

# Analysis of Virtual Enterprise-based Education Pattern for University Students' Innovative Undertaking

Ping Zhang

School of Mechanical and Electrical Engineering  
Guilin University of Electronic Technology  
No. 1 Jinji Road, Guilin, Guangxi 541004, China  
pingzhang@guet.edu.cn

Yinghong Zhang

School of Mechanical and Electrical Engineering  
Guilin University of Electronic Technology  
No. 1 Jinji Road, Guilin, Guangxi 541004, China  
zyh1433@sina.com

**Abstract**—Nowadays, the market competition is increasingly fierce, employers have gradually improved assessment criteria for talents, and college students expand constantly, so it is difficult for talents who just have graduated from university to find suitable jobs. In order to alleviate employment pressure on and stimulate economic activity, China has carried out a series of policies to promote entrepreneurship, encourage college students to make use of their own advantages to achieve self-employment and promote economic development. Therefore, it is very necessary to introduce the entrepreneurship education into modern higher education system. The paper conducts research on education pattern for university students' innovative undertaking combined with virtual enterprises and puts forward some strategies for effective development.

**Keywords**—virtual enterprise; university students' innovative undertaking; education pattern; evaluation system

## I. INTRODUCTION

Because the era of knowledge economy based on information technology has put forward higher requirements for talents, and the number of college students is increasing, the pressure of employment competition is increasing, and the whole society presents the situation of talent supply exceeding demand. In essence, it is caused by the gap between China's talent training mechanism and social employment mechanism<sup>[1-2]</sup>.

Entrepreneurship education is a kind of innovative educational thought, is mainly carried out for undergraduates who are of entrepreneurial thinking and entrepreneurial intention in China, mainly involving entrepreneurial skills impartation, identification of entrepreneurial environment, etc., is of traditional university education characteristics, and can provide better life positioning and career planning for college students<sup>[2][4]</sup>.

## II. OVERVIEW OF ENTREPRENEURSHIP EDUCATION AND VIRTUAL ENTERPRISE

### A. Concept and connotation of entrepreneurship education

In a narrow sense, "entrepreneurship" is understood as "to create a cause", which is supported by many experts and scholars who even believe that "entrepreneurship" is the establishment of enterprises, and to obtain huge economic benefits. Such view clearly shows differences between Chinese

culture and Western culture. In western culture, "entrepreneurship" is regarded as the process of value exploration, accumulation and creation, and an enterprise does not have to be big, but will realize self-worth finally. In contrast, in Chinese culture, the understanding to "entrepreneurship" is of strong utility<sup>[5]</sup>.

In fact, there is no essential difference between "entrepreneurship" and employment. Entrepreneurship is a more high-end employment, which not only meets individual employment demand, but also provides jobs for others, having greater contribution to the social economy, and more obvious promoting effect on productivity. China has clearly put forward to promote economic development strategy of "driving the employment by entrepreneurship", and a series of policies supporting university students' innovative undertaking and financial support projects.

### B. Concept and connotation of virtual enterprise

The so-called "virtual" shows that the object has no entity but provides functions that the entity has. Combined with the situation that current information technology is widely used, "virtual enterprise" in the narrow sense refers to business (enterprise) simulation environment re-integrating the internal and external resources of enterprises and meeting dynamic management demand of an organization by means of information technology<sup>[5-6]</sup>.

## III. PROBLEMS EXISTING IN COLLEGE STUDENTS' ENTREPRENEURSHIP EDUCATION

### A. Weak entrepreneurial awareness

In fact, China is still in the primary stage in terms of the knowledge about "entrepreneurship education". Not only the majority of college students lack systematic knowledge, but also educational department of universities has narrow and one-sided knowledge. Some universities mingle with project planning, brand founding, business management in the process of entrepreneurship education, resulting in many embarrassing phenomena of "high quality, but low level". Therefore, entrepreneurship education in colleges and universities must strengthen the awareness of entrepreneurship, and pay attention to practical teaching.

### *B. Unsound teaching environment*

Construction of the teaching environment includes two aspects, i.e. hardware and software. Hardware includes teaching equipment and facilities, project funds, teachers, while software is the college students' entrepreneurship education philosophy, cognition, pattern, etc.

