

A Path Study on the Integration of Innovation and Entrepreneurship Education and Professional Education: Taking the Marketing Major of Guilin University of Electronic Science and Technology as an Example

Qian Lu, Shuang Li, Yihui Liao

School of Business, Guilin University of Electronic Technology, Guilin 541000, China

Abstract

School of Business, Guilin University of Electronic Technology, Guilin The integration of innovation and entrepreneurship education with professional education is of great significance in promoting teaching reform in universities and improving the quality of talent cultivation. Taking the Marketing major of Guilin University of Electronic Science and Technology as an example, based on the OBE concept, synergy theory, and Herzberg's two factor theory, this study deeply constructs a path for the integration of innovation and entrepreneurship education and professional education from multiple levels such as the target layer, action layer, and support layer, in order to provide reference for further promoting the deep integration of innovation and entrepreneurship education and professional education in Chinese universities.541000, China

Keywords

Innovation and entrepreneurship education; Professional education; Integration; Path; Marketing.

1. Introduction

The report of the 20th National Congress of the Communist Party of China emphasizes the implementation of the priority strategy for entrepreneurship and employment, and further emphasizes the improvement of the guarantee system for entrepreneurship to drive employment^[1]. In order to meet the demand for talent in the development of the times, it is increasingly important to deeply implement the integration of innovation and entrepreneurship education with professional education, and cultivate talents with solid professional skills and entrepreneurial literacy. In recent years, the focus of research on the integration of expertise and creativity has mainly been on the following three aspects: first, the study of the concept of integration. Existing scholars believe that innovation and entrepreneurship education is a derivative of professional education, which is not an independent teaching activity, but an auxiliary and supplementary form of professional education (Song Huaming et al., 2017; Dai Lijun et al., 2018; Yu Lulu et al., 2024) ^{[2] [3] [4]}. The second is the study of fusion paths. Existing scholars have studied how to integrate innovation and entrepreneurship education elements into professional education in terms of teaching objectives, curriculum content, and teaching methods (Shao Yuehua, 2016; Liu Xiaojuan, 2023; Lv Xincong et al., 2023) ^{[5] [6] [7]}. The third is the study of integrated systems. Existing scholars believe that teachers' support for entrepreneurship education is not spontaneous and needs to be guided by school policies and systems. Schools need to establish a management mechanism that links various departments. (Li Aimin et al., 2017; Yin Jie et al., 2022; Liang Yongguo et al., 2023) ^{[8] [9] [10]}. It can be seen that scholars have made certain achievements in the research of the path of specialization and innovation integration. However, there are still some problems

that need to be solved in existing research. Most scholars have obvious fragmented characteristics in their research on the integration of innovation and entrepreneurship education and professional education, neglecting the coherence and integrity between various links, and lacking a systematic design of the entire talent cultivation chain. This study will combine synergy theory, OBE education philosophy, and dual factor theory to systematically study the integration path of professional education and innovation and entrepreneurship education; Taking the Marketing major of Guilin University of Electronic Science and Technology as an example, this study explores how to make improvements in teaching objectives, content, and methods to meet the needs of cultivating students' professional education and innovation and entrepreneurship abilities, and provide reference for the integration of specialization and innovation in other majors.

2. Exploration of the Integration Path between Innovation and Entrepreneurship Education and Marketing Professional Education

2.1. Theoretical Basis

2.1.1. OBE Theory

The OBE concept was first proposed by Spady in 1981 (Spady, 1994) ^[11], and can be summarized as the "three elements": student-centered, output oriented, and continuous improvement. The core goal of OBE teaching philosophy is to cultivate talents that meet market demand and corporate expectations. The key to cultivating applied talents based on the OBE concept lies in putting students first. And under the OBE concept, teachers need to clarify the goals of talent cultivation and design teaching plans, teaching outlines, teaching methods, etc. based on this to ensure the effective achievement of talent cultivation goals.

