

A Modularization of Vocational Education Curriculum System for Cross-border E-commerce Specialization

Diyuan Xu^{1,a,*} Qi Huang^{2,b}

¹Department of International Business, Fuzhou Melbourne Polytechnic, Fuzhou, China

²Department of International Business, Fuzhou Melbourne Polytechnic, Fuzhou, China

^afaidyxu@qq.com, ^besperanza921@163.com

*Corresponding author

Abstract: This paper aims to enhance the construction of a modularized curriculum system for cross-border e-commerce specialization in the context of vocational education. By examining the current trends in the cross-border e-commerce industry and analyzing the specific case of a cross-border e-commerce major, this study integrates the unique characteristics of higher vocational education and evolving talent requirements. Drawing inspiration from the modularization approach practiced in the TAFE education system in Australia, this paper designs a modular curriculum system for cross-border e-commerce majors and lists the specific module contents in order to achieve the flexibility and job adaptability of the curriculum system. Lastly, this study suggests potential directions for future enhancements of the modularized cross-border e-commerce specialization.

Keywords: cross-border e-commerce; curriculum system; modularization; TAFE

1. Introduction

With the implementation of the “Vocational Education Law of the People's Republic of China”, vocational education has been more and more recognized and valued in the national education system, and the supporting role of vocational education for the supply of talents for social development and economic growth is also very significant. Cross-border e-commerce has been developing rapidly in recent years, and the supply of talents can't keep up with the development of the industry, so many experts, scholars and educators have been carrying out various researches on how to better train talents. This paper will design the modularization framework and the learning content of each module for the vocational education curriculum system of cross-border e-commerce majors on the basis of existing modularization experiences around the world, which is expected to be useful for the cultivation of talents in cross-border e-commerce.

2. Research Background and Literature Review

2.1. The Importance of Vocational Education

Since the implementation on January 24, 2019, the “National Vocational Education Reform Implementation Program” has highlighted the importance of vocational education alongside general education. Vocational education has played a vital role in supporting China's economic and social development. The establishment of a modern vocational education system has greatly contributed to serving economic and social development, fostering modernization, and meeting the growing demand for skilled personnel in various fields as China enters a new stage of development^[1].

2.2. The Necessity of Cross-Border E-Commerce Vocational Education

The cross-border e-commerce industry is currently a globally prominent sector, marked by rapid development and an urgent need for talents. According to the "2023 Cross-border E-commerce Workplace Status Research Report" released by AMZ123, cross-border companies are increasingly valuing high-quality operational talents. The report reveals that 60.6% of cross-border companies

require a associate college degree as a minimum qualification during recruitment ^[2].

2.3. Modularization of the Curriculum System

The concept of modularization has a long history. It originated in the 19th century in the United States, where higher education institutions began exploring the idea of modular education. In the 1960s, European vocational education and training institutions recognized the benefits of modular teaching in cultivating skilled personnel and actively promoted modular curriculum reform. For example, the British Engineering Industries Training Board introduced a modular system for craft training in 1968, which served as a model for other industries ^[3].

In the mid-1970s, the International Labor Organization (ILO) launched the Modules for Employment Skills (MES) project, which aimed to provide modular education and training to workers in developing countries. This marked the first global exploration of a modular approach to education and training. Since the early 1980s, many countries have initiated educational reforms to adapt to the knowledge-based economy and the rise of information technology. Modularization is seen as a way to reform vocational education and training, as it focuses on accommodating individual differences and meeting specific skill needs. It provides students with flexible and diverse skill sets to adapt to the dynamic changes in the economy, technology, and society, improving the effectiveness of vocational education and training ^[4].

Over the past few decades, modular education and training have been widely developed and employed globally, contributing to the development of adaptable students with diversified skills. MIT sees modularization as crucial for re-configuring the future of university curricula, enhancing learning flexibility, and actively promotes its incorporation in both online and offline courses. This allows for seamless integration and interweaving of online and offline educational experiences ^[5]. Liu Xiaoping describes the modularization of the curriculum system as the process of organizing teaching content into basic modules with different functions, designing specific functional modules required for professional teaching based on professional teaching objectives, and constructing a curriculum system composed of these functional modules. Each functional module has specific teaching objectives and curriculum concepts ^[6].

In summary, a modular curriculum system is characterized by flexibility and diversity. By incorporating modularization into the cross-border e-commerce professional curriculum, it becomes possible to keep up with the evolving knowledge in the industry and meet the rapidly changing demands for skilled personnel.

