Research on the Cultivation Mode of University Student Maker Space Based on the Network Platform under the Background of School-Enterprise Cooperation

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Abstract. With the upsurge of “mass entrepreneurship and innovation” and the maturity of computer technology, the innovation and entrepreneurship education of colleges and universities has been given a new historical mission. How to promote the cultivation of applied talents and improve the ability of college students to innovate and create has become an urgent problem to be solved. With the gradual spread of the maker culture, the cultivation of college students' thinking and the exploration of the maker space model have gradually become the breakthrough of reform. This paper explores the operation mode of Maker Space in the second classroom of college students based on the network platform and the feasibility of cultivating the culture of Maker in the campus. Based on the experience of cooperation between schools and enterprises in recent years, this paper proposes the cultivation of college students' creator space under the school-enterprise cooperation mode. Mode of operation.

Keywords: School-enterprise Cooperation, Maker Space, Second Classroom, Innovation and Entrepreneurship, Network Platform

1. Introduction
With the advent of the Internet + era, "mass entrepreneurship, innovation" has been given a new life and gradually become the theme of this era. As the vanguard of contemporary innovation and entrepreneurship, college students are shouldering the mission of innovation and entrepreneurship[1-3]. In order to further improve the students' innovative practice ability and promote the cultivation of applied talents, cultivating the creator's thinking has become a breakthrough in colleges and universities' innovative education. Actively introducing the maker culture in the campus, cultivating the maker space has become the second classroom for college students. First priority[4-5]. Colleges and universities are the main channel and main battlefield for the cultivation of innovative talents. The campus is the main nursery for the growth of “Maker”. It trains, guides and supports the healthy and prosperous development of the maker culture. The university is duty-bound and has a long way to go. How to cultivate the maker culture in college campuses, to cultivate innovative entrepreneurial thinking, and to establish an effective second-class innovator space training mode for college students is extremely urgent[6].
2. The second class of college students
In order to further promote the cultivation of applied talents and strengthen innovation and entrepreneurship education, the School of Information Science and Engineering follows the principles of “interest-driven, independent experiment, and emphasis on the process”, with ACM Association, Software Association, Internet of Things Association, Digital Model Association, and animation. The Association, the Network Association and the Mobile Internet Association have seven science and technology associations as the main body, and comprehensively advocate college students to actively participate in the second classroom activities. Each science and technology association truly realizes the "autonomy" of students. At the beginning of each semester, the student leaders of the association formulate weekly activity plans, strictly implement them, reasonably select topics that meet the interests of various organizations, and conduct academic lectures, technical training, scientific and technological competitions, and entrepreneurial guidance. Class activities, at the same time carry out the annual "Computer Science and Culture Festival" activities, so that students can fully develop in the fields of academic technology, innovation and practice.

3. Status of school-enterprise cooperation
Zaozhuang College is the only full-time undergraduate college in Zaozhuang City. It is one of the first batch of 30 ICT production and education integration innovation bases of the Ministry of Education. In recent years, the school has clearly defined the application of talents, positioning, service, and development. Through school-enterprise cooperation, integration of production and education, combined with industry and enterprise requirements for talent training, the introduction of industry and enterprise resources, school and enterprise to build laboratories, and joint construction. Many measures such as maker space have been put into practice, providing talent, intelligence and science and technology support for regional economic and social development. During the transition to applied universities, they actively explored and actively reformed and played a demonstration in similar undergraduate colleges across the province. Leading role. The School of Information Science and Engineering keeps pace with the development of the school. In the application-oriented transformation and development, it broadens its own pace, and is bold and pioneering. As the “leader” in the reform and development of our school, it is the first to cooperate with industry enterprises and find out that it is in line with its own. The development of school-enterprise cooperation, the quality of information technology personnel training has greatly improved. Since 2011, it has cooperated with Qingdao Yinggu Education Technology Co., Ltd., Hewlett-Packard Co., Dana Times Technology Group and ZTE to establish computer related majors. With the gradual deepening of school-enterprise cooperation, schools and enterprises jointly build laboratories and practice bases, jointly develop talent training programs, jointly develop teaching materials, jointly research and apply applied research projects, and cultivate teachers' engineering practice ability, enterprise engineers enter classrooms, and enterprise projects. The R&D model is integrated into the implementation of practical teaching and other strategies. The students' innovative practice ability has been further improved, and the effective connection and mutual benefit of application-oriented personnel training and enterprise demand have been realized.

