International Education Forum, 2026, Volume 4, Issue 3
http://ojs.bbwpublisher.com/index.php/IEF
Online ISSN: 2981-8605
Print ISSN 3083-4902

Research on the Construction of the E-commerce Major in the Context of Digital Intelligence

Anxin Niu*

Hetianshijishixueyuan, Hotan 848000, Xinjiang, China

**Author to whom correspondence should be addressed.*

Abstract: With the deepening of the wave of digital economy and intelligent technology, the global business ecosystem has undergone significant changes, putting forward new requirements for the cultivation of e-commerce talents. Based on this, technician colleges need to advance the teaching activities of the e-commerce major from the perspective of the times and create a sound curriculum education environment to improve the effectiveness of talent cultivation. Starting from the background of the digital intelligence era, this paper analyzes the challenges faced by the construction of the e-commerce major in technician colleges and puts forward specific practical strategies for construction. The paper aims to cultivate high-quality compound talents and provide support for the subsequent talent cultivation of the e-commerce major.

Keywords: Digital intelligence; E-commerce major; Major construction; Industry-education integration; Cross-cultural communication

Online publication: March 31, 2026

1. Introduction

Entering the third decade of the 21st century, digital intelligent technologies such as big data, artificial intelligence, cloud computing, the Internet of Things, and blockchain have been deeply integrated and developed rapidly, and the global economy has stepped into a new stage featuring data as the core and intelligence as the prominent characteristic. In this context, e-commerce, a key component of the digital economy, has gradually expanded its connotation, evolving from a model solely relying on online transactions into a comprehensive ecosystem integrating intelligent marketing, precise supply chain operation, metaverse e-commerce, social commerce platforms, cross-border e-commerce services, and live streaming e-commerce. With the in-depth development of industrial changes, the demand for talent has shown a diversified trend. The market's attention to talents is not only limited to basic technical operation capabilities, but also highly expects a group of talents with business insight, data analysis proficiency, cross-cultural communication ability, and innovative practical

spirit.

This phenomenon poses severe challenges to the talent training model, curriculum design, practical teaching, and teaching staff construction of the e-commerce major in colleges and universities. The traditional construction system relying on the one-way integration of "electronics" and "commerce" can hardly adapt to the era requirements of digital intelligent technology changing business logic. How to systematically promote the digital transformation and innovative development of the e-commerce major, and explore an applied talent training path that conforms to the future development direction and is closely linked to industrial reality, has become one of the important issues to be urgently solved in the field of higher education. Focusing on the key issues in the construction of the e-commerce major in the digital intelligence era, this paper puts forward targeted and operable improvement suggestions from three aspects: technological innovation integration, school-enterprise collaborative education, and core competence cultivation, hoping to provide a reference for the professional development of other similar colleges and universities.

2. Challenges faced by the construction of an e-commerce major in the context of digital intelligence

2.1. Severe contradiction between accelerated technological iteration and lagging curriculum content

Innovative technologies such as Artificial Intelligence Generated Content (AIGC), big data intelligent analysis, automated marketing tools, and blockchain traceability have been integrated into the e-commerce field. The current curriculum system of higher education has a long update cycle, and the compilation of textbooks and revision of teaching syllabi often lag behind the development trend of the industry. It is difficult for classroom teaching to reflect industrial practice in a timely manner, and the problem of "generational gap" has gradually become prominent. Most business education still focuses on traditional e-commerce theories or basic technologies (such as web design), with insufficient discussion on the core principles, application approaches, and ethical norms of cutting-edge digital intelligent tools, resulting in an obvious disconnect between students' professional literacy and market demand [1].