3. Modularized Methodology Study

Various authoritative modularization methods are implemented worldwide, including the MES method (Modules of Employable Skill) developed by the International Labour Organization (ILO), the competency-based curriculum in Canada, and the globally promoted Australian TAFE system. These methods are tailored to the specific national conditions and socioeconomic development of their respective countries. While they may have some differences, they share commonalities in their focus on meeting the needs of jobs and occupations, as well as their systematic, flexible, and applicable approach.

Australia's TAFE system, also known as Technical and Further Education, is globally recognized and highly regarded. It is a comprehensive talent training model integrated into Australia's national education framework, combining government, industry, and schools. TAFE is characterized by its independence, industry-driven nature, student-centered approach, flexibility, and effective articulation with secondary schools and universities. Over the past three decades, TAFE colleges have emerged as a vital pillar in the Australian education system ^[7].

Table 1 illustrates that the Australian education system comprises ten tiers, with TAFE education covering six of them, including Level 1-4 Certification, Diploma, and Advanced Diploma ^[8]. Within these six tiers, professional-oriented training packages are divided into various occupations, and courses within each package are further classified as "core" and "elective" units. The requirements for coursework vary at different levels, and students must adhere to specific rules to obtain qualification ^[9].

Table 1: Australia's national education system

level	Level content
1	Certificate I
2	CertificateII
3	CertificateIII
4	CertificateIV
5	Diploma
6	Advanced Diploma/Associate Degree
7	Bachelor Degree
8	Bachelor Honors Degree/Graduate Certificate/Graduate Diploma
9	Master's Degree
10	Doctoral Degree

4. Modularization of Cross-Border E-Commerce Professional Curriculum System

According to the modularization method used in the Australian TAFE system and the principles of designing a cross-border e-commerce curriculum, interviews were conducted with several cross-border e-commerce business leaders. Based on these insights and continuous optimization, the cross-border e-commerce professional curriculum system was modularized and reformed. The contents of each module are listed in Figure 1.

4.1. Basic Qualification Module

The basic qualification module aims to cultivate well-rounded talents in ethics, intellect, physique, aesthetics, and labor. It plays a crucial role in helping students establish a correct worldview, outlook on life, and values. Education's fundamental task is to cultivate individuals with strong moral character, regardless of their future career paths. This module includes courses on ideology and politics, labor, physical education, art, and other relevant subjects. Additionally, considering the needs of national economic development, the inclusion of innovation and entrepreneurship theory education in the basic literacy module is encouraged. This will help students develop an entrepreneurial mindset and integrate innovation and entrepreneurship into their professional fields for effective entrepreneurial transformation after graduation.

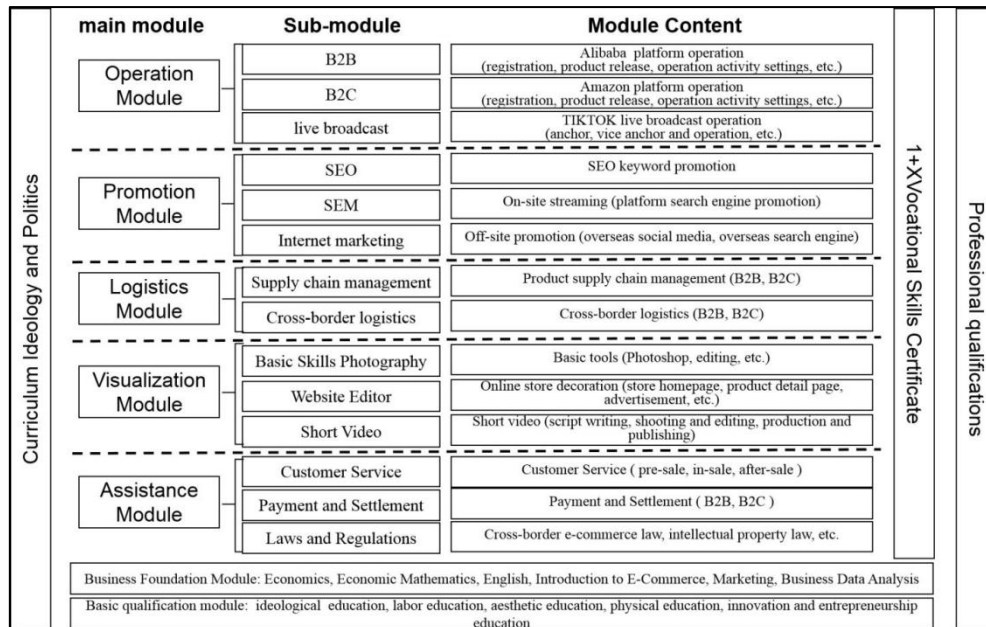


Figure 1: Modularization of cross-border e-commerce course system

4.2. Business Foundation Module

The Business Foundation Module covers the basic theory and skills of business. The theory courses

include Introduction to E-commerce, Marketing, and Economics. The skills-based courses include Economic Mathematics, Business Data Analysis, and English. The English course specifically focuses on developing students' language abilities in the context of cross-border e-commerce. Economic Mathematics and Business Data Analysis enhance students' proficiency in mathematical logic and the use of data analysis tools. Language and data analysis are fundamental skills that will be crucial throughout their career in cross-border e-commerce.

