

Discussion on Teaching Reform of Integrating Big Data into Finance and Economics Majors in Colleges

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Abstract

The era of big data poses new challenges to talent cultivation in Chinese colleges. Taking finance and economics majors as an example, due to their ability requirements for data processing, analysis, and mining, it is imperative to integrate big data technology in finance and economics teaching. However, currently, when implementing big data teaching reform in colleges, there are problems such as insufficient ideological understanding, lack of interdisciplinary integration, and lack of innovation in teaching content. To solve the above problems, colleges should actively transform their thinking and understanding, scientifically and reasonably construct interdisciplinary integration of big data, innovate teaching methods, and build a talent training system for big data application. Based on this, this article mainly explores the reform of integrating big data teaching in finance and economics majors, in order to improve the quality of talent cultivation in finance and economics majors and promote the healthy development of China's economy and society.

Keywords

Big data, Teaching reform, Integration measures, Applied talents, Interdisciplinary integration.

1. Introduction

In the environment of big data, financial information presents new characteristics such as large scale data processing, real-time cloud and intelligent decision-making. Traditional financial talents are in urgent need of change, and the requirements for the quality of talents are also changing. Therefore, how to meet the requirements of the construction of socialist market economy in the new century, in the era of artificial intelligence and big data, how to develop a professional financial theory knowledge, can use big data analysis technology to all kinds of financial data collection and analysis, and the data processing results accurately and efficient display and interpretation of interdisciplinary talents, become the finance and economics professional integration and reconstruction of a main purpose.

2. The meaning of big data

Big data refers to a technology and application mode that collects, stores, manages and analyzes large amounts of unstructured data within a certain period of time in order to obtain valuable information. In terms of connotation, big data refers to in a specific period, not through the traditional software tools to capture, management and processing of data collection, this is a large number, growing growth, a wide variety of information assets, requires a new processing mode, to make it have stronger decision-making ability, better discovery ability and better process optimization ability. In terms of storage methods, big data is mainly in the form of a large amount of structured data and semi-structured data, but also includes a large number of unstructured electronic text, video, pictures and other multimedia data. From the perspective

of value, big data has the characteristics of non-contact (i. e., taking the Internet as the carrier), immediacy (i. e., in milliseconds or even less time). From the perspective of processing mode, big data is quickly collected, stored, managed and processed within a certain range of time. From the perspective of application field, big data mainly includes e-commerce, finance, telecommunications and other industries. From the perspective of technology development trend, big data has a broad application space. However, because big data involves computer technology, network technology and other fields, but also involves storage and other aspects. Therefore, the current big data technology is still in the initial stage, and has not yet formed a complete system[1].

3. The significance of integrating big data in finance and economics majors in colleges

Colleges are the main bases for cultivating senior specialized talents to meet the needs of national and social development. The goal of "cultivating people by virtue" should be based on the combination of "knowledge-ability-quality", and the corresponding innovations should be made in the training objectives, curriculum setting and teaching content. The integration of big data technology in finance and economics majors can improve the application ability of students of finance and economics majors to big data technology, so that they can better adapt to the changing social demand for talents under the big data environment. At the same time, it also provides a group of high-quality financial professionals for the national economic and social development.

In the context of big data, people's demand for talent has changed profoundly. As the era of big data needs a large number of data talents, the integration of big data technology in finance and economics majors in colleges can further improve the practical ability of students majoring in finance and economics. The integration of big data technology in finance and economics majors in colleges enables students to conduct relevant course experiments and practical training operations through the simulation experiment platform, so that students can better master theoretical knowledge and skills. The integration of big data technology in finance and economics majors in colleges enables students to improve their practical ability by participating in the real business case analysis and practical operation of enterprises, so that students can truly master the skills and methods of big data technology applied in practice[2].

4. The current problems existing in the integration of big data teaching of finance and economics majors in colleges and universities

4.1. There is a disconnection between the curriculum setting and the needs of enterprises

With the application of big data in the field of finance and economics, the market demand for talents has changed from traditional financial accounting personnel to compound applied talents with data analysis ability, which also puts forward higher requirements for the professional courses of finance and economics majors in colleges. At present, most colleges of finance and economics in China have not established a complete data analysis course system, and they are lack of reasonable planning when cultivating talents. Take a college in Chongqing as an example, the college has started to offer big data application technology in 2020. However, so far, only big data technology, principle and application of big data technology, business intelligence and application of data mining. It can be seen that at present, most colleges in China are out of touch with the needs of enterprises in the training of big data talents, and fail to set up courses according to students' knowledge background and skill needs.

