

# *Construction of Entrepreneurship Education System for Logistics Management Majors Based on Big Data Mining*

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**Abstract**—Based on the theoretical analysis of entrepreneurship education for logistics management specialty, this paper uses SWOT-PEST analysis method to analyze the entrepreneurship education environment for logistics management specialty, and constructs an entrepreneurship education system for logistics management specialty based on big data. This system can not only effectively promote students' employment, but also rationally utilize existing resources and upgrade them, improve the logistics professional students' entrepreneurial success.

**Keywords**—*Entrepreneurship education; Big data; Logistics management; Data mining*

## I. INTRODUCTION

In May 2015, the General Office of the State Council issued the Opinions on the Implementation of the Reform of Innovation and Entrepreneurship Education in Higher Institutions. In the Opinions, priority should be given to supporting students who participate in innovation and entrepreneurship to transfer to relevant professional studies; flexible education system should be implemented to relax the length of study of students, allowing adjustment of the academic process and retention of their school status. Entrepreneurship education has risen to the strategic height of China's higher education. At the same time, big data is increasingly showing impetus to various industries. The value of big data in the business field is reflected in mining users' behavior habits and preferences, finding products and services more in line with users' interests and habits from the messy data, and optimizing and adjusting products and services. On the other hand, China's logistics industry will enter a new stage of development with transformation and upgrading, from incremental expansion to the coexistence of adjusting stock and optimizing increment, from factor investment to innovation, which also puts forward higher requirements for the transformation of logistics education in Colleges and universities. Based on the above points, how to carry out entrepreneurship education of logistics specialty with the help of big data mining and build a new entrepreneurship education system of logistics management specialty has a very important role.

## II. THEORETICAL FOUNDATION OF ENTREPRENEURSHIP EDUCATION FOR LOGISTICS MANAGEMENT MAJORS BASED ON BIG DATA MINING

Reasonable and effective entrepreneurship education system can not only enhance the interest of logistics students in entrepreneurship, lay a solid theoretical and practical foundation for entrepreneurship, but also further enhance the success rate of entrepreneurship of logistics students. Through research and analysis, scholars put forward the relevant theories of entrepreneurship education in logistics management specialty from different angles. On the basis of the analysis of logistics operation mode, Gu Zaiqiu and others analyzed the path of integration of entrepreneurship education and professional education in Applied Undergraduate logistics management specialty from the perspective of the necessity of integration of entrepreneurship education and professional education[1]. Liu Lei put forward that besides general knowledge of entrepreneurship, entrepreneurship education for logistics specialty should focus on increasing awareness of entrepreneurship opportunities, logistics alliance operation skills, logistics risks and integrity awareness. The basic path of cultivating entrepreneurship-oriented college students in logistics management specialty is constructed through innovating teaching methods and building a practical platform for entrepreneurship[2]. Based on the goal of logistics management entrepreneurship, an entrepreneurship education system which combines entrepreneurship education teaching system, entrepreneurship education practice system, entrepreneurship ideological education system and entrepreneurship education guarantee system is constructed. On this basis, this paper introduces SWOT-PEST analysis method to analyze the internal factors and external environment of entrepreneurship education in logistics management specialty.

SWOT-PEST analysis is a matrix analysis method which combines internal factors with macro-environment. It gathers all internal factors (i.e. advantages and disadvantages) together, and then evaluates these factors with external forces[3]. Among them, SWOT analysis is also called situation analysis, which includes Strengths, Weaknesses, Opportunities and Threats. PEST analysis refers to the analysis of macro-environment, including political system, economy, social and technology. AI). SWOT-PEST analysis combines the advantages of PEST

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analysis and SWOT analysis, breaks through the limitations of a single method, and is widely used in many industries and fields.

### III. ANALYSIS OF ENTREPRENEURSHIP EDUCATION ENVIRONMENT FOR LOGISTICS MANAGEMENT MAJORS

The entrepreneurship education has become a new breakthrough point in the reform of higher education. Logistics management specialty has been at the forefront of entrepreneurship education due to its wide coverage and strong integration with other specialties. Big data is the summation of subversive changes in decision-making process, business model and ideology based on massive data analysis. Data storage and data analysis will become the most important core strategic capabilities of new countries in the future. Data

finance, data materials, data medical treatment and data transportation have become hot research fields at present. In the field of data education, there is bound to be more room for development[4]. At present, the entrepreneurship education of logistics management specialty has both opportunities and challenges in politics, economy, society and technology. Now, the internal factors and external environment of entrepreneurship education of logistics management specialty are analyzed by PEST and SWOT, and the limitation of single method is broken through by comprehensive analysis with a high degree of overall planning, and the advantages and disadvantages of entrepreneurship education of logistics management specialty are put forward. The situation will be displayed together to provide a theoretical basis for further development of entrepreneurship education in logistics management major, as shown in Table 1.

