

Exploration on Modular Curriculum Construction of Economic and Management Majors in the Digital Age

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Abstract: Under the background of digital economy, digital literacy has become one of the basic qualities that economic and management talents should have. Digital thinking and digital skills should be integrated into the construction of modular courses of economic and management professional groups. Focusing on the new business philosophy of "soft business and hard technology", the comprehensive education mode of "post-course-competition-certificate" and the sustainable development of multi-specialty "collaborative symbiosis", this paper puts forward the construction system of "three-dimension and three-order" modular courses for economic and management majors. Three dimensions include management knowledge, digital skills and professional literacy. Three levels include primary general digital ability, middle professional digital ability and advanced innovative digital ability. Finally, this paper proposes the implementation path: integrating digital tools into teaching resources, building teaching team across borders, deepening the integration of industry and education, establishing a quality system.

Keywords: Digital Economy; Economic and Management Majors; Modular Curriculum.

1. Introduction

In the past decade, China's digital economy has shown a vigorous development trend. The scale of the digital economy has expanded from 9.5 trillion in 2011 to 45.5 trillion in 2021, and its proportion in GDP has risen from 20.3% to 39.8%. In January 2022, the State Council issued the "Fourteenth Five Year" Digital Economy Development Plan, which aims to vigorously promote industrial digital transformation and enterprise digital transformation, and improve employees' digital skills and data management capabilities. In the process of comprehensively and deeply promoting the digital upgrading of various businesses of enterprises, a large number of talents who can adapt to the development of the digital economy era, have digital knowledge and master digital skills are urgently needed. According to the Research Report on Digital Economy Employment Development (2021) released by the China Academy of Information and Communication Research, the digital talent gap in China is close to 11 million, and the demand gap for digital talent will continue to increase with the rapid progress of digitalization in the whole industry. In 2019, the Ministry of Human Resources and Social Security of the People's Republic of China announced 13 new job information, among which digital managers were recognized as one of the new jobs by the state. The development of digital economy has created favorable conditions for the birth of new posts, and also put forward new requirements for the knowledge structure and professional skills of workers. The demand of enterprises for digital talents not only emphasizes computer programming skills, but also pays more attention to comprehensive management ability. Economic management majors have gradually become the main source of digital management talents.

In the process of training economic and management professionals, we should focus on guiding students to establish digital thinking and data analysis ability, and reform them in professional courses. Therefore, it is of great significance to accelerate the adjustment of the training

structure of digital economic management talents and explore the establishment of a comprehensive, systematic and professional modular curriculum system of higher vocational economic management in the digital economy era. Based on the characteristics of talents and the new requirements of talent training in the digital economy era, this paper proposes the "three-dimension and three-level" modular curriculum construction system and implementation suggestions for the economic management specialty group.

2. Literature References

Since the State Council issued the National Vocational Education Reform Implementation Plan in 2019 and the Ministry of Education and the Ministry of Finance issued the Opinions on the Implementation of the High level Vocational Schools and Specialty Construction Plan with Chinese Characteristics in 2020, building a high-level professional group has become one of the tasks of vocational education reform and development, and exploring the construction of a professional group module curriculum system has become a hot topic in vocational education research. As for the construction of the curriculum system of the specialty group, the earliest is the "platform module" curriculum system, that is, within the specialty group, the "platform" curriculum consisting of the public compulsory courses and specialized basic courses of the whole school and the "module" curriculum system consisting of specialized core courses and specialized expansion courses are set up. On this basis, domestic universities and scholars have put forward their own distinctive professional group curriculum framework according to the actual situation, including integration of the professional certificate [1], combination of regional industrial chain, talent chain and education chain [2,3], quality education and innovation and entrepreneurship perspective [4, 5]. At present, the most common idea is to build a curriculum system based on the idea of "bottom sharing, middle separation, and high-level mutual selection". "bottom sharing" is to design basic knowledge and basic skills courses

necessary for talents in consideration of the common development requirements of all majors within the professional group. "middle separation" is to consider the separate training of all majors, and "high-level mutual selection" is based on the personalized needs of talents, building a platform for professional expansion courses.