4.3. Professional Qualifications Module

The Professional Qualifications Module consists of several sub-modules that align with various roles in jobs. These main modules include the Operation Module, Promotion Module, Logistics Module, Visualization Module, and Assistance Module. Under these main modules, there are 14 sub-modules, most of which involve practical training with some integrated theoretical content. Students can choose modules based on their interests and future career aspirations. The modular structure offers flexibility, allowing students to combine modules according to their specific needs. For example, the live broadcasting sub-module and the short video sub-module can be combined. Similarly, the customer service sub-module and the payment and settlement sub-module can be combined with the B2B, B2C, or live broadcasting sub-modules as job-specific content modules for positions in operations. The national credit system also enables the free combination of modularization courses.

5. Conclusion

By establishing a modular system for cross-border e-commerce professional courses, several benefits can be achieved. Firstly, it facilitates the accumulation and continuous updating of front-line occupational knowledge in cross-border e-commerce, ensuring that the courses have strong practical relevance. Additionally, the modular system allows students to choose career development routes that align with their interests, enabling them to proactively acquire the necessary skills for their chosen occupations. Furthermore, the modularization of the course system enables the development of teaching methods specific to each module, which can ultimately enhance teaching efficiency.

Looking ahead, the modularization of the cross-border e-commerce course system can tap into the potential for innovation and development through the integration of new technologies. As artificial intelligence, cloud computing, and big data continue to advance, these technologies can be applied to the course system. For example, Big data analysis can be utilized to analyze learning data and behavior, providing personalized and optimized learning experiences.

In conclusion, applying new technologies to the modularization of the future cross-border e-commerce curriculum system will help to improve and enhance the learning experience and outcomes.

Acknowledgements

Thanks for the support by Fujian Provincial Education Science "14th Five-Year Plan" 2022 Annual Project "Exploring the Construction of Cross-border E-commerce Professional Curriculum System in the Context of Higher Vocational Education" (Project No. FJKGZ22-096).

References

- [1] Ministry of Education of the People's Republic of China. Circular of the State Council on the Issuance of the Implementation Program of National Vocational Education Reform [EB/OL]. (2019-1-24) [2023-10-12]. http://www.moe.gov.cn/jyb_xxgk/moe_1777/moe_1778/201904/t20190404_376701.html.
- [2] AMZ123. "AMZ123|2023 Research Report on the Status of Cross-border E-commerce Workplace" [EB/OL]. (2023-8-11)[2023-10-12]. <https://www.amz123.com/report/C6Aa0AyL>.
- [3] Roberts, Modular Structures: Their Strengths and Weaknesses[NM]//in: Twinning, J., Nisbet, S.&Egarty, J.(Eds) World Yearbook of Education (London, Kogan Page), 1987.
- [4] De, Bruijn, E., Howieson, & C. Modular vocational education and training in Scotland and The Netherlands: Between specificity and coherence [J]. Comparative Education, 1995, 31(1), 83-99.
- [5] Liu Haiyan, Chang Tongshan. Modularization, Flexibility, and Globalization: Transformation of

Learning Paradigm in Information Technology-Based Universities-A Case Study of MIT[J]. Open Education Research, 2018, 24(03):19-26.

[6] Liu Xiaoping. *Exploration of modularization construction of curriculum system under the background of "double high"[J]. Occupation, 2022(04):70-72.*

[7] LI Yan, LIU Shuai, LI Weifei et al. *Analysis of Modularized Teaching Reform of Higher Vocational "Traditional Chinese Medicine Preparation" - The Inspiration of Training Mode of TAFE College in Australia[J]. China Traditional Chinese Medicine Modern Distance Education, 2016, 14(09):7-10.*

[8] AQF. *The AQF Second Edition January 2013[EB/OL]. (2013-1)[2023-10-12]. <https://www.aqf.edu.au/framework/australian-qualifications-framework>*

[9] Victorian Skills Gateway. *Understand course types and qualifications. [EB/OL]. [2023-10-12]. <https://www.skills.vic.gov.au/s/understand-course-types>*