TABLE I. SWOT-PEST ANALYSIS OF ENTREPRENEURSHIP EDUCATION IN LOGISTICS MANAGEMENT MAJOR

SWOT		<i>Politics</i>	<i>Economics</i>	<i>Society</i>	<i>Technology</i>
Internal factors	Strengths	(1) All regions and universities have formulated the implementation plan of deepening the innovation and entrepreneurship education reform in their own schools in light of the actual situation. (2) Entrepreneurship education in China has more than ten years of educational experience.	Innovation and entrepreneurship resources start sharing among Universities	(1) Many colleges and universities have launched KAB and SIYB entrepreneurship training projects. (2) Abundant human resources	Modern information technology such as Internet of things and mobile Internet has made breakthrough in the field of entrepreneurship education.
	Weaknesses	(1) Many university administrators think that the awareness of entrepreneurship education is insufficient and that entrepreneurship education is not considered fundamentally. (2) There is no specialized logistics education and entrepreneurship education system. (3) Some places and universities do not attach enough importance to entrepreneurship education, the concept of entrepreneurship education lags behind, the combination of entrepreneurship education and professional education is not tight, and it is out of touch with practice.	The ecosystem of logistics entrepreneurship education in most colleges and universities does not have the function of self-hematopoiesis economically, and needs a large amount of capital investment from universities and society.	(1) Logistics entrepreneurship education is mainly confined to operational level and skill level. (2) The teachers of logistics entrepreneurship education are weak, and most of them lack practical experience in Entrepreneurship education, or even work experience in logistics enterprises.	(1) related technologies such as big data, Internet + have not yet been applied to entrepreneurship education. (2) lack of entrepreneurship education technology and management personnel
External factors	Opportunities	The general office of the State Council has issued opinions on promoting entrepreneurship education reform. The training mode of innovative and entrepreneurial talents is more perfect.	The huge financial aid and perfect policy system provided by the government and Society for entrepreneurship education have created a good environment for the development of entrepreneurship education.	Entrepreneurship education full-time teachers to the industry enterprise attachment training system are increasingly perfect.	The informatization construction of quality education in entrepreneurship education is gradually advancing.
	Threats	(1) There is a departure from the introduction and implementation of entrepreneurship policies. (2) Entrepreneurship education lacks evaluation index system and subject evaluation index system.	Students often lack funds to start businesses.	There is no complete mechanism for the disposal of scientific and technological achievements and income distribution in universities, which can not encourage teachers to lead students to innovate and start businesses.	The service facilities supporting college students' entrepreneurship are not yet complete.

#### IV. CONSTRUCTION OF ENTREPRENEURSHIP EDUCATION SYSTEM FOR LOGISTICS MANAGEMENT MAJORS BASED ON BIG DATA MINING

##### A. *Promote the development of entrepreneurship education in logistics management by using big data*

In the entrepreneurship education system of logistics management specialty, the correlation analysis of big data can be used to excavate entrepreneurship first, that is, to classify college students effectively. Big data can identify who has entrepreneurial potential and desire. For these students, we can use big data analysis to find out the appropriate entrepreneurship education mode for different groups of people, and adopt corresponding ways to stimulate and cultivate entrepreneurship. In the stage of entrepreneurship education, we can also use big data to locate the proportion and roles of professional teachers, entrepreneurship teachers and business mentors respectively, and select the most suitable way for the education target. In the stage of entrepreneurship, we can also use big data to dig out effective entrepreneurship models to guide students according to their personality and specialty, and make a reasonable role orientation and division of labor in the entrepreneurship team. In the stage of entrepreneurship extension and entrepreneurship feedback, big data can still play its due role, straighten out the whole entrepreneurship education system, and explore feasible direction of entrepreneurship extension and means of entrepreneurship feedback.

