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Research on Teaching Innovation of Property Insurance Course: Based on the Perspective of Big Data Development

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ABSTRACT

The development of big data has brought unprecedented challenges and opportunities to the teaching reform of higher education. Property insurance course is the core course of economics and management, and it is the guarantee for the supply of talents in the health financial market. Big data technology and data economy put forward innovative requirements for its teaching objectives, teaching content, and teaching system. In China's new round of double-first-class universities and disciplines, big data is an important foundation and driving force. The comprehensive integration of property insurance and big data is reflected in: Cultivate students' big data thinking; Cultivate students' practical application ability based on market employment needs; Build a new discipline system of applied economics, and achieve good coordination between property insurance courses and other disciplines; The government, enterprises and universities form a strategic partnership to jointly participate in the development and construction of courses; The formulation of government policies can have a better governance effect on the development of higher education and talent training.

1. Introduction

The combination of education and big data lay a solid foundation for the comprehensive realization of the deep integration of big data and university curriculum teaching. Big data reshapes the new pattern of education reform, promotes the reform of curriculum teaching mode, improves the construction of school curriculum system, and enriches the form and depth of students' knowledge acquisition. "Property Insurance" is the main professional course for economics and management undergraduates. Its purpose is to guide students to systematically master the theory of property insurance, understand the ba-

sic operating mechanism of the property insurance market, and cultivate the ability to observe and analyze property insurance. In 2020, China's insurance depth was 4.22%, and the insurance density was 2,724.49 yuan/person. This shows that China's property insurance market has great development potential and high demand for professional talents. In the context of the construction of double first-class disciplines, colleges and universities should combine big data and property insurance courses to develop specialty applied economics. In September 2020, there are mainly 5 courses related to property insurance on the MOOC website of Chinese University, and there is no special course that combines big data and property insurance.

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This research has academic and practical significance. Integrating the undergraduate big data talent training model with the risk society is an expansion of the concept of serving the society and diversified cooperation. Data resources have become an important factor of production, and data-driven innovation has expanded to all areas of society, which is an extension of digital governance and refined governance. This article closely follows the viewpoint of “establishing and improving big data-assisted scientific decision-making and social governance mechanisms, and advancing the innovation of government management and social governance models”, and provides experience for solving the problems of undergraduates’ big data thinking and application ability.

2. Literature Review

Big data changes people’s lives, work and thinking. Global digital economy governance is becoming increasingly important^[1,2]. Big data is a source of people gaining new cognition and creating new value; big data is a way to change markets, organizations, and the relationship between government and citizens. By comprehensively narrating the fields of religion, philosophy, art, technology and finance, it presents the contradictory picture of the times. Big data expands real-time data systems and best practices^[3]. Big data transcends human limitations and reduces the digital divide^[4]. Big data can better serve the public interest. Big data has cultural significance, involving legal, economic and statistical frameworks and other knowledge fields, which is conducive to reducing data risks. The development of big data requires human resources protection, and business insights and operation integration can be obtained from data analysis and teaching^[5]. Big data is a major theme based on simple principles. The use of big data will better create future work and lifestyle^[6]. Big data architects build end-to-end solutions and adopt strategic approaches to solve business problems^[7].

Big data brings opportunities and challenges to the rule of law and social governance. Property insurance courses should focus on the four major topics of data governance, algorithm governance, digital market competition governance, and network ecological governance^[8]. In terms of talent training that combines big data and property insurance, universities should train big data analysis professionals to follow up the application of big data technology^[9]. Big data and machine intelligence have a comprehensive impact on society, and blockchain must be deeply integrated with big data. Colleges cultivate professional talents who combine big data and property insurance from teaching goals, teaching methods, and professional curriculum settings^[10]. Big data embodies strategic thinking,

and attention should be paid to students’ data awareness, data thinking, data ethics and data ability^[11]. Based on the advantages of big data development in Guizhou Province, university curriculum reform should be conducive to the promotion of the big data industry strategy^[12].