However, in the process of curriculum construction in colleges and universities, the curriculum systems of various majors still overlap, with serious homogenization and insufficient differentiation. They have not broken the barriers between majors, cannot reflect the grouping logic of majors within the specialty group, and it is difficult to implement the complexity of talent training [6] [7]. Especially in the context of digital economy, the updating and iteration of digital technology has promoted the transformation of China's traditional business education to a new business education with interdisciplinary integration, which puts forward higher requirements for the training of economic and management talents. At present, a prominent problem in the training mode of economic and management talents lies in the lack of systematic curriculum. First, each major in the specialty group did not clearly distinguish itself from others, and its curriculum content did not reflect the ability requirements of professional posts; Second, the curriculum was not updated in time to meet the needs of the industry frontier and enterprises, and there was a phenomenon of old wine in new bottles, which led to the lack of core competitiveness in student employment; Third, they did not keep up with the digital trend and not organically integrate economic management courses with science and engineering courses such as data processing and artificial intelligence. Students were confined to humanities and social sciences, ignoring digital thinking and even resisting mathematics and science courses. Zhang Guoping believed that the new business talents have a "professional" compound knowledge structure, a "technical" compound ability structure and a "entrepreneurial" compound quality structure. It is necessary to promote the full participation of universities, governments, enterprises, industries and society, and establish a collaborative education system [8]. Yang Wei proposed that the digital innovation ability of new business talents includes diversified knowledge base, data-driven innovative thinking and entrepreneurship in the digital era. Colleges and universities need to develop the digital innovation ability of new business talents from three aspects: curriculum integration, professional integration and subject integration [9].

To sum up, the construction of the curriculum system of the economic management specialty group should connect with new business types and new technologies, actively integrate into the new pattern of digital economy development, and conduct curriculum setting on the basis of scientific analysis of the relationship among industry, occupation, employment and specialty.

3. Curriculum construction idea of economic and management majors

3.1. Follow the new business philosophy of "soft business hard technology"

The breakthrough and application of cutting-edge and subversive technologies in the era of digital economy has led to comprehensive changes in digital products, operation modes, management methods, etc. in the business field, which is characterized by interdisciplinary, cross-border integration

and application practice [10]. It has bred a new concept of business education to guide the construction of financial and business specialty groups and courses in higher vocational colleges. On the one hand, it is necessary to retain the traditional business courses such as economics, management, marketing, etc., and reflect the comprehensive abilities such as technical skills, interpersonal skills, and conceptual skills, so that students can lay a solid foundation of management theory and master general management technical skills. On the other hand, new courses should be offered to adapt to the new business economy, reflecting "new thinking, new theory, new tools and new abilities". Students can use new business thinking to deeply understand and adapt to the uncertainty of business changes, use new theories and new methods to study the internal logic and operating laws of the new economic form, and use new technologies and new tools to solve complex management problems, becoming compound talents who understand both business management and digital technology.

3.2. Practice the integrated education model of "post-class-competition-certificate"

In April 2021, the National Vocational Education Conference proposed to promote the integration of "post-course-competition-certificate" and improve the quality of education. Firstly, meet the needs of regional industrial digital transformation and enterprise digital management upgrading, and reasonably build the professional ability framework of the specialty group facing the actual needs of local industries and enterprises; Secondly, organically integrate the contents of vocational skill grade certificates for new posts such as digital managers and financial technologists, meeting the requirements of current digital talents' professional abilities; Thirdly, connect professional competitions such as college students' vocational skills competition and college students' discipline competition to improve students' practical ability and mass entrepreneurship and innovation ability; Fourthly, serve the digital management business of industrial enterprises in the region, and further promote the digital courses of some professional groups to social industries. So as to achieve the five combinations of post ability demand, course module learning, professional ability certificate, professional skills competition and social training services.

