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An Exploration of the Reform of E-commerce Curriculum Teaching in the Background of the Digital Economy

Qian Deng[1,*]
[1]*Geely University of China, China*

Abstract: With the rapid development of the digital economy, e-commerce, as an important component of emerging business models, is confronted with multiple challenges such as rapid knowledge renewal, deep technological integration, and diversified talent demands. Traditional teaching models are thus in urgent need of transformation and upgrading. This paper analyzes the necessity of e-commerce curriculum reform from four aspects: adapting to industry demands, meeting student growth needs, promoting the digital transformation of education, and enhancing curriculum system construction. Furthermore, it proposes specific practical strategies for teaching reform from four pathways: curriculum content restructuring, innovation in teaching methods, platform resource development, and optimization of evaluation mechanisms. The aim is to provide feasible references for the high-quality development of e-commerce courses in higher education institutions in the context of the digital economy.

Keywords: digital economy, e-commerce, teaching reform, curriculum restructuring, industry-education integration

1. Introduction

With the widespread application of new digital technologies represented by big data, artificial intelligence, blockchain, and cloud computing, the global economy is accelerating its transformation towards digitalization. E-commerce, as an important vehicle for the digital economy, has evolved from traditional online shopping into a comprehensive business ecosystem integrating technology, content, services, and data. This transformation has not only profoundly impacted industrial structures and business logic but also imposed higher demands on the e-commerce talent cultivation system in higher education institutions. Currently, the e-commerce courses in most universities still suffer from issues such as outdated content, monotonous teaching methods, and weak practical training, which make it difficult to adapt to the rapid changes in industry transformation and job requirements. Therefore, conducting e-commerce curriculum reforms based on the context of the digital economy is not only a key link in improving the quality of talent cultivation but also an important measure to serve the national strategy of "Digital China" and promote high-quality economic development.

2. The Necessity of E-commerce Curriculum Reform in the Context of the Digital Economy

2.1 Adapting to the industrial demands of digital economy development

In the era of rapid digital economy development, the e-commerce industry is undergoing a profound transformation from traditional online sales models to a more diversified and intelligent direction. Emerging technologies such as big data analytics,

Corresponding Author: Qian Deng
Geely University of China, China

Artificial intelligence algorithms, blockchain payments, cross-border logistics systems, and live-streaming sales are significantly altering the operational models and service ecosystems of e-commerce. This trend not only drives the innovation of business models but also imposes higher and more complex capability requirements on e-commerce talents. In contrast, e-commerce courses in current universities generally suffer from outdated content, a singular structure, and a disconnect with the industry. Many courses remain at the basic level of web design and e-commerce platform operations, failing to cover the rapidly evolving technologies and knowledge skills required by the e-commerce ecosystem. As a result, students' adaptability and competitiveness in the job market are insufficient. To address this situation, e-commerce courses must undergo systematic reform and upgrading. On one hand, the course content system should be restructured to incorporate emerging technologies and application scenarios such as big data, artificial intelligence, digital marketing, short-video e-commerce, and intelligent logistics, thereby constructing a knowledge structure that is highly aligned with the digital economy. On the other hand, the practicality and cutting-edge nature of the courses should be enhanced, with a focus on aligning with actual corporate business operations and integrating course content with job competency standards. This will achieve a precise match between students' knowledge and skills and industry demands. The coordinated adjustment of teaching content and industrial needs will help improve the practical abilities and technical literacy of e-commerce talents, enhancing their professional adaptability and innovative development capabilities in the new economic environment.