Teaching research provides a reference for setting up big data courses across disciplines. Big data will promote teaching reforms, educational research reforms, educational management reforms, and educational evaluation reforms^[13]. The property insurance curriculum reform can be combined with the application cases of big data education in the United States^[14]. The major postgraduate education of big data in the United States focuses on the development and application of big data, training data scientists and engineers, and companies and research institutions actively cooperate^[15]. The government provides financial, material and human support in the construction of university big data platforms and application of talent training, and encourages research institutions to carry out interdisciplinary cooperation.

From the above research summary, academic research mainly discusses the important trends of digital economy and global digital economy governance, the necessity of big data curriculum, and the reform of application talent training. There is little research on the combination of property insurance courses and big data strategy. Scholars rarely study big data talent training goals and benign ecosystems at the undergraduate level; property insurance courses pay less attention to big data thinking and application capabilities.

3. Analysis of Curriculum Design Combining Big Data and Property Insurance

3.1 Content Innovation Requirements of Integrating Big Data into Property Insurance Courses

This paper studies the case of universities training big data talents, and explores influencing factors and effects. The university attaches great importance to the teaching reform of property insurance professional courses under the background of big data. It takes humanism theory and behavior design theory as the main guiding ideology, and takes the quality education theory as the guidance to establish and improve the classroom teaching model, and integrate quality education and innovation. The concept of curriculum reform is internalized into daily teaching behavior. In the context of big data, the basic connotation of property insurance curriculum reform is to form a rigorous and scientific theoretical system for property insurance by regulating the functions, legislation, basic concepts, nature, and research methods of the property insurance law.

Curriculum reform and the construction of double first-class disciplines focus on the research direction of property insurance curriculum, teachers, research institutions, international cooperation and exchanges, talent training, and social services. Based on the literature method, social survey, and case analysis method, this research summarizes the current situation of Chinese property insurance curriculum teaching, explores to enhance students' learning interest and ability, and builds a high-quality property insurance professional curriculum (table1).

Table 1. The important content of the combination of big data and property insurance courses

Reform requirements of property insurance curriculum	Specific contents
Understand big data	Directly generate data in teaching activities
	Data collected in educational management activities
	Data collected in academic research
Actively respond to big data challenges	Rationally recognize and apply big data
	Utilize the value of big data resources
	Explore the internal laws of big data development
	Recognize big data and its limitations
	Promote the deep integration of big data and property insurance education
Explore the teaching integration path of big data and property insurance courses	Pay more attention to students' learning status in course teaching
	Dynamic analysis of students' learning based on big data
	Process evaluation of students' growth and development based on big data
	Adjust teaching tasks based on big data analysis and teaching needs
Use big data technology and thinking in property insurance practice	Curriculum System Construction of University Property Insurance
	Develop teaching resources for courses
	Explore the strategies and modes of curriculum implementation
Utilize existing network resources to promote the transformation of curriculum teaching mode	Reconstruct a new learning ecology based on micro-classes, MOOCs and flipped classrooms
Use big data resources to improve school property insurance curriculum system	Specific course objectives
	Rich content of property insurance courses
	Good atmosphere of property insurance classroom environment
	Efficient property insurance course

In terms of literature research methods, it reviews current academic research on property insurance courses in the context of big data, analyzes research deficiencies and important enlightenments. In terms of case study method, the research object is financial lease engineering insurance. The curriculum combines educational theory to test

and deepen understanding in practice.

3.2 Case Analysis of Property Insurance for International Financial Lease of Engineering Equipment

In the reform of property insurance curriculum in the context of big data, universities should incorporate practical cases into the curriculum. This study analyzes the case of property insurance for international financial leasing of engineering equipment. In the One Belt One Road strategy, Chinese companies are increasingly participating in infrastructure construction in Africa, and international trade in engineering equipment is an important area. The financial leasing of engineering equipment has become an important way for Chinese companies to participate in infrastructure construction in African countries, and is also an important case of using big data technology and thinking. Incorporating the engineering insurance case of equipment financing lease in the property insurance course can enhance the students' understanding of international trade practice and increase the learning effect of the classroom.