2.1.2. Collaborative Theory

Collaborative theory was first proposed in the 1970s. Its core idea is based on the mutual coordination, connection, and cooperation among multiple subjects, achieving established goals through joint efforts, thereby improving the operational efficiency of various resources and saving a lot of costs (Li Xiangzhou, 1997) ^[12]. The synergy theory aims to achieve overall synergy through the mutual collaboration, cooperation, and coupling of multiple elements, and to operate according to a certain logic, in order to solve specific transactions or achieve specific goals. As a complex and long-term educational project, talent cultivation requires collaborative efforts from universities, social enterprises, and other parties to jointly formulate development strategies for talent cultivation.

2.1.3. Herzberg's Two Factor Theory

Herzberg's Two Factor Theory is a psychological theory about work motivation. Herzberg's two factor theory suggests that employee needs can be divided into two factors: healthcare factors and motivational factors. Health factors mainly include the basic elements of the employee work environment, while motivational factors focus on the work itself and play a role by meeting the needs of employees to realize self-worth in their work (Herzberg, Mosner et al., 1959) ^[13]. Therefore, to build an effective incentive mechanism for teachers, it is necessary to clarify the importance of health and incentive factors for teachers, and further stimulate teachers through a series of measures.

2.2. Outline of the System Construction Plan for the Integration of Innovation and Entrepreneurship Education and Professional Education

Guided by OBE theory, synergy theory, and Herzberg's Two Factor Theory, this article constructs a framework system for the integration of innovation and entrepreneurship education and professional education in the marketing profession. The framework includes the

goal layer, action layer, and action layer of the integration of innovation and entrepreneurship education and professional education in the marketing profession Exploring the path of integrating innovation and entrepreneurship education with professional education in marketing from three aspects of the support layer, and taking the marketing major of Guilin University of Electronic Science and Technology as an example, the content framework is shown in Figure 1.

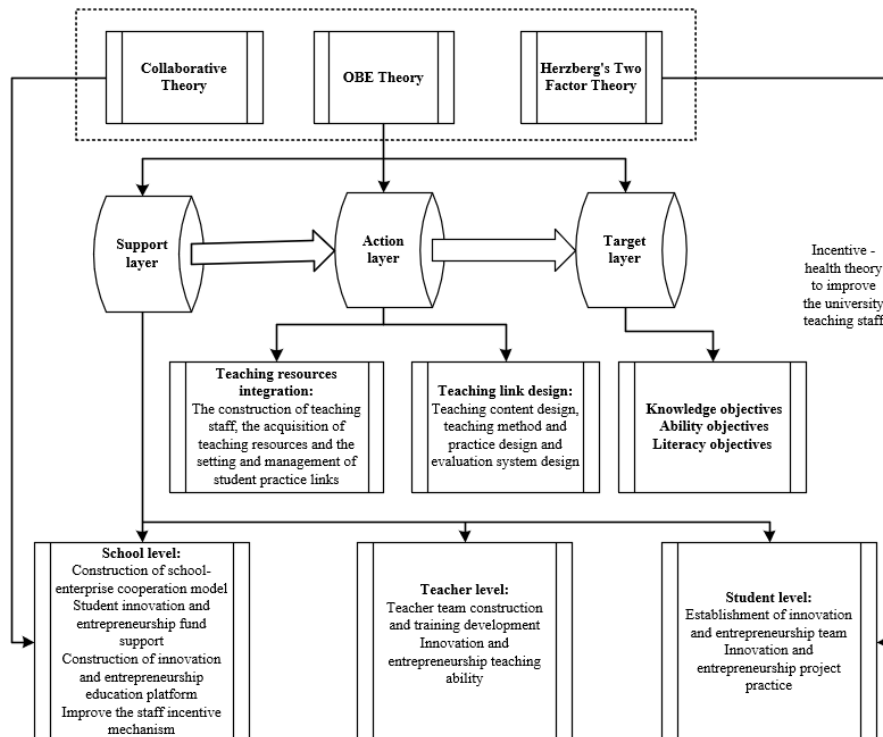


Figure 1. The Integration Framework of Innovation and Entrepreneurship Education and Professional Education in Marketing Specialty

