

Dilemma and Countermeasures of E-commerce Talent Cultivation in the Era of Big Data

Chengyu Zhu*

Dalian University of Finance and Economics, Dalian 116622, Liaoning, China

**Author to whom correspondence should be addressed.*

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Abstract: Against the backdrop of the vigorous development of big data technology, the e-commerce industry is facing new opportunities and challenges, with an increasing demand for professionals that is becoming higher and more complex. This paper deeply analyzes the dilemmas in e-commerce talent cultivation in the era of big data, including the disconnection between curriculum systems and the development of big data, insufficient big data literacy of teachers, weak integration of practical teaching with big data applications, and the lack of a big data-oriented evaluation system. To address these issues, countermeasures such as optimizing curriculum systems, strengthening teacher team building, deepening reform of practical teaching, and improving evaluation systems are proposed. The aim is to cultivate high-quality e-commerce talents who meet the needs of the big data era and promote the sustainable and healthy development of the e-commerce industry.

Keywords: Era of big data; E-commerce; Talent cultivation; Dilemma; Countermeasures

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1. Introduction

With the continuous development and widespread application of modern technological means such as artificial intelligence, big data, and cloud computing, people have now entered the era of big data, which is characterized by distinct digitalization^[1]. E-commerce, as a major emerging product of the current development of the digital economy, has significantly raised its requirements for the abilities and qualities of talents. Under this situation, an increasing number of universities have begun to explore new paths for cultivating e-commerce talents, aiming to better respond to the various changes brought about by the development of the big data society. Therefore, this paper mainly conducts relevant analysis and research on the dilemmas and countermeasures in the cultivation of e-commerce talents in the era of big data, for reference only.

2. Dilemmas faced in the cultivation of e-commerce talents in the era of big data

2.1. Disconnection between curriculum systems and big data development

For e-commerce majors, their acquisition and mastery of curriculum knowledge, professional skills, and

vocational literacy largely depend on the curriculum systems designed by schools ^[2]. The design of such systems is closely linked to the actual needs of enterprise job positions. However, in the context of the big data era, many colleges and universities currently have e-commerce curriculum systems that are disconnected from the development of big data. These systems fail to fully consider the trends of big data development and actual job requirements, with their focus still primarily on early-stage courses such as commodity marketing, online marketing, and website construction and maintenance. They lack the integration of knowledge and skills related to big data and artificial intelligence ^[3]. Obviously, such curriculum designs can hardly ensure that students meet the development needs of the current society.

2.2. Insufficient big data literacy among faculty

Currently, big data technology has demonstrated significant value in many fields such as education, healthcare, and e-commerce, with its applications becoming increasingly widespread ^[4]. Nevertheless, although many e-commerce teachers in colleges and universities possess solid theoretical foundations and rich professional teaching abilities, their big data literacy and digital teaching capabilities are relatively low. They cannot skillfully apply various data analysis software or visual teaching aids in their teaching, let alone comprehensively impart knowledge and skills related to big data and artificial intelligence to students. This, to a certain extent, affects students' learning and future development.

2.3. Weak integration of practical teaching with big data applications

Nowadays, industries have increasingly high requirements for the abilities and literacy of e-commerce talents. As a crucial link to test students' learning outcomes and evaluate the quality of talent cultivation in schools, practical teaching has become more and more important. However, in the era of big data, some colleges and universities face the problem of weak integration between practical teaching and big data applications in e-commerce talent cultivation ^[5]. Specifically, there are two main reasons for this issue: First, teachers do not attach enough importance to practical teaching, some overly focus on explaining theoretical knowledge, while others fail to integrate big data-related skill training, making it difficult for students to flexibly address and solve various practical problems in the workplace. Second, schools' big data experimental equipment needs improvement, and they cannot provide students with big data training platforms for practical exercises, which further leads to the weak integration of practical teaching with big data applications.