According to the 2012-2020 African Infrastructure Development Plan of the African Union, the areas of infrastructure construction are mainly energy, transportation, water resources, and communications^[16]. The investment scale of East Africa reached 23.3 billion U.S. dollars and is a key area for infrastructure investment in the African continent. By 2025, the expected expenditure on roads in Africa is US\$200 billion, with an average annual growth rate of 8.2%. Most countries in Africa are underdeveloped countries and generally cannot afford to purchase a large amount of engineering equipment. Therefore, the financial leasing of engineering equipment has become an important way for African countries to carry out infrastructure construction^[17]. The risk of cross-border financial lease insurance for engineering equipment has become an unavoidable problem.

Lease involves the rights and obligations between the property owner, lessor and lessee. Equipment leasing started in the 1950s. There are huge differences between the various lease types. Equipment leasing is divided into two categories: financial leasing and operating leasing. Finance lease is generally a long-term lease commitment, and the total rent is basically close to the purchase cost of the equipment. Other financial leases are equipment leases, collectively referred to as operating leases.

Financial leasing is the most common method of equipment leasing, with a long period, and the lessee has to bear the necessary owner responsibilities, such as repairing equipment, paying necessary insurance, asset custody obligations, and paying taxes. The basic obligation of the

lessor is to purchase equipment and lease it to the lessee during the agreement period. The financing lessor must protect its investment in the event of lease default or equipment damage. Finance leases usually include some “unconditional” rent guarantees. This kind of guarantee requires the tenant to pay in full when due. In the context of big data, the advantages of financial leasing are more prominent, which can minimize the risk of equipment depreciation, the lessee has low capital costs, and can obtain value-added technologies or services. Engineering insurance is conducive to hedging inflation risks. Finance lease includes a finance lease contract and a supply contract, and the two contracts are interrelated. Financial leasing is a combination of service and trade^[18]. The transnational financial leasing business of engineering equipment is more complicated, and big data technology is an important measure for Chinese companies to participate in international trade.

The property insurance course analyzes the cross-border financial lease insurance risks of Tanzania construction equipment through theory, empirical data and practical operation management, and proposes prevention strategies based on big data. In the property insurance case of the financial leasing of engineering facilities, the explanation is combined with the Tanzania case. In the financial leasing of construction equipment in Tanzania, we must first consider the legal provisions of China and Tanzania property insurance. Tanzania’s insufficient equipment information protection will create potential risks for Chinese companies participating in the financial leasing of Tanzania’s engineering equipment. Big data technology can be introduced to monitor the maintenance of leased items and prevent the theft of engineering equipment spare parts.

Different types of risk factors should be considered in the design of property insurance products for financial lease engineering equipment. In terms of risk responsibility subjects, the risk management and control of contractors in government procurement is not comprehensive; the risk awareness and risk identification capabilities of construction contractors are insufficient. Engineering insurance based on big data effectively reduces the probability and loss of risk accidents in financial leasing. The current insurance products for international engineering equipment financial leasing are insufficiently targeted, and insurance companies have insufficient engineering insurance underwriting experience and expertise. The introduction of big data thinking in engineering insurance will facilitate the development of financial leasing activities. The property insurance course sorts out the problems of financial leasing engineering insurance, and clarifies the problems of innovative product design and low risk

factors of insurance companies. Big data technology is an important technical tool to make up for the lack of professionalism, so as to comprehensively and systematically evaluate the risks of the entire project and accurately calculate the underwriting rate. The social survey method will be mentioned in the explanation. The property insurance course is a practical subject, and the development trend of property insurance is tracked by designing questionnaires. The comparative analysis of big data and the comparative research of property insurance disciplines can help students better grasp the general laws of property insurance courses and obtain new discoveries.

4. The Optimization Strategy of Undergraduates’ Big Data Talent Thinking and Application Ability

Under the digital economy, universities should build a new type of big data talent development system, and promote the formation of strategic partnerships between universities and cooperative enterprises through digital governance. Under the construction of dual first-class universities and disciplines, the government reshapes the training of big data talents in universities based on Internet capital. The university optimizes the content of big data courses and enhances the ability of teachers to accelerate the important role of China’s undergraduate education in the cultivation of big data talents, so that undergraduate students have the thinking ability and basic knowledge structure required by the digital economy. The government’s policy support for the cultivation of big data talents in universities is an important guarantee.

