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A Study on Implementation Route of College Innovation and Entrepreneurship Education in the Context of Internet Plus Education

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ABSTRACT. Internet plus education is deeply integrated into innovation and entrepreneurship education, which puts forward new requirements for the teaching reform of innovation and entrepreneurship education. In the process of carrying out innovation and entrepreneurship education, colleges and universities have faced a series of difficulties, which affect the development of innovation and entrepreneurship education. This paper analyzes the deep integration of college innovation and entrepreneurship education from the perspective of value to try to find out the value orientation and implementation path of it in the context of Internet plus education, promoting its development.

KEYWORDS: Internet plus education, Innovation and entrepreneurship education, Value orientation, Implementation route

1. Introduction

Colleges and universities are important sources of innovation and entrepreneurship education. Through innovation and entrepreneurship education, students are encouraged to develop their creativity and entrepreneurship as well as enhance their abilities. At present, China's innovation and entrepreneurship education is in full swing. A series of systems and policies have promoted the development of innovation and entrepreneurship education, but a complete innovation and entrepreneurship education system has not yet been formed. With Internet + being listed as a national strategy, Internet plus education has become a new requirement for higher education. In the context of Internet plus education, exploring the issue of innovation and entrepreneurship education is not only related to the development of students, but also the key to teaching reform in colleges and universities.

2. Deep Integration between Internet + Education and Innovation and Entrepreneurship Education

The Internet has a strategic and global impact on social development. Internet + is a deep integration of the innovation achievements of the Internet into all areas of society, promoting technological progress, efficiency improvement and organizational change, and forming a new form of social development with the Internet as an infrastructure and innovative elements [1]. When internet meets education, Internet + Education reorganizes and restructures the core elements of education, accurately understands the learning needs of students, and promotes teaching resources, teachers, teaching environment, teaching methods and teaching management. As well as the transformation of various elements in teaching, a new education form has been formed. Internet + Education is based on Internet technologies and concepts such as cloud computing, big data, and artificial intelligence. It is deeply integrated with innovation and entrepreneurship education, which promotes the quality and openness of teaching resources, the independence and personalization of the teaching process, the scientific management of teaching, and democratization of teacher-student relationships. Based on this situation, this article studies these in terms of value, deep integration which has important practical significance on the current development of innovation and entrepreneurship education.

2.1 Fusion of Training Goals

Internet + Education is based on the Internet, which provides rich resources and diversified choices. Students carry out independent learning according to their actual conditions, which greatly promotes the formation of students'

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personalized personality, the development of critical and creative thinking, and cultivation of innovative talents. Innovation and entrepreneurship education leads innovation, which mainly emphasizing social practice innovation based on professional knowledge [2], and cultivates students' innovative thinking, entrepreneurial awareness and practical ability. Therefore, the training goal of innovation and entrepreneurship are the same as the destination of Internet + Education, and is realized in terms of value.

2.2 Encourage Students from Passive Acceptance to Active Learning

For a long time, colleges and universities have always focused on classroom teaching, emphasizing teacher-centered, classroom-centered, and knowledge-centered, and students are passive receivers of knowledge. Students focus on coping with exams or further studies, and rely on memory for learning. This not only weakens students' creativity, but also is not conductive to students' active thinking, and does not turn them into conscious learning behaviors, which limits students' personalized development. The innovation and entrepreneurship education attaches importance to the initiative and cultivation of student learning, and guides students to actively participate in practice. Internet + Education emphasizes the autonomy and individuality of the teaching process, attaches importance to the subjectivity and initiative of students in teaching, and promotes students' active learning through Internet concepts and technologies. Innovation and entrepreneurship education helps students develop the habit of autonomous learning by strengthening their practical abilities. Therefore, the deep integration of Internet + education and innovation and entrepreneurship education promotes the transformation of students' learning from passive acceptance to active learning.

2.3 Consistency of Orientation in Terms of Value

Students are the main subjects of innovation and entrepreneurship education in colleges and universities. Student-centered is the value orientation of innovation and entrepreneurship education, which runs through all fields and links of innovation and entrepreneurship education in universities [3]. Internet + Education can accurately get the learning needs of students, and adhere to the student-centered educational values. Therefore, the value advocated by Internet + Education is consistent with the value orientation of innovation and entrepreneurship education, and the promotion of innovation and entrepreneurship education is also a reflection of the implementation of the Internet + Education action plan, and both can be better combined.