2.4. Lack of a big data-oriented evaluation system

Teaching evaluation is an important part of talent cultivation, as it can effectively assess students' mastery and application of knowledge, teachers' teaching levels, and the comprehensive strength of schools ^[6]. Moreover, through scientific and effective teaching evaluation, teachers can more timely and comprehensively identify problems in teaching, and then use this as a basis to improve and optimize talent cultivation plans and curriculum teaching strategies. However, in the era of big data, the evaluation systems for e-commerce talent cultivation in colleges and universities lack a big data orientation. Most evaluations focus on students' abilities and fail to fully consider the impact of big data applications on students' learning and development, nor have they established scientific evaluation indicators for big data application capabilities. This easily leads to students paying insufficient attention to big data applications, making it difficult for them to adapt to the requirements of the big data era and industrial development.

3. Optimization strategies for e-commerce talent cultivation in the era of big data

3.1. Optimizing the curriculum system

In view of the problem that the current e-commerce talent cultivation curriculum system is disconnected from the development of big data, colleges and universities should actively add some digital-related course contents and further optimize the curriculum system to better assist students' learning and development. Firstly, colleges and universities can, in combination with the actual needs of the digital transformation of the e-commerce industry in the context of the big data era, add a course on "Data Science and Big Data Analysis" and incorporate knowledge points such as data mining, data visualization, and statistical analysis into this course. This will guide students to master methods and skills in data collection, data processing, and data analysis, ensuring that they can effectively use such data to make scientific e-commerce decisions in future work and improve business efficiency and quality ^[7]. Secondly, colleges and universities can add a course on "Artificial Intelligence and Machine Learning", integrating knowledge and skills such as relevant basic theoretical algorithms, automated process design, model training techniques, and intelligent recommendation system construction into the course. This will enable students to fully recognize the great value of modern technical means in the development of the e-commerce industry and cultivate their ability to apply digital technologies. Finally, colleges and universities can also add courses on "Cloud Computing" and "Mobile Commerce" to the basic e-commerce curriculum system. These courses will teach students how to use cloud computing technologies and cloud platforms for e-commerce marketing services and operation management, thereby further enhancing their market competitiveness in the era of big data ^[8].

In addition, to better ensure the practicality and effectiveness of the newly added course contents, colleges and universities need to establish active cooperative relationships with e-commerce enterprises. They can invite industry experts and front-line enterprise staff to the school to give knowledge lectures, participate in the optimization design of the curriculum system, and jointly develop teaching projects. This will allow students to access more cutting-edge industry technologies, enrich their practical experience, and ultimately lay a solid foundation for them to adapt to the requirements of the digital transformation of the e-commerce industry in the era of big data ^[9].

3.2. Strengthening the construction of teaching staff

In the context of the big data era, if colleges and universities want to further improve the quality of e-commerce talent training, they must attach importance to the optimization and construction of the teaching staff, and continuously enhance teachers' professional level and ability literacy to ensure that they can provide better teaching services for students' learning and development.

First of all, colleges and universities should regularly organize teachers to participate in professional further education and skill training activities, such as professional seminars and training sessions in the e-commerce industry. This enables teachers to fully understand the latest developments and technological trends of the e-commerce industry in the big data era, such as big data analysis, digital marketing, artificial intelligence applications, and e-commerce platform operations ^[10]. At the same time, colleges and universities need to strengthen the training of teachers' digital teaching capabilities. For example, they can use big data technology to fully understand teachers' digital teaching levels, and on this basis, carry out hierarchical and diversified education and training, and build big data learning platforms for them, so as to continuously improve their digital literacy.

Secondly, colleges and universities need to strengthen school-enterprise cooperation, encourage teachers to

actively go deep into enterprises for professional practice and on-the-job training. This allows teachers to further master the actual operation processes of e-commerce, marketing strategies, and the application of advanced cutting-edge technologies in practical work, prompting them to transform these practical experiences into teaching resources, thereby better ensuring that the content taught by teachers is in line with reality^[11].