4.1 Innovative Content of the Combination of Big Data and Property Insurance Courses

Governments, enterprises and universities actively participate in the promotion of theoretical innovation of course content. The construction of double first-class courses should conform to the trend of social development and higher education teaching reform, meet the talent needs of big data and property insurance development, and promote the rapid transformation and development of financial institutions. In the era of big data, it is more convenient for people to obtain knowledge and information, and new technologies continue to promote classroom teaching reform as an external cause. University classroom teaching is not just a simple knowledge transfer, self-organized learning will rely on open high-quality online education resources. Course teaching should integrate quality education theory, humanistic learning theory, behaviorist learning theory, multiple intelligence theory, and develop-

mental evaluation theory.

Innovation in the practice of big data courses. Big data and property insurance are important specialty courses of economic management. Students participate in competitions to improve their professional and big data application capabilities. Teachers encourage students to participate in the “Banking Insurance and Wealth Management Comprehensive Business Competition, Internet Financial Innovation and Operation Management Competition, New Financial Product Innovation and Creative Design Competition”. The competition activities are conducive to improving the practice of student property insurance skill.

The online course system of property insurance courses has been upgraded. Big data skills and thinking habits are incorporated into the teaching objectives of the “Property Insurance” course, and professional training is provided from students’ learning autonomy, case study analysis, and learning methods, which can improve students’ ability to use property insurance network teaching resources. The university optimizes the evaluation of teaching methods of big data and property insurance courses, focusing on individual differences, scientific evaluation methods, and incentive evaluation methods.

Teachers summarize the expected value of teaching practice and research results. Teachers summarize the research results of the subject, promote experience in teaching practice, and improve students’ learning quality and ability. Teachers collect first-hand information about the reform of property insurance curriculum, and combine classroom practice data to discuss and analyze problem-solving strategies; teachers form teaching research reports and academic papers to give play to the value of social communication.

4.2 Basic Consensus on the Combination of Big Data and Property Insurance Courses

An important consensus to be formed in property insurance teaching is that employment is a testing tool. The training of big data talents is an important guarantee for the digital economy and effective employment. Big data talents realize diversified changes in the employment field, obtain higher-level employment opportunities, and realize active participation in employment. The traditional single teaching goal is difficult to meet the needs of compound talents. Under the background of the development of the digital economy, undergraduates’ big data thinking and ability training is of urgency.

Digital economy and technology expand employment scale, optimize employment structure, and promote flexible employment, which also brings risks of technical unemployment. Undergraduates’ big data thinking and abil-

ity training have become an important position to resolve the impact of technical unemployment in the short and medium term. Universities give full play to their comparative advantages in undergraduate talent training. Undergraduate general education strengthens industrial upgrading and social demand curriculum content, and cultivates undergraduate talents with the spirit of digital craftsman. Undergraduate education attaches great importance to the cultivation of basic knowledge of computer, networking and digitization. The university attaches importance to students’ science, technology, engineering, art and mathematics abilities, and cultivates students’ teamwork, creativity and lifelong learning skills.

4.3 Build a New Type of Big Data Talent Development System

Universities train talents with strategic vision and basic innovation. Universities are market-oriented, establish the concept of “dynamic development” talents, and provide “diversified opportunities for talent”. Colleges and universities play a new type of big data learning platform to enhance students’ competitiveness in the era of digital economy and build a sustainable talent system. The government, universities, enterprises and talent service organizations form a multi-party linkage to jointly improve the construction of the big data talent system. Universities and enterprises cooperate to achieve “integration of production and education”, and integrate multiple resources to form complementary advantages.

Teachers value the versatility of big data courses and stimulate undergraduate students’ interest in the digital economy. Curriculum design should be based on the research ideas of big data and complex system thinking, condense the laws of economic development and key scientific issues of theoretical research, and form “typical facts of China’s economic development based on big data”, “laws of Chinese economic development based on complex systems”, “Important research fields in the future, such as the construction of China’s economic development theory system, and the application of China’s economic development theory and policy practice”.