2.2. Persistence of the "fireplace phenomenon" in industry-education integration and insufficient depth of practical teaching

Although the consensus of school-enterprise collaborative education has long been reached in the education circle, the existing school-enterprise cooperation models are mostly limited to the primary stages, such as corporate visits and lectures, and a deep integration mechanism for the entire chain and all aspects of talent training has not yet been established, and is rarely adopted. It is difficult to form a complete introduction system for "cutting-edge industry cases, real-time latest data, advanced technology platforms", and the like, making it impossible to realize their safe and effective utilization [2]. The simulation experiment scenarios in the practical training bases of colleges and universities are insufficient and updated slowly, and these scenarios can hardly reproduce the complex digital business environment (such as real-time data analysis and decision-making in live streaming operation, supply chain crisis management in cross-border e-commerce). As a result, students' practical skills and comprehensive application capabilities are difficult to improve [3].

2.3. Urgent need to strengthen the digital intelligence literacy and the compound background of the teaching staff

The front-line teaching staff of e-commerce education has a single disciplinary background. Even though professionals in traditional majors such as management, economics, and computer science are good at analyzing theories, they have a big gap in understanding the current cutting-edge digital technologies and lack relevant experience, while information technology experts fail to fully understand the actual needs in business scenarios [4]. Affected by heavy teaching and research tasks, the teaching staff has not invested much energy in knowledge update and practical experience to enhance their cognitive renewal and practical abilities, and their understanding of the concept of digital transformation needs to be urgently improved, which seriously hinders the improvement of teaching quality and the cultivation of innovative talents [5].

2.4. Weak cultivation system for cross-cultural business and global operation capabilities

Driven by globalization and the dual circulation strategy, cross-border e-commerce has become an important force promoting economic growth. Enterprises are in urgent need of professional talents who can master international trade rules, manage international logistics, be proficient in cross-border payment operations, and have cross-cultural communication capabilities. At present, the curriculum content of the e-commerce major in colleges and universities is scattered, the proportion of elective courses is small, and the overall planning lacks systematic design. There is a disconnect between language skills and practical links, with insufficient attention to the differentiated business environments, characteristics of laws and regulations, and local cultural differences in key markets such as Southeast Asia, the Middle East, and Latin America, making it difficult to meet the actual demand for cultivating students' global competitiveness [6].

3. Construction strategies for the e-commerce major in the context of digital intelligence

3.1. Construct a curriculum and teaching system with in-depth integration of emerging technologies

The core goal is to break the separation of technology and business, and organically embed the cultivation of digital intelligence capabilities into the professional core.

Reconstruct a modular and dynamic curriculum system: Set up core modules such as "Digital Intelligence Technology Foundation", "Intelligent Business Application", and "Data-driven Operation". The "Digital Intelligence Technology Foundation" module includes compulsory or restricted elective courses such as Basic Python Data Analysis, Introduction to Database and Cloud Computing, AI Principles and E-commerce Application, and Blockchain and Digital Trust, focusing on the understanding of principles rather than pure programming [7]. The "Intelligent Business Application" module deepens the integration of technology and scenarios, offering courses such as Big Data Consumer Behavior Analysis, AIGC Empowered Content Marketing and Visual Design, Intelligent Customer Service and CRM System, and Smart Supply Chain and Logistics Management. A dynamic mechanism of annual fine-tuning and three-year medium-term revision is stipulated for curriculum content to closely follow technological evolution and industry reports.

Promote the design of project-based and situational teaching models: With the help of typical business cases or highly simulated e-commerce projects, integrate the key knowledge points of multiple courses. For example, the entire process of launching a new product can connect market research (relying on big data analysis),

creative design and brand promotion (using AI auxiliary tools), digital marketing planning and implementation (including intelligent marketing theories), and operational effect evaluation (using statistical methods). Practical operations are carried out through mainstream e-commerce platforms, professional data processing systems, and marketing automation platforms to achieve "learning by doing" in real business scenarios and strengthen students' understanding of the comprehensive application capabilities of technical methods and their practical applications [8].