3. The Dilemmas of Innovation and Entrepreneurship Education in the Context of Internet + Education

The innovation and entrepreneurship education in universities has been continuously strengthened and positive progress has been made. However, the existence of lagging ideas in innovation and entrepreneurship education, the lack of integration with professional education, and the disconnection from practice are the outstanding issues that cannot be ignored [4]. Internet + Education has brought a series of new requirements and challenges to the current stage of innovation and entrepreneurship education. There is still a deviation in the concepts and contents of innovation and entrepreneurship education. Colleges and universities are required to face the predicament of innovation and entrepreneurship education and continuously innovate teaching.

3.1 Ignoring Innovation and Entrepreneurship Practice Teaching

Because universities and colleges have been committed to the education of subject knowledge for many years, they attach importance to technological renewal and environmental construction, neglect the construction of innovation and entrepreneurship education and practice teaching platforms, resulting in a disconnect between innovation and entrepreneurship education and practice activities, and lack of innovation and entrepreneurship practice teaching and innovation training activities for students. The lack of practical activities is a major bottleneck restricting the development of innovation and entrepreneurship education in universities. Innovation and entrepreneurship education is an activity that requires practice. It only stays in theory and competition, and it is difficult to achieve the real goal of subject education. Nowadays, the practical activities of domestic colleges and universities are basically in the campus, where the atmosphere and facilities do not support students' creative and entrepreneurial practice activities. The university is a place where teacher-student relations are the main features, and entrepreneurial activities involve business, markets, funds, etc. So expanding colleges' innovation and entrepreneurship education bases is also an urgent issue.

3.2 Insufficient Teaching Resources and Practical Activities

The richness and diversity of teaching resources is an important way to achieve the training goals. Most colleges and universities' innovation and entrepreneurship education only stays at the level of participating in science and technology innovation and competitions. The subject base is weak and there is no systematic innovation and entrepreneurship education course. The universities which have set innovation and entrepreneurship education courses have greater limitations in selecting teaching materials [5]. In the context of Internet + Education, the environment for innovation and entrepreneurship education has not formed a good hidden curriculum, and the integration of innovation and entrepreneurship education into professional education is also limited to the second classroom, which lacks integration and systematicness with professional content. Most of the courses are about entrepreneurship basics and innovation classes, teaching entrepreneurial knowledge, entrepreneurial skills and cases. Various innovation and entrepreneurship projects and competitions are mainly based on the establishment of projects by the Educational Affairs Department, Student Affairs Department, and other related departments. The project implements a mentoring system, but there is a lack of communication and in-depth exchange between the instructors and students. The technology content of the existing entrepreneurial projects of students is not high, and only a few students are involved in high-tech fields, which is actually related to the insufficient in-depth of courses.

3.3 Lack of Professional Teachers

Teachers are the foundation for education in innovation and entrepreneurship. In the context of Internet + education, colleges and universities' innovation and entrepreneurship education attaches great importance to cultivating students' ability to innovation and entrepreneurship. It covers a wide range and faces many new forms. In reality, the teaching of innovation and entrepreneurship education is mainly undertaken by teachers and counsellors of business schools. They lack academic background of innovation and entrepreneurship education, and most of them have little experience in entrepreneurship and business management. Their teaching abilities are limited, and they can hardly guide innovation and entrepreneurship practice activities. Lack of professional teachers is a major problem in the development of innovation and entrepreneurship education in universities, which restricts the realization of talent training goals.

3.4 Failure to Adapt to the Internet + Education Teaching Model

Internet + Education restructures the traditional education model, forcing traditional education to change. Students become the subjects of learning. Teachers become guides who provide personalized teaching and guides students to carry out learning independently. While in traditional classrooms, innovation and entrepreneurship education is still dominated by teachers. Some teachers cannot change the traditional teaching model, and even impede the implementation of new teaching models. What's more, some students cannot adapt to the Internet + education teaching model and take the initiative to learn. Adapting to the Internet + Education teaching model, arousing the interest and desire of teachers and students to explore have become important issues to be solved at present.