Finally, colleges and universities need to cultivate teachers' good international awareness, encourage them to actively participate in international e-commerce academic conferences or seminars, and engage in in-depth discussions with experts and scholars from other countries and regions, to continuously broaden their international perspective and academic vision. Doing so will be more conducive to colleges and universities cultivating e-commerce professionals with a certain international perspective.

3.3. Deepen the reform of practical teaching

Practical teaching is an important way to help students further consolidate the theoretical knowledge they have learned. In the context of the big data era, colleges and universities should continue to deepen the reform of practical teaching to better promote students' learning and development.

First of all, colleges and universities can strengthen the organic integration of digital educational and teaching resources. For example, they can appropriately introduce advanced e-commerce simulation software, online teaching platforms, big data analysis tools, etc., according to their actual situation, to create a good digital practice environment for students^[12]. In practical teaching, teachers can arrange for students to use these digital teaching devices to simulate real e-commerce operation processes, enabling them to deepen their professional knowledge of e-commerce and gradually master advanced technologies such as artificial intelligence, big data, and cloud computing in the process of practice^[13]. In addition, teachers can organize students to participate in innovation competitions related to e-commerce and artificial intelligence, so as to cultivate students' ability to solve practical e-commerce problems by using artificial intelligence, big data, etc., such as the improvement of search algorithms and the optimal design of chatbots. In this way, students can also flexibly use digital technologies and tools to solve problems in future e-commerce operations, which is conducive to laying a solid foundation for their future career development.

Secondly, colleges and universities can rely on the integration of industry and education, deepen school-enterprise cooperation, and jointly build digital training bases for students with enterprises. In this way, enterprises can give full play to their educational advantages, provide students with more real business scenarios, data resources, and training project opportunities, so that they can gradually master how to use digital technologies to solve practical problems in enterprises^[14]. In addition, colleges and universities can invite enterprise experts to jointly guide students' practice and provide students with VR/AR training equipment to ensure that students' practical training can always be in line with the development needs of the industry, thereby helping students further improve their employability.

Finally, based on the integration of industry, education, and research, colleges and universities can encourage professional course teachers, industry experts, and front-line enterprise staff to focus on important issues in the field of e-commerce, such as digital innovation, intelligent operation, and network security, to jointly develop digital training projects or research projects, and require students to actively participate, so as to provide them with more opportunities and platforms for practice and exercise.

3.4. Improve the evaluation system

In the context of the big data era, the assessment and evaluation system for e-commerce talent training should

also keep pace with the times. In addition to the assessment of basic theoretical knowledge and professional abilities, attention should also be paid to examining students' technical application ability, innovative thinking, problem-solving ability, etc. ^[15] In practice, teachers can use online evaluation tools such as artificial intelligence or online testing platforms to scientifically evaluate students' learning and practical results, and use big data analysis technology to further analyze the scientificity of the evaluation results, to realize real-time dynamic monitoring and evaluation of students' learning process and learning results. In this process, teachers need to add evaluation criteria such as data analysis ability, artificial intelligence application ability, and the completion of e-commerce projects. At the same time, it is also necessary to introduce multiple subjects, such as enterprise mentors, industry experts, and students, for evaluation to ensure the comprehensiveness and effectiveness of the evaluation.

4. Conclusion

In summary, the advent of the big data era has exerted a significant impact on people's production and lifestyle. For practitioners in e-commerce-related fields, in addition to possessing rich professional theoretical knowledge and high professional practical capabilities, they must also have certain data mining and analysis abilities. Only in this way can they stand out in the current highly competitive market and even gain greater development space. Therefore, against the backdrop of the big data era, colleges and universities must strengthen the reform of e-commerce professional teaching and actively explore the teaching application of big data, to cultivate more high-skilled and high-quality interdisciplinary e-commerce professionals for the country and society.

Disclosure statement

The author declares no conflict of interest.

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