4.2. Lack of interdisciplinary integration

The lack of interdisciplinary integration is a problem in the integration of big data teaching of finance and economics majors in colleges. In the field of big data, the knowledge and skills of statistics, computer science, economics and other disciplines are involved. However, in some universities and the lack of comprehensive content in the curriculum, students are unable to comprehensively use the knowledge and skills of multiple disciplines in practical application. For big data related professional training target for big data analysis theory and method in the application of economic management and big data management and management method, in professional fusion big data teaching, lack of financial professional talent training target, not clearly financial data analysis ability as the core ability, in the lack of interdisciplinary integration will lead to course only focus on financial professional knowledge, and ignore other subject knowledge, knowledge simplification, cannot highlight the fusion of big data. Colleges have not established a complete data analysis curriculum system in the integration of big data teaching of finance and economics majors. Due to the particularity of the discipline setting of finance and economics colleges, the courses are mostly based on the existing curriculum system and traditional economic knowledge, and are not combined with the relevant knowledge of big data. At the same time, the field of big data needs to master the skills of data processing and analysis, and needs to have the skills of statistical analysis, machine learning and data mining. If teachers only focus on the skills of finance and economics majors, students will not be competent for the work in the field of big data, resulting in incomplete skills.

4.3. Lack of classroom interaction and information asymmetry between teachers and students

Classroom teaching is a process of two-way information flow, so teachers and students should share the main role. However, at present, most of the "practice-oriented classes", teachers can't get a response in class. On the one hand, unlike the small classes in ordinary middle schools, the number of students in the "practice-oriented classes" is generally very large, less than 40 or 50, more than one or two hundred. It is unrealistic to teach students in accordance with their aptitude in a limited class period. On the other hand, students either keep their heads down and do their own things, or they are reluctant to actively communicate with teachers because they are "timid" and "shy". This not only did not make the classroom active, but also made the students lose the enthusiasm for learning, and caused the information asymmetry between teachers and students. Teachers only simply instill the key points of knowledge to them, but they only accept it in a passive environment. Teachers can not well grasp the speed of digestion of students, and students do not know how to consult the teacher. This kind of information occlusion not only hinders the communication between students and teachers, but also greatly reduces the teaching effect[3].

4.4. The teaching evaluation mechanism is unreasonable

In the teaching work, the teaching evaluation is a very important link, which can most directly reflect the teaching level of teachers, but also can reflect the students' mastery of the knowledge. It is also an important index to evaluate the quality of education and teaching. The current teaching evaluation system of colleges still takes the students' final examination results as the evaluation index. The traditional teaching method of "paying attention to results and light on process" cannot adapt to the needs of students' individualized and diversified learning needs. Just want to get good results, adopt rigid teaching methods, often have the opposite effect. There are also many colleges that incorporate "student evaluation" into their own teaching evaluation, which can enhance the communication between teachers and students, so that teachers can better find their own shortcomings, so as to better improve their teaching. But this kind of evaluation way, it is very subjective, the students think of "good teacher", often from the

"do not call names", "do not leave students too much homework", "good grades" and so on, which for those to their work, high demand for their own teachers, is a kind of unfair treatment.

5. Teaching reform strategy of integrating big data in finance and Economics majors in colleges

5.1. Fully explore the application value of big data technology in the professional courses of finance and economics

The integration of big data technology in finance and economics majors of the college can help the college achieve the teaching goals of finance and economics majors, and effectively solve some problems in the current curriculum system of finance and economics. First of all, give full play to the big data technology to the important role of enterprise production and operation, provides students with rich course resources, help students to better understand the data analysis in the process of enterprise production management requirements, let the students through the process of enterprise production management of data analysis to solve practical problems, so as to improve the students' practical ability. Secondly, the application of big data technology in the curriculum system of finance and economics majors can help college teachers to better carry out their teaching work. By introducing big data technology into the curriculum system of finance and economics majors, teachers can have a more comprehensive understanding of the large amount of data generated in the process of enterprise production and management in the teaching process, so that teachers can better carry out classroom teaching and scientific research work. Finally, the big data technology in the application of financial professional course system can let students involved in the enterprise actual business case analysis and practice, to give students a more thorough understanding of large amounts of data in the process of enterprise production and the data reflects the problem and demand, for students in the graduation in the future to better adapt to the enterprise jobs provides important support, enable students to better master financial professional knowledge[4].