2.3. Target layer construction of the integration system between innovation and entrepreneurship education in marketing and professional education

The target layer refers to the goal of talent cultivation achieved by integrating innovation and entrepreneurship education with professional education. The construction principle of the target layer is to comprehensively integrate marketing professional knowledge, innovation and entrepreneurship ability and literacy, as well as principles such as foresight, market orientation, and measurability. Therefore, this article constructs the knowledge objectives, ability objectives, and literacy objectives for cultivating innovative and entrepreneurial talents in marketing, and takes the Marketing major of Guilin University of Electronic Science and Technology as an example to further explore the construction of the target layer of the integration system between innovation and entrepreneurship education in marketing and professional education.

2.3.1. Knowledge objectives of integrating innovation and entrepreneurship education with professional education in marketing

The knowledge objective is to cultivate the specific knowledge and concepts that students should master in the professional learning process, including innovation and entrepreneurship. Based on the OBE concept, taking the Marketing major of Guilin University of Electronic Science and Technology as an example, students should firmly grasp the basic theories of social sciences, and possess solid knowledge in marketing and innovation and entrepreneurship. To further enrich students' innovation knowledge, help them become familiar with the basic concepts of innovation and entrepreneurship management, understand the employment situation and

relevant policies and regulations; Familiarize oneself with the ways and methods to enhance professional competence, and master the steps and methods of career planning; Master the relevant knowledge of innovation and entrepreneurship financing; Master the knowledge of potential risks that may arise during the entrepreneurial process, and learn to evaluate and effectively manage these risks.

2.3.2. Ability goals for integrating innovation and entrepreneurship education with professional education in marketing

The ability goal is to cultivate students with diverse abilities in the field of entrepreneurship, enabling them to be more successful and innovative in the field of marketing. Based on the OBE concept, taking the Marketing major at Guilin University of Electronic Science and Technology as an example, students should have the ability to comprehensively apply multidisciplinary knowledge to design solutions to problems. To further cultivate students' innovation ability, they should possess entrepreneurial literacy and abilities; Having sensitivity to market changes and a proactive innovative mindset, able to think independently, propose innovative ideas, and put them into practice; Mastering professional knowledge about digital marketing to have the ability to effectively promote brand marketing in the digital environment; Have the ability to develop entrepreneurial plans and be able to actually execute them, transforming entrepreneurial concepts into feasible business practices. These competency goals emphasize practical ability orientation, enabling students to be competent in the fields of marketing and innovation and entrepreneurship upon graduation.

2.3.3. Quality goals for the integration of innovation and entrepreneurship education in marketing and professional education

The literacy goal aims to cultivate students to demonstrate comprehensive literacy in the entrepreneurial environment, in order to better adapt to the constantly changing and innovative development in the field of marketing. Based on the OBE concept, taking the Marketing major at Guilin University of Electronic Science and Technology as an example, students should possess good humanistic qualities, including teamwork skills and analytical and problem-solving abilities. To further enhance students' innovation literacy, they should understand and comprehend the entrepreneurial spirit, and cultivate entrepreneurial awareness; Form a problem oriented, innovation driven, courageous exploration, and pursuit of excellence learning attitude, and establish a firm and courageous entrepreneurial concept; Having good entrepreneurial ethics and a sense of social responsibility; Having entrepreneurial wisdom and courage to perceive market opportunities and bravely face challenges; Having the ability to coordinate, cooperate, and lead in a diverse team, as well as the ability to stimulate team creativity. These literacy goals aim to cultivate students' all-round abilities, making them more competitive in the field of marketing and able to stand out in an innovative and entrepreneurial environment.

