

# Research on Interdisciplinary Education of Chinese Universities in the Digital Economy

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**Abstract.** In recent years, in response to the continuous development of the global digital economy, Chinese universities have focused on training "digital+economy" composite talents, constantly developing interdisciplinary education, and exploring new paths and methods. This essay analyzes interdisciplinary education curriculum improvement, teaching method innovation, situational awareness education and evaluation criteria. In the aspect of curriculum improvement, we should integrate two or more subjects' knowledge and thinking modes to promote students' cognitive progress, depending on disciplines, solution of practical problems and research, and focus on the solution of complicated topics or problems and comprehensive understanding. Teaching methods ought to strengthen high-level and comprehensive thinking skills to help students establish a complete knowledge system and more research-based practice projects between different disciplines. Environmental awareness education needs to build a professional development community for teachers, focus on the "renewal" of knowledge, maintain an empty cup mentality and invest in research and cooperation in front of new concepts. In terms of the evaluation system, evaluation standards should be formulated to monitor students' knowledge and ability at different stages and ensure that students reach corresponding standards.

**Keywords:** Interdisciplinary education; situational awareness education; teaching method innovation.

## 1. Introduction

Human society is moving towards the era of "digital intelligence", and the global digital transformation is accelerating. The digital transformation of education and interdisciplinary digital education has given birth to the ecological chain of the digital education industry and become the fundamental supporting force to promote the development of the digital economy. In the "Internet plus" era, "Internet composite talents" with good Internet thinking, excellent basic financial business, network technology processing, communication and marketing knowledge and skills will become the mainstream of the talent market, and traditional single talents will be marginalized. The emergence of Internet compound talents has made the human resource market more open and fully integrated, and the value of human capital improved unprecedentedly. In order to meet the requirements of social and economic conditions, interdisciplinary education in Chinese universities has been innovated and practised. This paper shows the measures taken by Chinese universities in interdisciplinary education at this stage from the aspects of curriculum improvement, innovation of teaching methods, the relationship between university education and the labor market, and the evaluation criteria of interdisciplinary education.

## 2. Curriculum Improvement

In recent years, with the acceleration of new infrastructure construction, the in-depth promotion of digital industrialization, and the acceleration of key technologies, China's digital economy has been booming, and the industrial scale continues to grow rapidly, becoming one of the main engines to promote economic development. The demand of the labor market has also changed from simplification to diversification, requiring human resources with computer technology, financial knowledge and business marketing strategies [1]. In order to meet the new needs of the labor market, Chinese universities have conducted interdisciplinary education research. For example, the School of

Finance of Zhejiang Business and Technology University upgraded the courses in finance, business and student practice. Let students participate in the research and practice process, maximize their participation, improve their thinking ability by making use of book knowledge and practice results, create opportunities for students to share ideas, use various ways and tools to state data, make oral presentations, and use the Internet to broadcast [2]. In the classroom, the teacher broke the boundaries of disciplines, applied analytical thinking to project research, and allowed students to synthesize information from a higher perspective, establish connections, draw conclusions, encourage students to analyze business and current events, and cultivate students' willingness to analyze research, write and display. The basis for completing interdisciplinary is that each discipline has a complete knowledge framework and research methods. Therefore, the core concepts and research methods of the discipline must be rigorous and able to withstand scrutiny. The core courses offered by the School of Finance of Zhejiang Industrial and Commercial University include network economics, e-commerce, blockchain technology and big data finance to help students consolidate their knowledge base. In addition, the leading target of interdisciplinary education is to solve realistic problems in everyday life as the starting point, so we should concentrate on the social situation outside the college to find the realistic problems encountered by people from all walks of life and give solutions. Therefore, the college will supplement and improve all core courses with credit system practice courses. These practical courses are taught by tutors with financial and Internet academic and industrial backgrounds through master classes, project-based financial courses and other ways to help students solve practical problems by using economic, management, computer technology and other professional knowledge and capabilities, and to arouse students' interest in the subject in a more vivid and specific way to obtain credits [3]. Undergraduate students need to be transferred to different tutors during their junior and senior years to complete financial projects with the help and supervision of tutors so as to make full preparations for students' future employment and digital economy research. This is what traditional theoretical courses do not have compared with interdisciplinary education.