3.3. Promote the advantages of professional "collaborative symbiosis"

The imbalance and disharmony among majors in higher vocational colleges has become a key problem restricting the high-quality development of colleges and universities. In particular, the curriculum system of the economic and management specialty group is relatively fragmented, and there is less cross integration among the majors, which makes it difficult to form synergy. In the era of digital economy, the economic management specialty group needs to conform to the trend of industrial agglomeration, integration and ecology. While strengthening the internal integration of the specialty, first, focus on the cultivation of common professional abilities of new business professionals in the digital era, actively integrate into the application courses of new technologies and new tools, and form a systematic cross professional platform curriculum; Second, through the curriculum system model of "sharing at the bottom, separating at the middle, and mutual selection at the top", all majors work together to jointly build, share and share teaching courses and other resources, promote

the synergy and symbiosis among majors, achieve the coordinated and sustainable development of multiple majors, and thus improve the overall effectiveness of the professional group.

4. Framework of "three-dimension and three-level" modular curriculum

According to the above ideas, take the Digital Economy and Trade College of Wenzhou Vocational and Technical College as an example. On the one hand, on the basis of traditional business knowledge and ability, the curriculum system of its specialty group should build a three-dimensional system from "management knowledge-digital technology-professional quality". From the perspective of knowledge dimension, it should have a knowledge structure of business, that is, it should master a systematic economic management knowledge system, including general management module, professional management module Innovation management module; From the perspective of technology, it is necessary to have digital management skills and be able to effectively transform and utilize business data information resources, which can be divided into data collection and processing module, data analysis and application module, data innovation and decision-making module; From the perspective of professional quality, we should have good values and ethics to regulate the professional behavior of managers, use innovative thinking to promote the change of management mode, and set up personal quality module, team cooperation module and comprehensive practice module.

On the other hand, according to the requirements of students' progressive ability training, a three-level curriculum system of "general digital ability - post digital ability - innovative digital ability" is designed: at the first level, students' general digital ability is improved through basic management theory and basic data skills training, and students' initial digital management ability is cultivated. At the second level, students' digital ability in professional posts is improved and their mid-level digital management ability is cultivated through teaching and skill training of applied digital management knowledge in specialized business posts (HRM, international business, marketing, finance, etc.). At the third level, through comprehensive digital management skills training, students' innovative digital ability is improved and high-level digital management ability is cultivated.

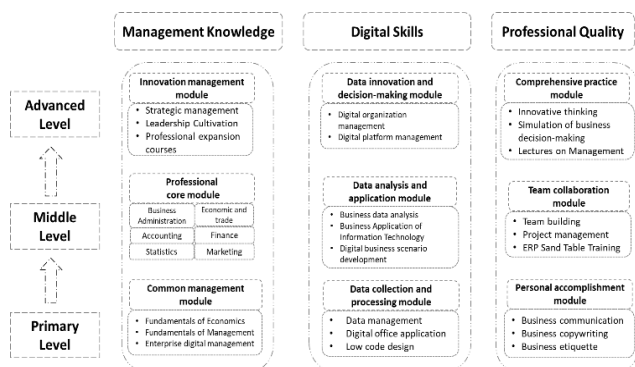


Figure 1. "Three dimension and three-level" modular curriculum system framework of economic management specialty group

5. Implementation path of the modular curriculum construction

5.1. Integrate digital tools into teaching resources

Unitized resources are the basis of curriculum construction. In the process of creating and updating curriculum content, new technologies, new processes, new norms and typical enterprise management cases need to be included in the teaching resource. Under the condition of comprehensive application of digital technology, there are two ways for digital tools to be integrated into the teaching resource. One is the integration of commercial digital tools as a component of teaching content, namely, information-based teaching, so as to improve the matching of teaching resource supply and learning demand. The second is the integration of educational digital tools as a means of teaching support, namely, teaching informatization, so as to improve the efficiency and efficiency of education and teaching. To integrate digital tools into the teaching content, the focus is to integrate the business model, organizational process, business practice, technical skills, etc. currently being applied by enterprises with the conceptual knowledge framework of traditional management, reorganize teaching resources around practical teaching activities such as "teaching, learning, training, competition", build digital application scenarios, form a digital teaching case library, and provide students with the environment and conditions to face real problems in the business field.