2.4. Construction of Action Layer for the Integration System of Entrepreneurship Education and Professional Education in Marketing

The course "Marketing Data Analysis and Processing" is one of the limited courses for economic management majors in higher education institutions. It introduces how to use data analysis methods to process, describe, and analyze the process and results of marketing activities, providing guidance for the formulation of marketing plans, marketing activity planning, and other market operations of enterprises. Taking this course as an example, we will explain how to establish an action layer when exploring the integration of specialized and creative education.

2.4.1. Teaching Link Design for the Course of Marketing Data Analysis and Processing

(1) Teaching Content Design

In order to accelerate the integration of innovation and entrepreneurship education in marketing and professional education, the course teaching content should be improved and redesigned. Taking the course "Marketing Data Analysis and Processing" as an example, the teaching content design mainly focuses on three aspects: students' knowledge system, skill cultivation and practical application, and comprehensive quality. Firstly, it is necessary to build a comprehensive knowledge system, combining data analysis foundations, methods, models, mathematical statistics, and innovation and entrepreneurship knowledge. Through various teaching tools such as lesson plans, PPTs, and online resources, students are encouraged to actively master entrepreneurship theory. Secondly, expand students' practical skills, including not only marketing data analysis and processing, but also enhancing their ability to solve practical problems such as market analysis, product development, and sales planning. In addition, legal and regulatory knowledge and marketing skills should also be involved. Finally, cultivate students' comprehensive qualities, including theoretical knowledge, practical abilities, social responsibility and communication skills, as well as innovative spirit, adaptability and lifelong learning ability.

(2) Teaching methods and practical design

In the course of Marketing Data Analysis and Processing, which integrates marketing professional education with innovation and entrepreneurship education, teaching methods and practical aspects play a crucial role. To enhance students' learning enthusiasm, knowledge mastery, and innovation ability, the course will adopt a case teaching method, teaching data analysis skills through analyzing actual marketing cases; Implement project-based learning and encourage teamwork to complete data analysis projects; Organize special lectures or seminars, and invite industry experts to share their experiences. Design a simulated marketing data analysis project in the practical stage, allowing students to apply their learned knowledge to simulated real-life situations; Provide internship opportunities through cooperation with enterprises, allowing students to participate in real marketing data analysis work; And organize special lectures or seminars to allow industry experts to share practical experience in data analysis in marketing and innovation and entrepreneurship. This educational model aims to cultivate students' practical skills and theoretical knowledge, laying a solid foundation for their career.

(3) Design of evaluation system

The design of the evaluation system follows the principles of diversity and timely feedback. Diversified evaluation system: Through daily assignments, assess students' understanding and application of basic theories and knowledge; Through practical projects, assess the ability of student teams to analyze and propose solutions to real or simulated marketing problems; Comprehensively evaluate students' mastery of course knowledge through mid-term and final exams. In addition, introducing a peer review mechanism to enhance students' critical thinking and collaborative abilities. At the same time, the teacher timely corrects assignments and projects, and provides specific suggestions based on the performance of students; Collect real-time feedback through classroom interaction, adjust teaching content, and use real-time electronic voting or online Q&A platforms to increase student participation.

2.4.2. Integration of Teaching Resources for the Course of Marketing Data Analysis and Processing

(1) Acquisition of Teaching Resources

The teaching resources for the course "Marketing Data Analysis and Processing" are mainly obtained from the following channels: firstly, relevant course materials from various publishing houses. For example, "Marketing Data Analysis: Market Analysis and Software Applications" published by Southwest University of Finance and Economics Press. The second is domestic and foreign online course platforms. Get relevant high-quality video tutorials from online

course platforms such as China University MOOC, Chaoxing Xuetong, Xuetang Online, and Udemy. The third is to obtain relevant market reports and data through channels such as market research companies, industry associations, and government departments. Fourth, relevant social media accounts, academic forums and WeChat official account.