3.5 Unreasonable Teaching Management Mechanism

Innovation education and entrepreneurship education are closely linked together, which are essentially interconnected and cannot be completely separated. Colleges and universities have insufficient knowledge of innovation and entrepreneurship education. They have not been incorporated into the talent training system, and innovation education is separated from entrepreneurship education. Therefore, innovation education and entrepreneurship education are centralized in different departments, resulting in multiple management and effective communication. Internet + Education promotes the scientific allocation of resources and management. Big data provides conditions for scientific teaching management in colleges and universities. There are many information islands in the management of innovation and entrepreneurship education in colleges and universities, and the resource sharing mechanism is not smooth. Colleges and universities fail to grasp the actual situation of innovation and entrepreneurship teaching, and the management and support system is weak. At the same time, the phenomenon of multiple management has directly led to the implementation of discounts for innovation and entrepreneurship education.

4. Value Orientation and Implementation Route of Innovation and Entrepreneurship Education

Internet + Education has been deeply integrated into teaching, subverted traditional teaching, reshaped the classroom structure, weakened the leading role of teachers in classroom teaching, and flooded and generalized educational resources and education technology. In the context of Internet + Education, Colleges and universities should adhere to the student-centered positioning, give play to the leading role of teachers, reflect the subject status of students, and promote the cultivation of innovative and entrepreneurial capabilities. They should seize the opportunity of teaching reform and development of innovation and entrepreneurship education, transforming the difficulties faced by innovation

and entrepreneurship education into opportunities for progress, and building a new ecology of innovation and entrepreneurship education. Internet + Education widely affects all aspects of the teaching process of innovation and entrepreneurship education. It is necessary to establish a new teaching system, create a ubiquitous practical teaching environment, optimize teaching resources and configuration, diversify teaching methods, and humane management. From this, a practice framework for innovation and entrepreneurship education in colleges and universities in the context of Internet + education is constructed, which includes five major routes for implementing innovation and entrepreneurship education, as shown in Fig.1.

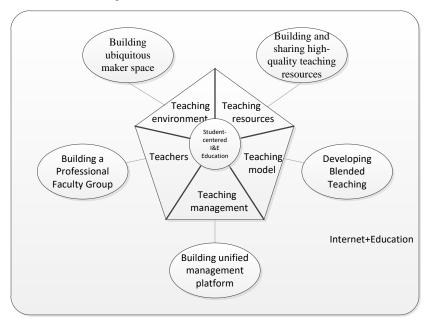


Fig.1 Framework of Innovation and Entrepreneurship Education in the Context of Internet + Education

4.1 Building a Ubiquitous Maker Space

The ability to innovate and start a business is formed in complex problem solving, and the intelligent learning environment provides students with good tools and resources for problem solving [6]. Cultivation of innovation and entrepreneurship requires practice testing. Pure theoretical education and simulation teaching have little effect on the improvement of innovation and entrepreneurship.

Maker space is an innovation and entrepreneurship education enabled by Internet + Education, which provides students with a hardware technology platform and an online community. The convenient conditions have promoted the communication and cooperation between students and makers, opened up a new field of innovation education, and realized their creativity [7]. Maker education integrates Internet + education, and inherits the concept of innovation education, which provides an opportunity for the practice teaching of innovation and entrepreneurship education in universities and the ubiquitous innovation and entrepreneurship environment. Through the maker space, the process of students asking questions and solving problems with their own creativity has a direct role in promoting innovation and entrepreneurship education, and it is an important mean of achieving innovation and entrepreneurship education [8].

4.2 Building and Sharing High-Quality Teaching Resources

Internet + Education applies Internet thinking, technology and models to transform the traditional education ecology and realize structural changes in the education system [9]. Internet + Education emphasizes interaction, openness, and sharing. While mastering the basic knowledge and skills, students use the Internet as the engine to enrich the number of courses and the diversity of resources through online open courses. It provides favorable conditions for colleges and universities, and students can autonomously choose teaching resources for innovation and entrepreneurship under the circumstances of lack innovative teaching resources and teachers.

4.3 Building a Professional Faculty Group

Teachers are the main elements who guide and promote the innovation and entrepreneurship education as well as the

key elements of teaching activities. Both professional education and innovation and entrepreneurship education point to the goal of talent training, which is an integral part of college education and cannot be separated. Professional education is the foundation of innovation and entrepreneurship education. During the construction of the innovation and entrepreneurship education system, universities should use the openness of Internet + education to provide training and guidance for professional teachers, integrate innovation and entrepreneurship education into professional education within all aspects. Through the introduction of off-school innovation and entrepreneurship education teachers, students' innovative entrepreneurship spirit is cultivated to make up for the lack of professional faculty. Colleges and universities should provide modular training for full-time teachers engaged in innovation and entrepreneurship education according to the needs of different categories, focusing on the combination of training and practice.