4. Maker space construction measures under the cooperation of schools and enterprises
"Innovation" is the "soul" of a university, and it also represents the "living power" of a university. In order to further promote the cultivation of applied talents, our institute has attached great importance to students' innovation and entrepreneurship in recent years. On the road of school-enterprise cooperation, It has formed its own unique model of application-type talents, continuously cultivated the maker culture, implanted the concept of makers into the innovation and entrepreneurship education of colleges and universities, and gradually explored the mode of fostering space in colleges and universities based on entrepreneurship education.

(1) Relying on Mozi College, “Building a space entity by “external force”. In order to ensure the orderly development of innovation and entrepreneurship, relying on the university's innovative and
entrepreneurial work management platform—Mozi College and joint cooperation enterprise, the college has established a school-enterprise innovation and entrepreneurship center, which consists of a university self-employment center and a school-enterprise innovation platform. The development of the center activities centered on the second classroom, effectively bringing together the innovation projects and entrepreneurial projects of various science and technology associations, using the technological advantages of the cooperative enterprises to carry out innovation and entrepreneurship education, and providing sufficient hardware facilities for the development of the maker space model.

(2) The concept of makers is implanted into innovation and entrepreneurship education. The maker concept focuses on the cooperation and interaction of the innovation subject, knowledge sharing, creative transformation and technical exchange. The maker space provides the event entity for the maker. College campus makers are driven by interest and self-realization as the driving force for innovation. They do not aim at profit or utilitarianism. The campus promotion of the concept of makers has a pioneering effect on the cultivation of talents in colleges and universities, effectively updating the concept of talent cultivation in colleges and universities, and further promoting the application type. Cultivation of talents. At the same time, it integrates general education and professional education resources, realizes the comprehensive communication of the first and second classrooms, creates a public space for the integration of schools and enterprises, and promotes innovation and entrepreneurship education, which has fostered the innovation and entrepreneurship of college students.

(3) Establish a school-enterprise mixed Maker space team. On the basis of the school-enterprise joint construction of professional mixed faculty, we will create a team of Maker Space faculty, taking into account professional skills training, professional quality training and innovation and entrepreneurship guidance. The launch of the maker space activity is based on the second classroom, attracting all the teachers and students of the whole school. The activities follow the students' "autonomy" and weaken the orientation of the "central role" of the instructors, emphasizing the central position of the students and the teachers in the maker space. The guiding role.

Figure 1. Is a diagram of the structure of innovative entrepreneurs

Gradually match the team of innovative entrepreneurs with strong creative space, actively recruit socially renowned entrepreneurs, successful entrepreneurs, experts and scholars, and outstanding alumni as part-time entrepreneurial instructors. On this basis, select outstanding entrepreneurial instructors, and have the willingness to start a business. The students of the project and start-up
enterprises will provide “1+1” guidance and assistance. Figure 1 shows the structure of an innovative entrepreneurial teacher.

5. Conclusion
In the second classroom activity, by introducing the thinking of the makers, supporting the students' creativity, gradually activating the genes of college students, using the power of enterprises and computer science and technology to build a web-based platform for creating customers, cultivating the team of makers, and building a space for creating enterprises. Appropriately introduce the enterprise maker guide teacher, integrate into the second classroom maker space, enrich the second classroom activities, and let the second classroom emerge more creative and innovative works. At the same time, we will integrate the resources of the whole school and gradually realize the process of creative incentive, innovation realization, project incubation and flexible employment, and further improve our innovation and entrepreneurship system.

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