Research on Innovation and Entrepreneurship Education for College Students from the Perspective of Big Data

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Abstract. Information technology promotes the wide application of big data and causes the constant reform of the teaching mode in colleges and universities. How to make college students adapt to the changeable market environment and improve the effect of innovation and entrepreneurship education has become a topic. Analyze the current situation of college students' innovation and entrepreneurship education through big data. This paper analyzes college students' professional ethics, job-hunting concept, innovation and practice ability cultivation, creative thinking, entrepreneurial psychological bearing ability, entrepreneurial core competitiveness, innovation and entrepreneurship comprehensive quality, etc. Through the analysis of the current situation of college students' innovation and entrepreneurship education, we find out the positive influencing factors and consolidate and improve them. In view of the negative influence factors, this paper puts forward reform ideas and countermeasures. From the government, schools, teachers and students, the society summed up the innovation and entrepreneurship education model, to establish a set of constantly improved innovation and entrepreneurship curriculum system. In this way, the innovative and entrepreneurial talents training scheme adapted to the changing times can be formed and the healthy development of talents can be promoted.

1. Research significance of innovation and Entrepreneurship education from the perspective of big data

Innovation and entrepreneurship education in colleges and universities is to cultivate students' innovation consciousness and entrepreneurial spirit, as well as practical education to reserve for their future personal growth.

1.1. The development of big data poses new challenges for the improvement of college students' innovation and entrepreneurship ability

With the rapid development of e-commerce and the rapid update of information technology, college students with keen insight into the market will inevitably pay attention to the market opportunities and aim at emerging markets [1-2].

1.2. Big data provides entrepreneurial advantages for college students

Nowadays, college students have strong independence, pursue personalization, dare to challenge and dare to compete, and are more able to adapt to the business form of industrial chain reconstruction and value chain reorganization brought by big data. Big data provides an experimental base for the growth of college students [3-4].
2. Analysis on the Current situation of innovation and Entrepreneurship Education for college students

2.1. College students have insufficient cognition of innovation and entrepreneurship
According to the survey data, the cognition of innovation and entrepreneurship education varies greatly among college students. Among college students, the majority of male students believe that innovation and entrepreneurship is a mode of operation that combines thinking and action to seize market opportunities. Most girls think it is to integrate their own resources, open up a new shortcut to survival activities.

| Table 1. College students' cognitive distribution of innovation and entrepreneurship education |
|---------------------------------------------------------------|
| options                                                             | frequency | Male | Female |
| A team starts a whole new business on its own                        |           | 11.74% | 10.14% |
| A way of thinking, reasoning, and acting                             |           | 36.03% | 24.64% |
| Innovation is the foundation of entrepreneurship, entrepreneurship is the embodiment of innovation |           | 23.89% | 26.81% |
| Start a business with your own resources                             |           | 28.34% | 38.41% |

2.2. The insufficient aspects in the process of innovation and entrepreneurship
Known from the analysis of the data in Table 2, in the capital, contacts, market, policy, visibility, and other data, the capital, contacts, market occupy a very high proportion, data about between 72% and 82%, as we all know, now business need a lot of things, especially money, a wide range of contacts, the right market, in this a few, be short of one cannot.

Capital is the premise of starting a business, with capital to start a business, the current college students or fresh graduates, do not have enough capital, lack of experience, do not know how to get through the market, so the data is relatively high, there are a lot of people who have a gap to start a business. However, the data of policy and popularity are relatively low.

The state supports entrepreneurship and has many good policies. For those who want to start their own businesses, the state liberalizes policies and gives support to policies, economy and other resources.

| Table 2. Table of gender distribution in innovation and entrepreneurship |
|---------------------------------------------------------------|
| XY       | money  | contacts | market | policy | profile | other |
| Male     | 72.87% | 78.14%   | 76.92% | 56.28% | 52.63%  | 19.43% |
| Female   | 76.45% | 79.71%   | 81.16% | 58.70% | 63.41%  | 31.88% |

2.3. Innovation and entrepreneurship education has different influence on college students
As can be seen from The data in Table 3, self-employment to increase the experience of innovation and entrepreneurship is the choice with the largest proportion for both men and women, with male students accounting for 45.93% and female students as high as 52.54%.