(2) Construction of teaching staff

In the integration of marketing education and innovation and entrepreneurship education, the construction of teaching staff is a key element in ensuring the quality of courses and teaching effectiveness. Adopting multiple strategies to ensure the professional quality and teaching ability of the teaching staff. One is to regularly organize teaching and training activities; The second is to participate in teaching competitions and promote teaching through competitions; The third is to organize regular teaching seminars to share teaching experience, explore teaching issues, and propose improvement suggestions.

(3) The establishment and management of student practical activities

To achieve the integration of marketing professional education and innovation and entrepreneurship education, it needs to be set up in the student practice link, starting from encouraging students to participate in market survey contests, Internet plus, Challenge Cup and other competitions, so as to cultivate their ability to solve problems. Firstly, schools and colleges can hold special lectures, inviting students who have won previous competitions and competition judges to share their participation experiences and insights into competition trends; The second is to provide mentors for the student participating teams, providing professional marketing and entrepreneurship guidance to carry out pre competition guidance; The third is to conduct post competition review and organize participating students to exchange experiences, have discussions with judges and experts, obtain feedback, and encourage students to write competition reports, summarize learning points and improvement areas.

2.5. Construction of Support Layer for the Integration System of Innovation and Entrepreneurship Education in Marketing and Professional Education

The support layer is the guarantee system to ensure the smooth progress of the action layer. The school level should provide overall strategic support and resource investment, the teacher level should have a team with practical experience, and the student level should cultivate innovation and entrepreneurship awareness and practical operation ability. Therefore, this article constructs an institutional system to support the implementation of the action layer at the school level, teacher level, and student level, and further analyzes it using the marketing major of Guilin University of Electronic Science and Technology as an example.

2.5.1. School level

Schools need to adopt a series of strategies to promote the integration of innovation and entrepreneurship education in marketing and professional education. This article mainly elaborates on four aspects: the construction of school enterprise cooperation models, the construction of innovation and entrepreneurship education platforms, student innovation and entrepreneurship fund support, and faculty incentive mechanisms.

Firstly, the construction of school enterprise cooperation models. The Marketing major of Guilin University of Electronic Science and Technology focuses on cultivating students' ability to use big data technology to solve practical marketing problems. Therefore, schools can regularly organize entrepreneurship competitions, and companies can provide mentors or judges to provide students with practical guidance and feedback. Secondly, the construction of innovation and entrepreneurship education platforms. According to the marketing training program of Guilin University of Electronic Science and Technology, students should have a certain level of innovation awareness and application innovation ability. Therefore, schools

should establish innovation and entrepreneurship education platforms, providing rich and diverse resources, such as entrepreneurial cases. Thirdly, support from student innovation and entrepreneurship funds. Schools should establish student innovation and entrepreneurship funds to provide financial support for potential student entrepreneurship projects; Winning projects in competitions can receive funding support to help them better advance project development. Fourthly, the incentive mechanism for faculty and staff. Schools should establish specific rewards and incorporate the academic contributions of teachers in the field of innovation and entrepreneurship into the promotion evaluation system, encouraging teachers to actively engage in research on innovation and entrepreneurship education.

2.5.2. Teacher level

To ensure the organic integration of innovation and entrepreneurship education in marketing and professional education, it is crucial to build and train the teaching team, and improve the teaching ability of teachers in innovation and entrepreneurship.

Firstly, teacher team construction and training development. Teachers need to integrate innovative and entrepreneurial elements into the curriculum on the basis of imparting knowledge, in order to cultivate students with innovative awareness and entrepreneurial spirit. In this process, teachers need to have a deep understanding of innovation and entrepreneurial trends in the field of marketing in order to integrate the latest knowledge into their teaching. Secondly, the innovation and entrepreneurship teaching ability of teachers. Teachers should have a certain understanding of basic concepts such as innovation, entrepreneurship, and business models, and be able to combine these concepts with the field of marketing; Being able to select practical innovation and entrepreneurship cases and integrate them into marketing courses helps students better understand the application of innovation and entrepreneurship.