Build an intelligent practical teaching platform combining virtual and real scenarios: Build or transform a comprehensive e-commerce laboratory, integrate cross-border e-commerce simulation systems, live streaming e-commerce simulation environments, and big data analysis tools, and add a Business Intelligence (BI) decision-making sand table module. Use Virtual Reality (VR)/Augmented Reality (AR) technology to reproduce actual business scenarios, such as cross-border warehouse management and international trade exhibitions. Rely on the support of industry-leading enterprises and well-known technical service providers to access real operation data sources or classic case libraries, enhancing the authenticity and application value of practical training links [9].

3.2. Deepen industry-education integration through alignment with industry certification and standards

Integrating industry certification and competency standards deeply into teaching is a key path to improving the accuracy of talent training and social recognition.

Establish a connection mechanism with authoritative industry certification and vocational qualification standards: In-depth study the talent training programs for digital marketing, e-commerce operation, data processing and other fields released by enterprises such as Alibaba, Google and Amazon, refer to the vocational skill specifications for various new forms of business released by the Ministry of Human Resources and Social Security (such as Internet Marketing Specialist, Omnimedia Operation Specialist). Disassemble and refine the core knowledge modules and skill elements of various certifications, and organically integrate them into the design of curriculum teaching objectives to make educational content highly compatible with industrial demand [10].

Build a "certification-practical training-employment" trinity industry-education integration talent training model: Cooperate with cutting-edge industry e-commerce platforms and authoritative industry associations to build industrial colleges or vocational skill appraisal centers, and increase the in-depth participation of enterprises: provide real business case support, employ experienced experts as instructors, and offer practical positions to enhance students' practical operation capabilities. Colleges and universities should also incorporate relevant certification results into the credit management system and embed micro-majors or special certification modules in core courses, enabling students to obtain industry-recognized professional qualification certificates while completing their major studies, thus improving students' overall quality [11].

Create a mechanism for the application and continuous improvement of certification results: Recognize students who have passed the certification in academic evaluation, honor recognition, and internship recommendation to reflect its value connotation. Set up a special committee composed of enterprise experts, certification institution representatives, and college teachers to regularly inspect the actual effect of integrating certification content into teaching, adjust the docking methods according to the development trend of industrial technology, and maintain the practicality and adaptability of industry-education integration [12].

3.3. Systematically improve cross-cultural business communication and global operation capabilities

Take global vision and cross-cultural competence as one of the core qualities of digital intelligence e-commerce talents for systematic cultivation.

Construct a comprehensive curriculum system integrating "language ability + cultural literacy + business practice + information technology": Focus on improving the practical application ability of business English or small languages in compulsory courses, offer characteristic courses such as International Business Etiquette Norms, focus on building core professional course groups such as Analysis of Overseas Trade Laws and Regulations, and systematically introduce the comprehensive application methodology of intelligent translation tools, cross-border public opinion monitoring platforms and global data statistical analysis systems [13].

Build a variety of international exchange and practice platforms: Guide students to participate in cross-border e-commerce innovation and entrepreneurship competitions, deeply experience business processes through simulated operation links, carry out transnational online seminars or virtual team cooperation projects by virtue of international cooperation resources, and formulate product marketing plans for specific target markets. Jointly build practical training bases with cross-border e-commerce comprehensive pilot zones, local foreign trade enterprises, and overseas warehousing service providers to provide students with immersive practical drill opportunities [14].

Create diverse educational forms and evaluation systems: Use the case analysis method to carefully study typical cases and their elements in cross-border e-commerce, focusing on exploring the specific application approaches of digital technology in practical operation. Guide students to conduct special research on the market of a specific region and write reports integrating market access skills. Emphasize the assessment of learning performance in examinations, including cross-cultural communication and cooperation performance, the quality of overseas research results, the ability to process store operation data, and the ability to design multilingual marketing copy, so as to comprehensively evaluate students' global business capabilities and development potential [15].