The digital economy should integrate multiple professional resources, cooperate with third-party institutions for talent training, and continue to provide teaching support for superior subjects. The university actively responds to the challenge of the digital divide and has formed a talent training system with high teaching standards, strong teaching staff, and guaranteed course quality in terms of teaching content, teaching resources, and teacher motivation. Policy makers and implementers give full consideration to the decision-making behavior of stakeholders and value

the governance effectiveness of talent training. The talent training goals of the combination of big data and property insurance include: cultivating big data thinking and innovative talents; cultivating broad vision and serving big data talents; meeting the society's demand for compound big data talents. Big data teaching includes: providing a multi-module course system for students to learn big data knowledge, cultivate big data thinking and practice innovation, and strengthen students' comprehensive quality. The curriculum system related to the property insurance course covers: Introduction to Big Data, Data Ethics; Data Thinking, Big Data Management and Innovation, Big Data Governance and Policy. Based on the construction of double first-class disciplines and the new requirements of the digital economy, the university continuously cultivates urgently needed talents for the society.

4.4 Innovative Measures in Important Aspects of Big Data and Property Insurance Courses

In order to cope with the lack of students' big data collection ability and awareness, teachers should make full use of the large amount of data generated by the practical teaching of property insurance courses, cultivate students' data acquisition ability in the course arrangement, increase students' ability to collect and process property insurance big data, and attach importance to students' sensitivity and integration capabilities of various data types.

Course assessment is an important link to ensure the quality of teaching and talent training. In order to solve the single problem of the property insurance course assessment method, in the course assessment standards, it is necessary to increase the students' learning attitude, data information search, big data thinking, insurance marketing and other practical ability and independent inquiry learning ability assessment.

Teaching emphasizes the cultivation of students' practical ability. The curriculum should increase the importance of students' learning about property insurance and strengthen the integration of property insurance courses and professional knowledge. The course teaching content should cover research hotspots, make good use of the existing network platform and training environment, and integrate existing software and virtual simulation experiment teaching projects into teaching. Curriculum teaching should cultivate students' ability to practice property insurance. The "big data + insurance industry" application model has become an important area of research and practice.

The era of big data has had a profound impact on the development environment and operation and management of property insurance. The property insurance course

combines big data to re-examine all aspects of property insurance, in order to innovate and cultivate talents suitable for social needs. There are higher requirements for the data thinking ability and data sensitivity analysis ability of insurance students. There are new requirements for risk identification and risk management in property insurance business management. In the teaching process of property insurance, existing data resources should be used to cultivate students' ability to analyze customer behavior, customer credit analysis, and customer risk status. Teachers use existing resource websites in the classroom to let students understand the current development of big data in China and cultivate students' interest in big data. In terms of data analysis and processing, students can improve the inertia of big data thinking by writing data analysis reports or experience. Teachers train students to develop innovative divergent thinking through insurance practice simulation experiments. Property insurance marketing is developing towards individualization. In property insurance teaching, students can be guided to analyze the insurance needs of different customers through existing self-media software and cultivate students' marketing service thinking.

5. Conclusion

Based on literature review, case analysis, comparative research and other methods, this research analyzes the plight of university big data property insurance talent training, the reasons for its formation, and proposes optimization strategies. There are obstacles in the training of big data talents in universities in accordance with the standards of digital economy and double first-class discipline construction: the big data talent training system is not perfect; the curriculum pays little attention to students' big data thinking and interest; extensive management makes it difficult for universities and enterprises to establish strategic partnerships Relationship: Universities do not have big data evaluation standards that meet the needs of society, and there is a gap between macro policy formulation and micro implementation. The digital economy puts forward reform requirements for the training and employment of college undergraduates. Universities should analyze the impact of digital economy on undergraduate talent training models, curriculum settings, and employment services; in-depth evaluation of the effects and transmission of university training goals and corporate participation and cooperation on university undergraduates' big data thinking and application capabilities.

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