##### B. *Create an educational philosophy of mutual penetration between entrepreneurship education and logistics management professional education.*

We will continue to promote entrepreneurship education and professional education, and work together to cultivate resultant force. In the training of logistics management professionals, efforts should be made to create new thinking, new horizons, new methods and new applications in the practice of professional learning, to cultivate students' innovation and entrepreneurship in professional education at the same time; at the same time, to break the traditional teaching mode of logistics management professionals, and to set up according to the needs of the market and the requirements of the development of disciplines. In the course of teaching, we should integrate the international frontier academic development of logistics, the latest research results and practical experience into classroom teaching, and expand rural logistics and Western goods to students. The combination of flow and cross-border e-commerce logistics, O2O and logistics, and the opportunity brought by the "one belt and one road" to logistics can also continue to expand the new direction of logistics and entrepreneurship, such as campus cloud supermarket "8 days online" and so on.

##### C. *Mining flexible and diversified entrepreneurship education mode*

On the basis of effectively combing the professional characteristics of logistics management talents, we should use

data mining technology to explore and cultivate the entrepreneurial desire and direction of different students, release students' personality reasonably, actively guide students to contact closely with different industries through effective means, find problems and solve problems in production practice. To further develop students' creativity, creativity and entrepreneurship. At the same time, we can use data mining technology to explore appropriate ways and means of entrepreneurship education, such as offering entrepreneurship education courses and various forms of entrepreneurship lectures, inviting alumni and successful entrepreneurs from their peers to present their views, educating and guiding students with their entrepreneurship achievements and typical examples, so as to make typical entrepreneurship experience and entrepreneurship come into being. It is the spiritual motivation for young students to work hard and strive for self-improvement; it is widely organized to carry out simulation training of entrepreneurship in order to consolidate and extend the achievements of professional education and entrepreneurship theory education; it is also encouraged to actively participate in various forms and contents of entrepreneurship practice activities and experience the hardship and joy of Entrepreneurship in practice. We will organize experimental classes on innovative entrepreneurship education, explore new mechanisms for collaborative education among schools, schools, enterprises, sites, schools and international cooperation, and actively attract social resources and foreign high-quality educational resources to invest in innovative entrepreneurship training.

#### V. POLICY SUPPORT FOR ENTREPRENEURSHIP EDUCATION SYSTEM OF LOGISTICS MANAGEMENT MAJOR BASED ON BIG DATA MINING

In order to ensure the healthy growth of entrepreneurship education, relevant policy support still needs to be improved, such as establishing a credit accumulation and transformation system for entrepreneurship, simplifying the process of entrepreneurship for college students, lowering the threshold of entrepreneurship for college students, relaxing the residence registration conditions of business departments, Building Provincial College Students 'entrepreneurship bases, and exempting small and micro enterprises set up by college students. Levy VAT and business tax. At the same time, we should give full play to the important role of logistics management teachers in developing innovative entrepreneurship education and guiding students to carry out innovative entrepreneurship practice. We should gradually build up a team of teachers who are specialized and part-time and meet the needs of innovative entrepreneurship education in combination with specialty, and build a new pattern of innovative entrepreneurship education and innovative entrepreneurship talents training Relevant policies have been issued to actively encourage teachers to invest in students 'start-up companies with scientific research results, and further integrate specialty and entrepreneurship. Set up relevant professional teachers, innovative and entrepreneurial education full-time teachers, and go to the training system of industry enterprises. Accelerate and improve the mechanism

of disposal and income distribution of scientific and technological achievements in Colleges and universities, support teachers to industrialize scientific and technological achievements in the form of external transfer, cooperative transformation, share pricing, and independent entrepreneurship, and encourage students to innovate and start businesses. All regions and universities make full use of various resources to build university science and technology parks, University Students 'entrepreneurship parks, entrepreneurship incubation bases and small and micro enterprises' entrepreneurship bases. As a practical platform for entrepreneurship education, a number of University Students' off-campus practical education bases, entrepreneurship demonstration bases, science and technology entrepreneurship practice bases and vocational colleges' training bases have been built. We will improve the teaching system of innovative entrepreneurship training at the national, local and University levels, carry out in-depth innovative entrepreneurship training programs for college students, expand coverage and promote the transformation of projects to the ground. We will organize the National College Students Innovation and Entrepreneurship Competition, the National Vocational College Skills Competition, and support the holding of various thematic competitions such as scientific and technological innovation, creative design and entrepreneurial plans. Support college students to establish innovation and entrepreneurship associations, entrepreneurial clubs and other associations,

holding seminars on innovation and entrepreneurship, and carrying out innovation and entrepreneurship practice.

## VI. CONCLUSION

The rational construction of entrepreneurship education system directly determines the further development of our economy, is the lubricant of the economic engine, and promotes the effective combination of professional knowledge and entrepreneurship among college students. As one of the key development industries in China, logistics industry is of great significance in making rapid development while making use of big data and Internet + to create a feasible entrepreneurship education system.

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