching Theory and Practice* (4), 37-43.
- [3] Li Weizhong. Cultivation of college students' innovation ability under the background of "Double first-class" construction [J].

Journal of Hubei University of Engineering, 2024,44 (03): 106-109.

[4] Gong Min. —— Take the industrial Design major of Yangtze University as an example [J / OL]. Educational Technology and Equipment in China, 1-4 [2024-05-31].

[5] Li Huazhen, Wu Li. Construction of innovation cultivation system of college students' innovation ability from the perspective of collaborative innovation [J]. Theoretical Research and Practice of Innovation and Entrepreneurship, 2024,7 (08): 1-4 + 17.

[6] Lu Xiaoxu, Guan Jingru, Zhao Xiaorong. Exploration of the teaching reform of TCM Physiological ecology guided by the cultivation of college students' innovation ability [J]. Anhui Medical Industry, 2024,28 (05): 1056-1060.

[7] Chen Shujie, Wang Fei. Research on the improvement of college students' innovation ability under the interaction between students and teachers —— Based on the analysis of a land national conditions survey competition project [J]. Theoretical Research and Practice of Innovation and Entrepreneurship, 2024,7 (07): 179-182.

[8] Huang Jing, Liu Junjuan. Evaluation ability Assessment of innovation ability based on Fuzzy AHP [J]. Information and Computer (theoretical edition), 2024,36 (05): 28-30.

[9] Xu Zhe. Research on deep learning mode and application effect for the development of college Students' innovation ability [J]. Chinese Journal of Multimedia and Network Teaching (published), 2024, (03): 160-163.

[10] Xu Zhe. Research on deep learning mode and application effect for the development of college Students' innovation ability [J]. Chinese Journal of Multimedia and Network Teaching (published), 2024, (03): 160-163.

[11] [Hu Guojie. The training mode of college students' innovation ability based on the mentor team [J]. Journal of Liaoning University of Technology (Social Science Edition), 2024,26 (01): 88-91.

[12] Zhou Min. Research on the training path of college students' innovation ability in public management [J]. Heilongjiang Education (Research and Evaluation of Higher Education), 2024, (02): 43-45.

[13] Tan Yun. Enlightenment of international Innovation Competition on the cultivation mode of college Students 'innovation ability —— Take the International College Students' Biosensor Design Competition as an example [J]. Education and Teaching Forum, 2024, (04): 13-16.

[14] Yang Hui. The "3 + 2" paradigm for the cultivation of college students' innovation ability —— takes Nanjing University of Science and Technology as an example [J]. Journal of Higher Education, 2024,10 (04): 54-57.

[15] Zhang Yingying, Ye Jihong, Yu Qiu, et al. Research and practice of college students' innovation ability training mode based on "four-wheel drive mode" [J]. Higher Building Education, 2024,33 (01): 44-49.

[16] Zhang Yelei, Li Dan. Research on cultivating college students' innovation ability based on multiple practice teaching [J]. Time Report (Running Run), 2024, (01): 146-148.

[17] Zhang Chunmei, Zhang Zhangran. Research on constructivism for the cultivation of college Students' innovation ability [J]. Contemporary Education Theory and Practice, 2024,16 (01): 36-42.

[18] Yin Dongsong, Zhai Fenglong, Liu Ailian, et al. Research on the construction of production and education Integration base in Material Forming and Control Engineering [J]. Casting Equipment and Process, 2023, (06): 63-66.

[19] CAI Shuguang, Lin Han. Exploration on the influence of experimental teaching reform of organic chemistry on college students' innovation ability [J]. Modern Education Equipment in China, 2023, (23): 157-159.