2.2 Meeting students' personalized and practice-oriented learning needs

With the continuous deepening of the digital transformation of education, students' learning methods are undergoing profound changes, showing a trend towards greater personalization, autonomy, and practice orientation. Particularly in highly applied fields such as e-commerce, students are no longer satisfied with passively receiving theoretical knowledge; instead, they are more concerned with whether the course content is realistic, can enhance practical operational skills, and improve future employability. However, the current e-commerce courses in most universities still rely mainly on traditional classroom lectures, with content focusing on the accumulation of theoretical knowledge and lacking case analysis, project practice, and situational simulation. The monotonous teaching model results in low student engagement and insufficient practical skills, making it difficult for them to meet the rapidly changing workplace demands. To better meet students' growth and development needs, e-commerce curriculum reform should focus on shifting from "teaching knowledge" to "teaching skills" and strengthening practical teaching, task-driven learning, and job simulation. Specifically, a task system based on real e-commerce projects can be established to guide students to participate in various aspects of e-commerce operations, such as platform construction, product planning, data operation, and customer service. Students can use big data tools to analyze user behavior and make market predictions, thereby honing their skills and gaining experience in real business contexts. At the same time, strengthening cooperation with enterprises and building joint school-enterprise training platforms can provide students with immersive learning spaces to enhance their hands-on abilities and job adaptability. Through these personalized and practice-oriented teaching strategies, not only can students' interest in learning be stimulated, but also the effective transformation from knowledge acquisition to skill development can be achieved, cultivating high-quality e-commerce talents that meet the requirements of the digital economy era.

2.3 Promoting the digital transformation of higher education and curriculum system optimization

In the context of the continuous deepening of the digital economy, higher education is facing the dual challenges and opportunities of conceptual renewal and systemic reshaping, with the digital

transformation of education becoming an inevitable trend. As a professional course that is intensive in technology application and rapid in iteration, e-commerce courses are at the forefront of this reform. The optimization of its teaching system is of great significance for improving the overall educational quality of universities. However, many e-commerce courses in current universities still suffer from fragmented content, repetitive module settings, unclear course hierarchy, and a singular teaching evaluation mechanism. These issues prevent students from forming a systematic and progressive knowledge structure, affecting the overall effectiveness of talent cultivation. To keep pace with the development of the digital economy, e-commerce courses urgently need structural optimization and model innovation. On one hand, the course goal system should be restructured with a focus on competency cultivation, aligning course content with professional standards and industry job competency requirements to enhance the practicality and orientation of the courses. On the other hand, the integration of information technology and teaching should be accelerated. Intelligent teaching platforms, big data analysis tools, and virtual simulation training systems should be fully utilized to construct a new hybrid teaching model that combines online and offline learning, achieving intelligent, personalized, and collaborative teaching processes. In addition, a diversified teaching evaluation system should be established to assess students' learning processes, project outcomes, and data application abilities in a comprehensive manner, breaking away from the traditional evaluation habit of relying solely on exams. Through these approaches, not only can the quality of e-commerce courses be comprehensively improved, but universities can also strategically transform from a knowledge-lecture-based to a competency-based education system in the digital age, serving the national digital economy strategy and the goal of high-quality development.

3. Practical Pathways for E-commerce Curriculum Reform in the Context of the Digital Economy

3.1 Restructuring the course content system to strengthen the integration of digital and commercial knowledge

In the context of the digital economy's comprehensive penetration into all industries, the connotation and extension of e-commerce have undergone profound changes. It has evolved from a traditional online marketing and trading platform to a comprehensive digital business system driven by data and supported by the integration of technologies such as big data, artificial intelligence, blockchain, and cloud computing. E-commerce is no longer merely the online sale of products but has become a complex business operation model supported by advanced digital technologies. This trend has imposed higher requirements on the content of e-commerce courses in higher education institutions, necessitating a transformation from a traditional "e-commerce operation"-oriented teaching system to a comprehensive knowledge structure centered on "digital business capability cultivation." Therefore, the systematic restructuring of course content has become the primary task of teaching reform.

Firstly, on the basis of the existing course system, new modules closely aligned with the cutting-edge developments of the industry should be added, such as big data marketing, intelligent recommendation algorithms, short-video and live-streaming e-commerce operations, cross-border payments, and blockchain security management. This will help students understand and master the specific applications of mainstream digital technologies in e-commerce. Secondly, the cultivation of students' data thinking and "digital commerce" literacy should be strengthened, with a focus on training their ability to collect, analyze, and apply data in real business scenarios, thereby achieving intelligent and precise business decision-making. Additionally, a progressive course structure consisting of four levels-basic theory, platform operations, technical tools, and comprehensive application-should be

established. This will enable students to build a solid foundation in theory and platform operations in the early stages of learning, master tools and technical applications in the middle stages, and apply their knowledge to solve complex business problems in the later stages. Through the updating of content modules and optimization of the course system, e-commerce courses will better meet the requirements for cultivating compound and innovative talents in the digital economy era. This will not only enhance students' professional literacy and comprehensive abilities but also lay a solid foundation for their sustainable development in the intelligent business environment.

