

Research on the Cultivation Mode of Local Application-oriented Universities

---Taking Wuhan Business University Hackerspace as an example

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Abstract: In the government work report early than 2015, the premier Li Keqiang proposed business startups and innovation, and regard them as one of the engines fueling Chinese economic transition and growth. At the same time, maker, hackerspace, creative people, creative education, cultivation of innovative people became the top focus in the society, especially in the university. The cultivation of college students' innovative ability had become an urgent task in the reform of university, which requires the building of cultivation mode of local application-oriented universities. It is the requirement of the times, as well as the requirement of the education development. Based on the targets of cultivation and innovative ability for local application-oriented universities, the paper takes Wuhan Business University hackerspace as an example, setups a cultivation mode in application-oriented universities from instructional system, curriculum system, teaching method and teaching evaluation.

1. Introduction

The applied undergraduate college students learning exists five "more and fewer" phenomenon. In the learning ways, more following type, fewer autonomy. In the thinking ways more similar, fewer difference. In the learning state, more submissive, fewer problem solving. In the learning level, more inheritance type, fewer innovation. In the learning emotion, more examination oriented, fewer interesting. Focus on the learning problems in current higher education, profound reflection and comprehensive analysis on the problems of College Students' creative ability, exploring the training mode for higher education development of the characteristics of its own personnel, so as to effectively improve the quality of technological innovation.

The training mode of innovative people is a new educational mode that applies modern information technology, advocating "innovation", "sharing", "cooperation" and "practice", and focus on the training all kinds of innovative people. In the environment of mass entrepreneurship and innovation, need setup the cultivation mode of local application-oriented universities creative people. It is the need of the times development, and the need of the education development.

2. The status of the creative people cultivation mode

Along with the maker movement popular everywhere, many more people talking about the creative people cultivation mode. More countries and regions are paying attention to the maker movement, promoting the training of creative people, enabling students learning from doing, thinking and realizing, and regard "creative learning" as the best way for learning.

America is the birthplace of the global maker movement and the training of creative people. The vigorous development of American innovative people training provides a new idea for the transformation and development in the global education field. In Nov. 2009, the present of America Mr. Obama launched the "Educate to Innovate", then the White House responding to the call of President Obama, started "Maker Education Initiative, MEI". The plan aims to motivate students' interest and enhance their confidence and creativity by promoting the construction of customer

space and developing various customer projects, so that every student can become a maker. This is the embryonic form of the creative people cultivation.

The cultivation of creative people was raised in China in 2013. As a new educational concept, the research of Chinese scholars mainly focused on combing the definition and source of creative people training, and analyzing the theoretical research results and practical cases of implementing innovative people training in American primary and secondary schools. Through these carding and analysis, educators and experts in China began to recognize and understand the training of innovative people, especially following with the full promotion of educational information in China in 2015, the training of creative people has gained more and more attention and favor.

3. The cultivation mode of the local application-oriented universities creative people

Following with the deepening of the comprehensive reform in higher education, the transformation and development of local universities towards application-oriented universities and colleges has become a consensus. Wuhan Business University has been approved to be one of the first batch of pilot universities in Hubei province to transform an applied type. Under the background of innovation education, the training of college students, especially the innovation ability of engineering students, has become an urgent task for the applied undergraduate education. Based on the targets of cultivation and innovative ability for local application-oriented universities creative people in this subject, using Wuhan Business University hackerspace as an example, setup the cultivation mode application-oriented universities creative people from instructional system, curriculum system, teaching method and teaching evaluation.

3.1 Instructional System

Taking the application as the main line and taking the discipline competition as the link, setup the interactive teaching system of "the fusion of two classes" (the integration of the first class and the second class).

The interactive teaching mode of "the fusion of two classes" is focused on the comprehensive promotion of students' theoretical knowledge, practical ability and comprehensive literacy. Therefore, it is the key to establish the unity of theoretical education and practical ability with the interests and hobbies of students, which is the key to improve the students' innovative ability. Through the first class introducing the application knowledge, cultivate students' interest by hackerspace, combining the knowledge points and points of interest, supplemented by the guidance of teachers, enhance the students' comprehensive quality, academic competition, the level of teaching and scientific research and social service ability.

3.2 Curriculum System

Taking the cultivation of students' innovative and entrepreneurial ability as the purpose, we build B (Base, basic curriculum system), D (Discipline, subject application curriculum system) and I (Innovate, innovation practice curriculum system) three levels service discipline competition ladder curriculum system.

In the first class, we take discipline competition as a guide, combine curriculum knowledge points, reconstruct discipline curriculum system, setup B (Base) level curriculum system and D (Discipline) curriculum system for Discipline and professional knowledge. In the second class, we focus on discipline competition and combine students' interest points, and create a I (Innovate) course system for innovative practice application based on the professional community activities in hackerspace.

Using the courses of Wuhan Business University of machinery as an example, the B level including engineering graphics, theoretical mechanics, mechanical design etc. basic courses; the D level including the tolerance and fit, computer aided design, MCU application etc. application courses, I level including 3D printing technology, mechanical creative design, innovation and entrepreneurship base etc. practice courses.

3.2.1 Teaching Method

Establish the teaching method of "project + competition" to encourage the students' interest, paying more attention to the problem solving. That is to say, take the competition projects as the breakthrough point of curriculum teaching projects, induce relevant knowledge points, guide students to form innovation points in teaching process, setup the progressive teaching method, for example, a competition project---some knowledge points---innovative points.

For the teaching contents, we should closely match the competition projects, using real competition projects to guide students integrating theory with practice, pay attention to the development of applied technology and initiative practice ability.

3.2.2 Teaching Evaluation

Establish a multi teaching evaluation method based on process evaluation, focusing on students' learning process, and combining limited incentive and unlimited development.

The creative people cultivation mode presented in this article is taking the application as the main line, integrating the discipline competition "the fusion of two classes", constructing students' innovative ability training for the purpose, servicing for the subject competition "BDI" course system. The establishment of "project + competition" innovation teaching and evaluation methods can fully play a leading role in universities. Later we will apply it in Wuhan Business University hackerspace and automobile service engineering degree, vehicle engineering degree, to further optimize the mode, in order to using it in other local application-oriented universities more easily.

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