"Practice leads to knowledge", so most people are willing to participate in the learning and understanding of innovation and entrepreneurship through their own practical experience. Few people choose to participate in innovative and entrepreneurial club activities. According to the survey, many people think that these club activities have some limitations and they do not learn much from social practice.

| Table 3. Distribution of male and female students of different types of courses |
|---------------------------------------------------------------|
| XY            | University Innovation and Entrepreneurship courses | Their own part-time | Entrepreneur lectures and videos | Innovative and entrepreneurial community activities | other |
| Male          | 19.43% | 46.15% | 17.81% | 11.34% | 5.26% |
| Female        | 18.12% | 52.54% | 12.68% | 11.59% | 5.07% |
2.4. The teaching content analysis of innovation and Entrepreneurship courses in colleges and universities

According to the data analysis in Table 4, the two most obvious data are the interpersonal communication and communication skills of boys and girls, with 72.36% for boys and 74.28% for girls, indicating that interpersonal communication and communication skills are very useful and indispensable for entrepreneurship.

Among male students, 49.59% and 45.93% of the data are entrepreneurial case analysis, entrepreneurial opportunity and environment analysis. The reason for these two low data is that male students are not patient enough and are not interested in some case analysis. They may find it boring and prefer practical courses. Among these data, other options are still available, with male students accounting for 17.89% and female students 23.19%, which is still relatively low, possibly because they have some ideas about starting their own businesses.

Table 4. Contents distribution of innovation and Entrepreneurship courses

| X\Y            | marketing | Financial and tax | Personalized coaching | Human communication skills | Entrepreneurial Case Analysis | Entrepreneurial opportunities | other |
|----------------|-----------|-------------------|-----------------------|---------------------------|-------------------------------|-------------------------------|-------|
| Male/a freshman | 78.18%    | 34.55%            | 45.45%                | 65.45%                    | 52.73%                        | 50.91%                        | 20%   |
| Male/a sophomore| 56.72%    | 52.24%            | 68.66%                | 67.16%                    | 50.75%                        | 53.73%                        | 16.42%|
| Male/junior     | 63.92%    | 69.07%            | 68.04%                | 77.32%                    | 42.27%                        | 32.99%                        | 14.43%|
| Male/senior     | 89.29%    | 57.14%            | 71.43%                | 82.14%                    | 67.86%                        | 64.29%                        | 28.57%|
| Female/a freshman | 63.04%  | 58.70%            | 50%                   | 67.39%                    | 60.87%                        | 63.04%                        | 13.04%|
| Female/sophomore| 69.23%    | 53.85%            | 63.74%                | 71.43%                    | 59.34%                        | 63.74%                        | 24.18%|
| Female/junior   | 67.52%    | 54.70%            | 71.79%                | 76.07%                    | 64.96%                        | 67.52%                        | 27.35%|
| Female/senior   | 86.36%    | 54.55%            | 54.55%                | 90.91%                    | 59.09%                        | 68.18%                        | 18.18%|

2.5. The biggest obstacle to innovation and entrepreneurship

As shown in Table 5, more than 60% of students believe that the biggest obstacle to innovation and entrepreneurship is the high risk and low success rate. The obstacles and difficulties of college students' innovation and entrepreneurship are capital, contacts and market, internal management system, suppression of market competitors and choice of partners.

The students are not familiar with the world, have no contact with or do not understand some of the national policies and subsidies for innovation and entrepreneurship. Last but not least, students lack experience and ability, and they need guidance from professionals or instructors, support from families and help from schools.