3.2 Innovating teaching methods and implementing project-based and task-oriented approaches

Driven by the rapid development of the digital economy, the pace of technological updates and business model iterations in the e-commerce industry is accelerating, imposing higher requirements for practicality and applicability in higher education talent cultivation. The traditional classroom teaching model, which is primarily teacher-centered and student-passive, can no longer meet the modern e-commerce education goal of cultivating compound talents with strong practical skills, project awareness, and rapid job adaptability. Therefore, e-commerce course teaching must undergo in-depth reform at the level of teaching methods, shifting towards a more participatory, open, and task-oriented teaching model.

Promoting teaching philosophies such as PBL (Project-Based Learning) and OBE (Outcomes-Based Education) is an important pathway to achieving curriculum reform. Through project-driven teaching, instructors can organize teaching content around real business problems, guiding students to conduct problem analysis, solution design, project implementation, and outcome presentation in team formats, effectively enhancing their comprehensive application and collaborative innovation capabilities. In terms of specific implementation, e-commerce courses should introduce real e-commerce operational tasks to break the dilemma of "disconnection between knowledge and practice." For example, students can be organized to complete the entire e-commerce operation process, including online store setup, product information organization and posting, customer communication and service, transaction process management, and data statistics and analysis. By adopting a three-in-one teaching approach of "online simulation—platform practice—data analysis," students can achieve a leap in capability from "learning" to "applying." Additionally, leveraging the actual operational tools of mainstream platforms such as Taobao, JD.com, and TikTok e-commerce can enhance students' perception and operational skills in the latest e-commerce environment.

Moreover, e-commerce teaching should actively leverage corporate resources to integrate jointly built e-commerce training bases, case resource libraries, and industry guidance forces between schools and enterprises, creating an immersive teaching environment. By inviting corporate mentors to participate in teaching and conducting course design and training activities based on real corporate cases, the timeliness and relevance of teaching content can be enhanced, and students can be provided with more practical opportunities that closely resemble real work scenarios, thereby effectively improving their employability and job transferability. Through the innovation of teaching methods, e-commerce courses will become more vibrant and effective, truly achieving the talent cultivation goal of "student-centered and application-oriented."

3.3 Developing intelligent teaching platforms to achieve integrated online and offline development

In the context of the continuous deepening of the digital economy, the digital transformation of education has become a key direction for the development of higher education. As a discipline that is both technology-intensive and application-oriented, e-commerce courses need to leverage information technology to promote comprehensive optimization of the teaching environment and learning pathways. To meet the transformation needs of the new era's

educational ecosystem, it is essential to actively build intelligent e-commerce teaching platforms and deeply integrate modern information technology into the entire process of course design and teaching implementation.

On one hand, a fully functional intelligent e-commerce teaching platform should be constructed, integrating modules such as video courses, interactive case teaching, virtual simulation training, intelligent Q&A, and AI-assisted learning. This comprehensive teaching system, which combines content resources, teaching activities, data monitoring, and intelligent feedback, will realize intelligent, interactive, and visualized teaching. The platform should also support learning behavior tracking and learning data analysis to help instructors monitor students' learning progress and outcomes in real time, providing data support for personalized teaching. On the other hand, the construction of an online learning resource library should be accelerated, offering a variety of digital resources such as micro-lectures, MOOCs (Massive Open Online Courses), and SPOCs (Small Private Online Courses) to meet the individualized learning needs of different students. Micro-lectures can help students focus on key points and master skills in segments, while MOOCs and SPOCs can expand the breadth and depth of learning, enabling students to access high-quality teaching resources on a broader platform. This mode of resource sharing and flexible access not only improves learning efficiency but also breaks the spatial limitations of traditional classroom teaching.