### 3. Innovation of Educational Methods

Cultivating the soul of national innovation and realizing the dream of national self-reliance over the world's national forest depends on the realization of educational innovation and the implementation of innovative education. The essence of interdisciplinary education is to achieve educational innovation [4]. Interdisciplinary education allows for cultivating students' interdisciplinary thinking abilities. In addition, outdated educational concepts and content can neither achieve the upgrading of knowledge content nor meet the requirements of digital economy development [5]. As an interdisciplinary subject under the economics category, the "new business" innovative talents trained by the digital economy speciality have the ability to use modern statistical analysis methods and data mining tools to grasp the operation rules of the digital economy and solve the practical problems arising from the development of the digital economy. Paying attention to students' individualized education is an important factor in realizing educational innovation. Xiaoying Li once pointed out that teachers should instruct students in accordance with their aptitude in order to give full play to students' personalities and abilities [6]. For example, in the digital finance project, students with different specialities are assigned to different groups to complete different branches of the project so as to truly "make the best use of everything and make the best use of people" and shape students' sense of teamwork and spirit of inclusiveness. Let students who are better at data analysis make data icons and analyses, let students who are better at Python programming write computer programs, and let students who know more about digital finance give full play to their professional knowledge. In addition, examination-oriented education in China relies heavily on long-term closed teaching and rote learning, which to some extent stifles students' talent and creativity, buries students' personalities and curiosity, and attacks most children's self-confidence. Therefore, the school should establish professional learning objectives, employment orientation, and basic scientific knowledge at the beginning of students' first year so as to pave the way for students' subsequent study careers and

lay a solid foundation of professional knowledge [7]. At the same time, the guidance system in higher education should be improved through master classes, seminars or other training methods.

## **4. Situational Awareness Education**

### **4.1 Innovation and Entrepreneurship Education**

Innovation and entrepreneurship education play a very important role in the current Chinese universities. It is innovative, creative and practical. It aims to cultivate talents with basic qualities and personalities of entrepreneurship. It not only focuses on the education of cultivating students' entrepreneurship awareness, entrepreneurship and innovation and entrepreneurship ability but also focuses on the education of innovative thinking and entrepreneurship training for the whole society in different classes and levels [8]. For example, Hangzhou Alibaba Business School provides students with various forms of learning models and entrepreneurial opportunities and arranges counselors, alumni or lecturers and professors to provide economic, legal and technical support to students who have started or are starting businesses. The entrepreneurship training carried out by Alibaba Business School enables college students to have an innovative consciousness and form innovative abilities in practical operation exercising in order to improve the personality ability of college students and grasp the development trend of the enterprise market when starting businesses. At the same time, it can also enhance college students' professional quality and interpersonal skills, which is conducive to their future development. When colleges and universities cultivate students' entrepreneurial ability, they can help them analyze the current market competitiveness, create a sense of competition, actively carry out innovation ability training, improve enterprise entrepreneurial competitiveness, stimulate college students' entrepreneurial enthusiasm, and promote the development of innovative enterprise talents in China [9].