5.2. Interdisciplinary integration of teaching content

Finance and economics majors in colleges also pay attention to interdisciplinary integration in big data teaching. By combining the knowledge of statistics, computer science, accounting and economics, students' comprehensive ability is cultivated. After the integration of big data technology in finance and economics majors in colleges, it is necessary to add the relevant theoretical and technical knowledge of big data technology to the existing curriculum system. At present, the teaching content of finance and economics courses in colleges is mainly designed and arranged around the basis of economics, accounting, statistics and other categories, and lack of theoretical and technical knowledge related to big data. Therefore, colleges need to add the theoretical and technical knowledge related to big data to the original curriculum system, and adjust and optimize the existing course teaching content on this basis. After the integration of big data technology in finance and economics majors in colleges, it is necessary to readjust and improve the course teaching content by combining the existing course teaching content.

On the one hand, big data technology needs to be applied to the existing curriculum, such as adding the relevant content of big data analysis to finance and financial management; On the other hand, it is necessary to readjust and optimize the era of big data, such as adding theoretical and technical knowledge related to big data to the major courses of economics, statistics and accounting. Colleges can adjust the relevant course teaching content according to the demand of enterprises for talents in data analysis. For example, they can set up the theoretical and technical knowledge related to big data analysis according to enterprises' demand for big data talents, and apply these knowledge to practical operation.

5.3. Strengthen school-enterprise cooperation and build an on-campus practice base

At present, the teaching and practice bases of finance and economics majors in many colleges in China are built by the schools themselves, which leads to the lack of rich experience and resources in the course practice teaching of finance and economics majors in many colleges, which leads to the unsatisfactory effect of course practice teaching. Therefore, colleges need to strengthen school-enterprise cooperation, and promote the application of big data technology in finance and economics professional courses through cooperation with enterprises to build on-campus practice bases. Therefore, colleges need to strengthen cooperation with enterprises, jointly build campus practice bases, and provide students with more abundant practical training opportunities through cooperation with enterprises to build campus practice bases. By cooperating with enterprises to build campus practice bases, colleges can provide more talent training opportunities and technical support for enterprises, and help enterprises to further improve production efficiency and management level. Colleges can cooperate with enterprises to build campus practice bases to improve students' practical ability by participating in the real business case analysis and practical operation of enterprises. At present, many colleges in China have integrated big data technology teaching content into finance and economics courses, but most of these teaching contents are theoretical subjects such as management principles, microeconomics, macroeconomics and macroeconomics. And for some theoretical and operational relatively strong course teaching content is rarely involved. Colleges can work with enterprises to build campus practice bases, so that students can more comprehensively master the skills and methods of big data technology application in finance and economics professional courses[5].

5.4. Through the introduction of "Internet +" mode, realize the network teaching resources sharing

At present, the Internet has been deeply integrated with all walks of life, and the big data technology has been integrated into the production and operation activities of all walks of life. Therefore, colleges need to actively use the Internet technology to transform the traditional education mode and realize the sharing of network teaching resources. First of all, colleges can cooperate with Internet companies to build an online teaching resources sharing platform for finance and economics majors. Colleges can cooperate with large Internet enterprises to build an online teaching resource sharing platform, so that students can understand the latest teaching content and teaching methods of finance and economics majors through the online teaching resource sharing platform. Secondly, colleges can make full use of Internet technology to improve teachers' teaching level and ability. Traditional professional courses of finance and economics often focus on theoretical knowledge in the teaching process, which makes many teachers unable to combine big data technology with the course content well. Therefore, colleges can use Internet technology to design an online teaching resource sharing platform for finance and economics majors based on big data technology, so that teachers can combine big data technology with the existing course content in the course teaching process. Finally, colleges can actively use Internet technology to reform the curriculum system and curriculum content of finance and economics majors. At present, Chinese colleges have established many online teaching resource sharing platforms for finance and economics majors, such as MOOC and Learning. However, most of these online teaching resource sharing platforms are open to the society in the form of free, which reduces the enthusiasm of the college to carry out online teaching to a certain extent. Therefore, colleges can introduce the "Internet +" mode into the construction of online teaching resource sharing platform for finance and economics majors, integrate and transform those representative online teaching resource sharing platforms, and build them into a completely free online teaching resource sharing platform for finance and