Moreover, the implementation of blended learning, which combines online self-study with face-to-face teaching, has become an important trend in e-commerce teaching reform. By integrating online independent learning with offline face-to-face instruction, instructors can more flexibly arrange the teaching pace, and students can conduct preview, review, or extended learning according to their own progress. This integrated model not only enhances the flexibility and adaptability of learning but also achieves precise and efficient teaching through online data feedback and offline in-depth discussions.

3.4 Refining the evaluation mechanism and industry-education collaboration system to enhance educational effectiveness

In the context of the digital economy, the teaching objectives of e-commerce courses are no longer limited to students' mastery of theoretical knowledge but place greater emphasis on the cultivation of students' comprehensive abilities, professional literacy, and innovative consciousness. Therefore, the course evaluation system urgently needs to transform from the traditional model, which primarily focuses on "knowledge memorization and examination scores," to a diversified, competency-oriented, and process-oriented evaluation system to comprehensively improve teaching quality and educational effectiveness.

Firstly, a scientific, multi-dimensional, and comprehensive evaluation system should be established, integrating formative assessment, process-oriented evaluation, and outcome-oriented evaluation throughout the entire teaching process. Formative assessment emphasizes students' understanding, mastery, and abilities application demonstrated during the learning process, such as study notes, classroom performance, and group cooperation. Process-oriented evaluation focuses on the completion and reflection quality in project implementation and practical activities. Outcome-oriented evaluation places greater emphasis on the quality of students' final outputs, such as project quality, platform operation performance, and data analysis reports. Through this multi-faceted evaluation mechanism, not only can students' true levels be more objectively and comprehensively reflected, but students can also be effectively guided to focus on practice and reflection in the learning process, thereby enhancing their learning initiative and professional awareness.

In competency evaluation, particular attention should be paid to assessing students' comprehensive practical abilities. The course grade composition should include students' project outcomes, e-commerce platform operation performance, user

data analysis capabilities, and marketing planning execution in real or simulated environments. For example, students' product selection strategies, page design, customer communication records, data reports, and conversion rates when setting up e-commerce platforms can all serve as evaluation criteria. This approach ensures that assessment is closely aligned with actual job requirements, truly achieving the goal of "learning through doing and teaching through evaluation."

More importantly, teaching practice should comprehensively deepen industry-education collaboration and establish a "school-enterprise co-cultivation" talent development mechanism, encouraging enterprises to deeply participate in the design, implementation, and evaluation of courses. On one hand, corporate experts can be invited to serve as course co-construction mentors to jointly develop teaching content and skill standards. On the other hand, internship and practice bases should be expanded, and school-enterprise joint development of training projects should be promoted, using real corporate business problems as the objects of student learning and research to enhance their ability to solve complex problems. Additionally, students should be encouraged to actively participate in off-campus internships, innovation and entrepreneurship projects, national college student e-commerce challenges, e-commerce live-streaming planning and operations, and other competitions and activities. This will transform classroom knowledge into practical operational skills and further connect the talent development pathway between "classroom —enterprise—market."

This collaborative talent development mechanism of "learning through doing, evaluating through doing, and improving through evaluation" can significantly enhance the relevance and effectiveness of teaching and help achieve the transformation of students from "knowledge-based talents" to "competency-based, innovative, and adaptive talents," truly realizing the high-quality development goal of e-commerce education in the digital economy era.

Conclusion

In summary, e-commerce courses, as an important bridge linking the digital economy with talent cultivation, must be grounded in contemporary development and responsive to real-world needs. By systematically restructuring course content, innovating teaching methods, integrating intelligent teaching resources, constructing diversified evaluation mechanisms, and deepening industry-education collaboration, e-commerce courses can achieve a transformation from knowledge transmission to capability development and an extension from classroom teaching to real-world application. In the future, e-commerce education should continue to strengthen the talent cultivation philosophy of integrating digital technology with commerce, promote in-depth alignment between teaching and the industry, and nurture e-commerce talents with data thinking, technical literacy, and innovative capabilities to support the high-quality development of the digital economy.

Conflict of interest

The author declares that she has no conflicts of interest in this work.

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