### **4.2 Future Vocational and Interdisciplinary Education**

With the rapid development of the digital economy, all industries are grasping the opportunities of the times to transform and upgrade. New technologies, business logic and models are constantly being implemented. The development of the Internet has given birth to digital thinking, distributed cognition, virtual space knowledge dissemination and interpersonal communication, which will lead to systematic changes in the concept, method and governance system of talent training [10]. The digital transformation of higher education is imperative. At present, the demand for human resources in the fields of basic information research and development and the Internet economy is growing explosively. Previous higher education cannot satisfy the meet for digital cross-integration talents, and interdisciplinary education is particularly important. Taking employment as the guidance, vigorously promote the talent training mode of school-enterprise cooperation, strengthen the ability of the school to serve the local and regional economic and social development, deepen the integration of school-enterprise cooperation, update the teaching concept, rely on the advantages of the enterprise industry, make full use of teaching resources, establish a cooperation mechanism of deep cooperation, close combination, complementary advantages and common development between schools and enterprises, and achieve the goal of "win-win" [11]. In addition to mastering the most basic information technology courses (such as coding theory and cloud computing), we should control the changes in financial markets in real-time and combine and use theoretical knowledge. The single and conservative information technology theory and economic management knowledge should be organically integrated and replaced by new teaching materials. In addition, the school provides "cloud" laboratories for students to simulate the working environment they will face in time and space so that students can understand and solve problems in the future workplace in advance and help them get ready [12].

## 5. Evaluation Criteria for Interdisciplinary Education

At present, the number of interdisciplinary and interdisciplinary students is increasing day by day, which has become a large scale. It is necessary to build a relatively complete education quality system. However, because interdisciplinary education itself has a high level of R&D and design technology, which is still in the experimental stage in Chinese universities, it is particularly important to establish a standardized evaluation system to guarantee the achievement of interdisciplinary education [13]. First, establish a comprehensive evaluation standard for the academic performance of interdisciplinary and professional students. At present, the long-term curriculum performance evaluation standards in China are still applicable to the evaluation of interdisciplinary talents, but at the same time, more attention should be paid to the characteristics of interdisciplinary talents. For example, at each stage, students have to pass the required evaluations or examinations. As a freshman, students ought to pass the evaluation criteria of basic programming skills and financial knowledge to participate in the next phase of project practice. Second, construct the evaluation criteria of tutors. The evaluation of teachers is supposed to generally be based on the characteristics and difficulties of teachers' cross majors, combined with the evaluation of students, and the comprehensive evaluation of tutors should be carried out to give the tutors the motivation to further promote the development and training of students. The assessment criteria will be classified and incorporated into the curriculum. Third, establish estimation criteria for participating in scientific research or practical activities [14]. The practical activities that students participate in should be classified and counted in detail, such as companies that prefer information network security, accounting companies, and financial companies. According to the specific performance and results of research, students should be given a high-level ability test for problem-solving and innovation ability to promote their interdisciplinary professional research, learning and development. Fourth, set up an independent, interdisciplinary coordination department to ensure effective communication of international experience in higher education. With the continuous evolution of the globalization of universities, colleges and higher education in various countries and regions are required to have universal evaluation standards for curriculum structure and ability tests [15]. Therefore, Chinese institutions of higher learning need such coordination departments to promote, drive and coordinate interdisciplinary research and cooperation not only at home but also possibly internationally, promote academic exchanges, and deepen mutual understanding and respect of cultures of various countries.

## 6. Conclusion

As the requirements of digital emerging industries for talents continue to rise, the existing skills of employees will not meet the requirements of new jobs, and cross-integration talents with digital commerce, digital finance, digital marketing and other skills are needed [16]. At the moment, Chinese universities are still exploring how to develop their interdisciplinary education, and it needs to be reformed, innovated and improved from the aspects of curriculum reform, educational methods, evaluation standards, and more. This paper analyzes that in interdisciplinary education combining finance and computer science, curriculum reform focuses on curriculum integration and project-based practice curriculum; Education methods should pay more attention to the individualized development of students, give full play to each person's advantages and strengths, and achieve the rational development and application of human resources. At the same time, pay attention to the education guidance system to help students learn relevant knowledge more systematically and improve the quality of education; Situational awareness education requires opening the "school-enterprise" cooperative talent training mode to help students learn but also adapt to the changing economic environment and labor market; We should formulate and implement interdisciplinary education evaluation standards to ensure teaching quality and promote international interdisciplinary research and cooperation in education.

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