Table 5. Barriers to innovation and Entrepreneurship education

| X\Y            | External objective environmental problems | High risk, low success rate | Insufficient start-up capital | Lack of experience, lack of ability |
|----------------|------------------------------------------|-----------------------------|-------------------------------|-----------------------------------|
| Male/a freshman | 14.55%                                   | 27.27                       | 21.82%                        | 36.36%                            |
| Male/a sophomore| 17.91%                                   | 40.30%                      | 16.42%                        | 25.37%                            |
| Male/junior     | 12.37%                                   | 35.05%                      | 16.49%                        | 36.08%                            |
| Male/senior     | 21.43%                                   | 42.86%                      | 10.71%                        | 25%                               |
| Female/a freshman | 13.04%                                  | 28.26%                      | 21.74%                        | 36.96%                            |
| Female/sophomore| 10.99%                                   | 34.07%                      | 17.58%                        | 37.36%                            |
3. Analysis of the effect of innovation and Entrepreneurship Education on the Growth of college students

3.1. Positive impact

3.1.1. Innovation and entrepreneurship education can enhance the practical ability of individuals. Schools in order to strengthen the education of the students innovative undertaking, for all kinds of innovative entrepreneurial activity [5]. For example, colleges and universities every year for a number of innovative entrepreneurial class skills contest, run all kinds of business incubator, open a number of innovative entrepreneurial activities, rich and colorful education form, makes the college students, enhance innovative entrepreneurial experience.

3.1.2. Innovation and entrepreneurship education can enhance students' psychological endurance. Problems encountered in different stages of innovation and entrepreneurship activities are different.

3.1.3. Innovative entrepreneurship education help to improve students' overall quality. During the period of university, to carry out the creative education, simulate the real business scenarios, let the students is blended in among them, real entrepreneurial experience, play to imagine myself, cultivate the students ability of self-employment, accumulate experience in practice, let the students helping each other in the simulated business, find a way to solve the difficult, improve the comprehensive quality.

3.1.4. Innovation and entrepreneurship education improves the core competitiveness of college students. During the university, students should be educated on innovation and entrepreneurship to improve their entrepreneurial cognition view, so that they can understand the difficulties in entrepreneurship and find appropriate methods so that they can stand on their own feet in the society and enhance their entrepreneurial competitiveness [6].

3.2. Negative impact

3.2.1. Innovation and entrepreneurship practice activities will affect the learning of other courses. College students should focus on their studies. Innovation and entrepreneurship are only a part of college life. Do not turn them into the whole of life.

3.2.2. Entrepreneurship failure is easy to discourage the innovation consciousness of college students. Innovation and entrepreneurship are relatively risky, and college students have relatively insufficient social experience. In the context of fierce market competition pressure for entrepreneurship, failure to correctly analyze the current market situation is likely to lead to entrepreneurship failure. Students with weak psychological bearing capacity will be hit, and their innovation consciousness and courage will be hurt.

4. Suggestions on innovation and Entrepreneurship Education reform in colleges and universities

4.1. Improve the entrepreneurial environment system
Government departments should constantly improve the construction of innovation and entrepreneurship environment, build and improve the credit system more quickly, create an open, fair and just market environment, and guide college students to join the tide of innovation and entrepreneurship [7].

| Female/junior | 15.38% | 41.03% | 16.24% | 27.35% |
|--------------|--------|--------|--------|--------|
| Female/senior| 27.27% | 22.73% | 27.27% | 22.73% |
4.2. Give full play to the role of government policies and systems
Governments at all levels should give strong support to the innovation and entrepreneurship of college students, create conditions in terms of funds and provide convenience in terms of policies, including a series of preferential conditions. Special consideration is given to such issues as records and length of service [8].

4.3. Improve entrepreneurship education and family support
Colleges and universities should constantly improve the teaching conditions, enhance the level of innovation and entrepreneurship teaching, constantly bring forth the new from the curriculum setting to the teaching mode, attract college students to learn theoretical knowledge from the content and means, and lay a good practical foundation. Take advantage of the support from society, school and family to cultivate the healthy growth of college students [9-10].

5. Conclusion
The development of information technology and the arrival of the era of big data have an increasing impact on the innovation and entrepreneurship education of college students. In order to adapt to the changing times, the government, schools, teachers and enterprises should take their respective responsibilities and complement each other in the process of education. Colleges and universities should establish a perfect entrepreneurship course system, teachers should conduct systematic entrepreneurship theory education, enterprises should provide a real platform for entrepreneurship practice, and the government should launch a series of policies to support entrepreneurship. All parties work together to create the characteristics of innovation and entrepreneurship education in universities.

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