2.5.3. Student level

In the process of integrating innovation and entrepreneurship education with professional education in marketing, schools should put forward some requirements for students to ensure their success in the field of entrepreneurship. This mainly includes two aspects: the formation of innovation and entrepreneurship teams and the practice of innovation and entrepreneurship projects.

Firstly, establish an innovation and entrepreneurship team. Through the accumulation of professional knowledge and the cultivation of teamwork ability, students majoring in marketing can collaborate with classmates from different backgrounds to form diversified entrepreneurial teams. In this process, students need to learn to efficiently plan and manage resources, allocate time and budget reasonably, and promote the smooth progress of projects. Secondly, innovation and entrepreneurship project practice. In practical projects, students need to fully utilize their learned marketing strategies, from product development to market promotion, from market research to brand positioning, from customer communication to sales channels, all of which require a comprehensive application of professional knowledge and innovative thinking. Therefore, students need to learn to analyze market trends, develop practical and feasible marketing plans, and continuously optimize and adjust them in practice.

3. Implementation and Control Research on the Integration of Marketing Professional Education and Innovation and Entrepreneurship Education

3.1. Preparation for Implementation

In order to promote the integration of marketing professional education and innovation and entrepreneurship education, both the school and college levels need to make sufficient implementation preparations. At the school level, specific integrated education policies should

be formulated and ensured to be implemented and supervised throughout the school; Clearly allocate funds in the budget for implementing integrated education and ensure that they are used as planned; Establish a dedicated integrated education office responsible for coordinating various departments and promoting the implementation of integrated education; Establish a mechanism for enterprise cooperation, establish internship bases, and provide practical venues for students. At the college level, it is necessary to revise the curriculum outline to ensure that the content of marketing education and innovation and entrepreneurship education is fully reflected in the curriculum; Organize professional training for teachers to enhance their teaching abilities; Regularly hold lectures and seminars related to marketing and innovation and entrepreneurship to increase student interest and participation; Develop a detailed course schedule and teaching plan to ensure the smooth progress of teaching.

3.2. Effective process control

Effective process control can ensure the orderly integration of marketing education and innovation and entrepreneurship education. Schools should regularly conduct progress checks on integrated education across the entire school. At the end of each semester, a dedicated inspection team should be organized to inspect the teaching progress and quality of all courses, and supervise and guide courses that do not meet the standards; Establish a feedback platform for integrated education, collect feedback and suggestions from students, teachers, and parents on integrated education, regularly review and summarize them, and adjust education policies and strategies based on feedback opinions. The college should regularly organize teaching work meetings, allowing teachers to report on teaching progress and existing problems, and jointly explore solutions; Set to hold a monthly teaching work meeting to review the teaching work of the past month, summarize experiences and lessons learned, and develop the next step of work plan; Regularly evaluate the teaching quality of teachers, commend outstanding teachers, and provide guidance and assistance to underperforming teachers.

4. Conclusion

In summary, this article focuses on the integration of innovation and entrepreneurship education and professional education. Taking the Marketing major of Guilin University of Electronic Science and Technology as an example, supported by the OBE concept, synergy theory, and Herzberg's two factor theory, a path for the integration of innovation and entrepreneurship is constructed. This article mainly proposes the following integration strategies: for the target layer, setting challenging training goals aims to guide students to develop comprehensively in the field of innovation and entrepreneurship. For the action layer, introducing innovative teaching methods and practical activities to stimulate students' entrepreneurial spirit. For the support layer, emphasis should be placed on building a good educational environment and resource system to ensure the high-quality implementation of integrated education. This integration model not only provides experience for the development of marketing majors, but also provides reference for the cultivation of innovative talents in other majors and universities. In addition, close cooperation between schools and actual industries and market demand may also become the direction of future research. To ensure better integration between the education system and the vocational field, these studies are expected to provide more beneficial insights for further deepening the integration of specialized and creative industries in Chinese universities.

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