economics majors. In this way, more social learners can not only be attracted to participate in the construction of online teaching resource sharing platform for finance and economics majors, but also improve the interest and enthusiasm of students majoring in finance and economics in learning big data technology. So colleges can through the introduction of "Internet +" mode to achieve financial professional network teaching resources sharing platform construction, let students can more easily use the Internet technology to understand the latest financial professional teaching content and course content, so as to improve the finance and economics professional students of big data technology learning interest and enthusiasm.

5.5. Adopt the case teaching method to carry out school-enterprise cooperation

The integration of big data technology of finance and economics majors in colleges can use case teaching method for teaching. Case teaching method is a teaching method with students as the main body and practice as the main content. The case teaching method can enable students to analyze and understand the actual business under the guidance of teachers, and master the application methods and skills of big data technology in practice. Since the real business data of enterprises involves many professional fields, the integration of big data technology in finance and economics majors in colleges can adopt school-enterprise cooperation to carry out relevant course practice and practical training and teaching activities. The main contents of school-enterprise cooperation include the collection, analysis and application of enterprise business data. In school-enterprise cooperation, teachers of finance and economics in colleges can invite enterprise personnel to teach relevant knowledge to students, so that students can understand the application method of big data technology commonly used in the production and operation management of enterprises. School-enterprise cooperation in big data technology practice teaching can enable students to improve their practical ability and application ability by participating in the practical business case analysis and practical operation while completing the theoretical knowledge learning task. School-enterprise cooperation can also enable students to truly understand the application effect and method of big data technology in the production and operation of enterprises after completing the task of theoretical knowledge learning, so as to improve students' comprehensive quality. At the same time, the cooperation between schools and enterprises can also let students in the company's business case analysis and the practical process, improve their practical application ability, let them really understand the big data technology in the enterprise production and operation management effect and method, in this way, it can better meet the needs of national economic and social development changing needs, for the country's economic and social development to provide more high-quality financial professionals.

5.6. According to China's national conditions, classified construction, and vigorously develop professional characteristics

"People's Daily" once said: only by expanding the quantity to improve the quality, can we realize the connotation development of higher education. How to play the "characteristic card" and how to deal with the relationship between "key" and "comprehensive" is an important topic in the discipline construction of each college in the future. In the discipline construction of finance and economics colleges, there is a weakness, that is, the discipline structure is single, and the setting of second-level disciplines is too scattered, there are serious administrative barriers, and there is no obvious advantages and characteristics of discipline construction[6].

Taking the subject construction goal of "double first-class" colleges as for reference, if China's financial and economic colleges want to make some achievements in the future development, they must combine their own advantages, accurately compare and classify the development. For the management and management majors with traditional advantages, it is necessary to

solve the problem of excessive professional division and repeated construction, optimize the secondary majors and refine them, and create professional characteristics and brands based on China's national conditions and the needs of China's economic and social development. Based on its regional advantages, it comprehensively optimizes the disciplines, develops and promotes each other in management, management and other related fields, takes "discipline integration" as the development idea, breaks through the discipline barriers, and constructs a multi-disciplinary discipline system with significant financial and economic characteristics.

6. Epilogue

In short, big data technology, as a new technical means, has had a positive impact on the development of finance and economics majors. However, at present, there are still some problems in the integration of big data teaching of finance and economics majors in colleges, such as unclear application positioning of big data technology, unreasonable setting of big data technology curriculum system, inadequate education of students' data literacy, and lack of high-quality data analysis and practice platform. Therefore, colleges should reform the integration of big data teaching in finance and economics majors from the aspects of changing ideas, reasonably setting up curriculum system, strengthening data literacy education and building high-quality data analysis and practice platform, so as to improve the quality of financial and economics professionals and promote the sound development of China's economy and society.

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