5.2. Build teaching-team across borders

At present, teachers with a single background are difficult to adapt to the development of the digital economy era. The key to implement the modular curriculum construction is to establish a cross-border teaching team. On the one hand, in accordance with the principles of multiple backgrounds, combination of full-time and part-time, and reasonable structure, we will build a teacher team with professional management theory, digital technology skills and ability to guide students to innovate and practice. On the other hand, different teaching teams develop curriculum standards, implementation plans and online teaching resources for each module. In terms of curriculum standards, we should establish unified teaching standards from the aspects of knowledge structure, ability structure and quality structure around the goal of talent training; In terms of the curriculum implementation plan, combining the characteristics of students, deepen the teaching methods from the aspects of implementation preparation, process and effect, pay attention to both theory and practice, and reflect the application of new technology. In terms of online teaching resources, based on the online open course platform, modern information technology is used to share teaching resources and promote classroom teaching reform.

5.3. Deepen integration between industry and education

The curriculum system of specialty group is an important link in implementing the cooperative education between schools and enterprises. It is necessary to give full play to the main role of enterprises in the construction of the curriculum system of specialty group. First, the curriculum system of the economic management specialty group in higher vocational colleges should closely follow the needs of digital

management talents in industries and enterprises. Based on the regional characteristics of the university and the analysis of the commonness and individuality of each specialty in the specialty group, the professional teaching standards should be connected with the professional skill certificate standards such as digital managers, so as to clarify the work content of the core posts of each specialty. Second, under the leadership of post groups, schools and enterprises jointly innovatively implement project-based teaching content, segmented teaching arrangements and rotational training of business skills, jointly develop modular curriculum standards, jointly develop a series of teaching tasks, and jointly guide students to complete digital skills training. Third, reasonably layout the construction of training bases inside and outside the school, serve the needs of professional development, and realize the digital transformation and upgrading of the training base by connecting with digital leading enterprises, equipping them with digital software and hardware equipment.

5.4. Establish a quality system to provide systematic guarantee.

In the process of building the curriculum system of the specialty group, we should set up a three-level monitoring and guarantee mechanism for teaching quality of schools, colleges and specialties. At the macro level, the University has established teaching work committee, academic committee, teaching quality monitoring office and other institutions to guide the formulation and improvement of talent training program of secondary colleges, the construction and design of professional curriculum system, and supervise whether they constantly update modular courses based on the development needs of the digital era. At the medium level, the college should track the teaching process of implementing modular courses in each specialty within the specialty group, find and analyze problems in the implementation process from the perspectives of teachers, textbooks, teaching methods, etc., and put forward corresponding improvement countermeasures, so as to further improve the modular curriculum system of the specialty group. At the micro level, majors should implement diversified teaching quality evaluation. They should pay attention to both learning achievements and ability achievement, and improve the overall curriculum design, teaching content and teaching methods according to the curriculum quality evaluation report.

6. Conclusion

This paper proposes the "three-dimension and three-level" modular curriculum construction system to meet the new requirements of talent training in the digital economy era. Economic management professionals need to master management knowledge, digital skills and professional quality, then improve their skills from three levels: general digital management ability, professional digital ability and innovative digital management ability. In addition, this paper puts forward four suggestions for the implementation of the curriculum construction of the economic management specialty group: integrating digital intelligent tools into teaching resources, building a team of teachers across borders,

comprehensively deepening the integration of production and teaching, establishing a quality system to provide systematic guarantee.

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