### *C. Single teaching form*

Most colleges and universities still take traditional teaching standard, incorporate entrepreneurship education into conventional theory courses, and involve most of the knowledge of incoherent marginal content, even some content conflicting with the facts. On the one hand, it is difficult to understand, and on the other hand, the entrepreneurship education course is out of joint with entrepreneurial practice and professional courses so that the students think the entrepreneurship education course is not essential, and are easy to be tired, which is disadvantageous for the development of entrepreneurship education.

## IV. VIRTUAL ENTERPRISE-BASED ENTREPRENEURSHIP EDUCATION QUALITY EVALUATION INDEX

Virtual enterprise-based quality evaluation of entrepreneurship education is not only the verification to the function of entrepreneurship education, but also the way to test whether current index system adopted by colleges and universities is reasonable. I will analyze from the three aspects below.

### *A. Students*

Students are the key to entrepreneurship education quality evaluation index system and the subject of teaching function of virtual enterprise. Given that students are influenced by internal and external reasons, i.e. self-recognition and social influence respectively. Therefore, two main indexes, i.e. students' personality and educational background should be set. Students' personality can be divided into two three-level indexes, i.e. entrepreneurial interest and practical sensitivity, and the education background can be divided into three three-level indexes, i.e. training experience, entrepreneurial foundation and work experience.

### *B. Universities*

The degree of support and the breadth involved determines both the basis of quality of entrepreneurship education and the effectiveness of application of virtual enterprise. I conclude that the quality evaluation index of colleges and universities includes four aspects, i.e. teaching method, entrepreneurship culture, curriculum system and teacher background.

### *C. Enterprise*

Cooperation between school and enterprise is an effective model of entrepreneurship education experience, which combines the talent education and talent practice, and reduces the economic cost of the talents training for the universities and enterprises. On the premise of small businesses, the realization of entrepreneurship education security model mainly includes

project input, construction of interactive platform, entrepreneurship contest and practice base for enterprise's quality evaluation.

## V. VIRTUAL ENTERPRISE-BASED EDUCATION PATTERN FOR UNIVERSITY STUDENTS' INNOVATIVE UNDERTAKING CONSTRUCTION STRATEGY

Just as its name implies, "virtual enterprise" refers to a kind of enterprise which does not exist in reality but possesses the function of entity. From the perspective of students, "virtual enterprise" is a resource recombination mechanism and an emulation mode to realize artificially created commercial simulation environment and be used for entrepreneurship practice in teaching environment through the integration of internal and external environment.

In general, carrying out entrepreneurship education in higher education is to provide more practice capital for the employment of college students so that they can face the challenges more leisurely. However, entrepreneurship education merely emphasizes that only establishing a business in market is a success. I tend to regard the entrepreneurship education as the expansion of knowledge and skills, the accumulation of work experience and the promotion of mental ability. Under the background of popular education, competitive advantage of college students is becoming smaller and smaller, and it can be predicted that "entrepreneurship education" will become an important research area in higher education.

## ACKNOWLEDGMENT

The authors acknowledge financial support provided by the Undergraduate Teaching Reform Project of Guangxi Higher Education (Grant No. 2016JGA201 and 2018JGB192), Innovation Project of GUET Graduate Education (Grant No. 2018XWYJ02) and supported by GUET Degree and Postgraduate Education Program.

## REFERENCES

- [1] Cooke, Phil. "Regionally asymmetric knowledge capabilities and open innovation: Exploring 'Globalisation 2'—A new model of industry organisation." *Research policy* 34.8 (2005): 1128-1149.
- [2] Herstad, Sverre J., et al. "Open innovation and globalisation: Theory, evidence and implications." *Vision: EraNet* 19.9 (2008): 1-96.
- [3] Curtain R. "Vocational Education and Training, Innovation and Globalisation." National Centre for Vocational Education Research Ltd. PO Box 8288, Stational Arcade, Adelaide, SA 5000, Australia, 2004.
- [4] Bowdon M A, Carpenter R G. "Higher Education, Emerging Technologies, and Community Partnerships: Concepts, Models and Practices." *Information Science Reference*, 2011.
- [5] Curtain, Richard. *Vocational Education and Training, Innovation and Globalisation*. National Centre for Vocational Education Research Ltd. PO Box 8288, Stational Arcade, Adelaide, SA 5000, Australia, 2004.
- [6] Shapiro, Hanne, et al. "Background paper on innovation and education." Danish Technological Institute and Technopolis for the European Commission, DG Education & Culture in the context of a planned Green Paper on innovation (2007).