4. Conclusion

In summary, the surging tide of digital intelligence and the rapid evolution of the e-commerce industry pose severe challenges to the construction of the e-commerce major in colleges and universities, and also provide a great opportunity for development. The core of professional construction is to return to the essence of talent cultivation, vigorously break the barriers between disciplines, enterprises, and regions, and respond to changes with an open attitude in learning. The future e-commerce major is bound to be a representative form of the "New Liberal Arts" or "New Engineering" generated by the in-depth integration of business logic and digital intelligence technology.

It is necessary to continuously adjust the curriculum system in response to technological changes, bridge the gap of talent supply in the future industry, stand the test of the international market to enhance China's international competitiveness, and, more importantly, cultivate students' core literacy.

Disclosure statement

The author declares no conflict of interest.

References

[1] Ni ZM, 2025, Construction of Modular Curriculum System for E-commerce Professional Group under the Background of Digital Economy. Journal of Hubei Open Vocational College, 38(11): 167–169.

[2] Li JY, Liu X, Fang M, 2025, Research on the Curriculum Teaching Reform of E-commerce Major under the Concept of Empowerment Education. Brand Marketing of Time-honored Brands, 2025(8): 217–219.

[3] Luo T, Li A, Zhang YM, 2025, Research on the Practical Teaching Reform of E-commerce Major in Higher Vocational Colleges Driven by Digitalization. Brand Marketing of Time-honored Brands, 2025(7): 217–219.

[4] Zhang X, 2025, Research on the Innovative Model of School-enterprise Cooperation in E-commerce Major. Market Modernization, 2025(2): 65–67.

[5] Shi TS. 2024, Research on the Path of School-enterprise Cooperation in E-commerce Major. Anhui Education Research, 2024(36): 96–99.

[6] Ning WW, Liang DN, 2024, Exploration of the "Three-class Practice and Three-dimensional Linkage" Talent Training Model for the Secondary Vocational E-commerce Major — Taking Guangxi Yulin Agricultural School as an Example. Guangxi Education, 2024(35): 21–25.

[7] Wang W, 2024, Construction of Practical Teaching System for Higher Vocational E-commerce Major from the Perspective of Innovation and Entrepreneurship Orientation. Academy, 17(35): 80–82.

[8] Jiang YL, Xu JY, 2024, Research on the Innovation of Accounting Practical Teaching under the Background of Digital Intelligence — Taking E-commerce Major as an Example. Modern Business Trade Industry, 45(15): 185–187.

[9] Tian JJ, Qi LL, Yang Y, 2024, Research on the "Learning-Training-Competition-Practice" Integrated Talent Training Model — Taking Higher Vocational E-commerce Major as an Example. Vocational Education Research, 2024(6): 60–65.

[10] Jiang Z, Chen Z, 2024, Evaluation and Reform Measures of Online Quality Courses for University E-commerce Professional Groups under the Background of Digital Intelligence. Journal of Taishan University, 46(3): 138–144.

[11] Huang BY, 2024, Research on the Problems and Countermeasures of Applied Undergraduate E-commerce Talent Training in the Digital Intelligence Era. Heilongjiang Education (Theory and Practice), 2024(4): 94–97.

[12] Liu DW, 2023, Research on the Construction of E-commerce Professional Group and Industrial Collaborative Development in Guangdong Higher Vocational Colleges — Taking Guangdong Polytechnic of Science and Technology as an Example. Fortune Today, 2023(19): 134–136.

[13] Liu Y, Du SH, Xuan X, 2023, Research on the "Innovation and Integration" Development Model of E-commerce Major under the Background of New Liberal Arts. Technology Wind, 2023(24): 120–122.

[14] Li AS, 2022, Reconstruction of E-commerce Talent Training Model under the Background of Digital Intelligence + Professional Cluster. Heilongjiang Education (Higher Education Research and Evaluation), 2022(10): 61–64.

[15] Li ZC, 2021, Research on the Construction of Digital Intelligence Business Virtual Simulation Practical Training System for E-commerce Major. Inner Mongolia Coal Economy, 2021(19): 219–220.