4.4 Developing Blended Teaching

The sign of the success of the innovation and entrepreneurship education teaching model is to promote teaching with new technologies, promote students' autonomous learning and enthusiastic participation, and attach importance to extracurricular and classroom. In the context of Internet + Education, the openness of innovation and entrepreneurship education requires the reform of traditional teaching models. Through the construction of smart teaching spaces such as smart classrooms, MOOCs are used to carry out online and offline blended teaching. Blended teaching gives students sufficient time to learn basic knowledge online, and enhances the vividness of content through classroom teaching activities to interact with teachers and students, and guides students to think deeply in the theoretical and practical activities of innovation and entrepreneurship. It is necessary to break through the constraints of classroom supremacy, boldly explore the educational presentation method combined with Internet technology, adopt online and offline teaching methods, and encourage students to conduct online learning and offline practice.

4.5 Building a Unified Management Platform (Institution)

Universities in China are committed to training innovative talents, but innovation and entrepreneurship education has not yet formed a perfect system. Innovation and entrepreneurship are inextricably linked, and innovation is based on entrepreneurship [10], and innovation education and entrepreneurship education are also linked. Colleges and Universities must adhere to the student-centered orientation, organically integrate innovation education and entrepreneurship education into the entire process of talent training, to achieve the goal of innovation and entrepreneurship education and talent training. In the face of large-scale students, teachers, and teaching resources, innovation and entrepreneurship education must take advantage of the Internet + education to strengthen teaching management reforms and break their own policies. Furthermore, Colleges and Universities set up specialized innovation and entrepreneurship education institutions, establish a unified management platform, carry out efficient and unified management and coordination, and improve the innovation and entrepreneurship education talent training system.

5. Conclusion

Internet + Education is an opportunity and a challenge to traditional education. Internet + Education and innovation and entrepreneurship education are deeply integrated, in terms of value, and the training goals are the same, and adhere to the student-centric orientation, promoting students from passive acceptance to active learning. Innovation and entrepreneurship education must be clear the dilemmas faced in the context of Internet + education, of which take advantage to build maker space, build and share high-quality teaching resources, build professional teachers, develop online and offline teaching, establish a unified management platform and other implementation routes to promote the cultivation of students' innovation and entrepreneurship.

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References

- [1] Guiding Opinions of the State Council on Actively Promoting Internet + Actions, [online] Available: http://www.xinhuanet.com//politics/2015-07/04 / c_1115815944.htm.
- [2] Zh Xiangmin. The Integration and Implementation of Entrepreneurship Education and Professional Education in

- Colleges and Universities from the Perspective of Coupling. Chongqing Higher Education Research, No. 5, PP. 44-51, 2017.
- [3] Student-centered: the value of double innovation education in universities, [online] Available: http://news.sciencenet.cn/sbhtmlnews/ 2018/5 / 335479.shtm.
- [4] The General Office of the State Council printed and issued the Opinions on Deepening the Reform of Innovation and Entrepreneurship Education in Colleges and Universities, [online] Available: http://www.gov.cn/xinwen/2015-05/13/content_2861327.htm.
- [5] Sh Yongchuan, H Zhaoxin, Li Yuanxi. Difficulties and Countermeasures of Entrepreneurship Education for College Students. Research on Educational Development, No. 21, PP. 71-75, 2010.
- [6] H Xiaoyong, Z Long. An Empirical Study on the Cultivation of Creativity in a Smart Learning Environment. China Telephone Education, No. 6, PP.11-16, 2017.
- [7] Zh Zhiting, S Yanyan. Maker Education: Information Technology-enabled Innovation Education Practice Field. China Educational Technology, No.1, PP.14-21, 2015.
- [8] W Liyong, K Cuiping. Internet + Maker Education: Building a New Ecology of Innovation and Entrepreneurship Education in Colleges and Universities. Educational Development Research, No. 7, PP.59-65, 2016.
- [9] Y Xianmin, Z Xinshuo. Recognition of Learning Resources in the Internet+ Era and Its Development Trends. Research on Electronic Education, No.10, PP. 88-96, 2016.
- [10] Strategic innovation to promote innovation and entrepreneurship education in colleges and universities, [online] Available: http://epaper.gmw.cn/gmrb/html/2016-02/04/nw.D110000gmrb_20160204_2-15.htm.