

## *Original Paper*

# Innovative Path of Accounting Teaching under the Background of Intelligent Finance

Chengfang Wang<sup>1</sup>, Ning Xu<sup>1</sup> & Bing Huang<sup>2\*</sup>

<sup>1</sup> School of Accountancy, Anhui University of Finance and Economics, Bengbu 233030, Anhui, China

<sup>2</sup> Business School, Xiangtan University, Xiangtan 411105, Hunan, China

\* Corresponding Author

Received: August 29, 2024      Accepted: October 18, 2024      Online Published: October 28, 2024

doi:10.22158/ibes.v6n5p152      URL: <http://dx.doi.org/10.22158/ibes.v6n5p152>

### ***Abstract***

*This article focus on the development and application status of intelligent finance, and explores innovative paths for deep integration of intelligent finance and accounting teaching from the perspective of accounting teaching mode transformation. Firstly, it constructs an intelligent financial teaching practice platform from the aspects of data integration and intelligent financial decision execution; Secondly, promote the deep integration of industry, academia and research; The third is to promote mutual learning and mutual learning. In order to provide some reference and inspiration for the construction of the accounting team under the new management background, promote the integration of industry and academia, and accelerate the construction of an intelligent financial teaching system.*

### ***Keywords***

*Digital economy, intelligent finance, financial accounting, reform in education*

## **1. Introduction**

Intelligent finance comes into being in the wave of digital economy, which promotes the comprehensive application of digitalization in the cultivation of talents in the field of enterprise and finance and accounting. According to the results of the Survey Report on the Status Quo of Financial Intelligence of Chinese Enterprises in 2023 released by Shanghai National Accounting Institute and ZTE New Cloud, the average application of financial intelligence technology of enterprises participating in the survey is 10.60, the average adoption rate of intelligent financial technology is 34%, and the use of functional modules of digital financial system increases by 7.27% compared with 2022. This shows that Chinese enterprises are actively exploring the systematic application of intelligent

finance. Intelligent finance has greatly improved the efficiency of financial management and injected new momentum into the integration of industry and finance. Today, data-driven and financial sharing have become an important engine to promote the financial intelligence of enterprises. Based on in-depth analysis of the application status and development trend of intelligent finance, this paper explores multiple paths for accounting teaching innovation in the era of intelligent finance by combining the shortcomings of the current accounting teaching model. It is expected to provide some reference for training high-quality talents in the field of finance and accounting to meet the needs of intelligent financial times.

## 2. The System Framework and Practical Application of Intelligent Finance

### 2.1 Intelligent Financial System Architecture and Construction Ideas

With the deepening of the "National Big Data Strategy", smart finance is being applied to various fields by leaps and bounds. In recent years, emerging technologies and emerging theories such as cloud computing, AI, blockchain, and quantum communication have been changing with each passing day, and the thinking of "Yun Wu Yi Da Zhi" (cloud computing, Internet of Things, mobile Internet, big data, and intelligent technology) has become the standard of The Times. Technological iteration has a profound impact on the production and life style of modern society, and also brings subversive innovation and challenges to higher education. Technological iterations such as "Yun Wu Yi Da Zhi" will make concept reshaping, mode transformation and self-organization "fluctuation" become the focus of higher education in the future and run through the modernization process of higher education. In this era, intelligent financial construction has become an important innovation in the financial field, and its main goal is to plan and build an innovative intelligent financial platform, and explore and build a new financial management model on this basis (Liu et al., 2020). As a result of the development of digital economy, intelligent finance has become a necessary means for the digital transformation of enterprises, but also put forward new challenges to accounting teaching. To realize the innovative application of intelligent finance, the first thing is to build an intelligent financial framework that supports systematic application. This paper takes big data integration, intelligent financial decision execution and other aspects as the basic framework, and uses intelligent data collection and processing and other technologies to realize the basic construction of intelligent financial system. Table1 provides a basic framework and construction ideas of intelligent financial system.

**Table 1. Ideas for the Construction of Intelligent Finance**

Basic framework	Construction idea	Technical support
Data acquisition and integration	Ensure access to all types of financial data, integrate data from different sources, and	Use ETL (Extract, Transform, Load) tools, API integration and other technologies to achieve

	ensure data accuracy and consistency.	efficient data collection and integration.
Data storage and management	Design and build scalable data warehouses to store large-scale financial data and ensure data security and integrity.	Use relational database, NOSQL database or cloud storage service, and specifically select according to the data scale and nature.
Data analysis and mining	Data analysis and mining techniques are used to build models of financial forecasting, trend analysis, risk assessment, etc., to provide decision support.	Use machine learning, deep learning and other technologies, combined with data analysis tools (such as Python, R, Tableau, etc.) for data mining.
Intelligent decision support	Develop intelligent recommendation systems, real-time reports and dashboards to help management make smarter financial decisions.	Integrate data visualization tools, intelligent algorithms, and more to provide intuitive and real-time decision support.
Automated processing and execution	Automate financial business processes, including approval processes, payment processes, invoice processing, etc.	Automate business processes using workflow engines, smart contract technology, automated payment systems, etc.
Safety and compliance	Emphasize data security and ensure financial operations are compliant with regulations and internal compliance.	Implement security measures such as data encryption, authentication, and access control, while integrating compliance checking mechanisms.
Integration and expansion	Integrate with other enterprise systems, such as ERP, CRM, etc., to achieve comprehensive enterprise informatization.	Make use of modern integration architectures, API, etc., to ensure seamless integration with other business systems.

## 2.2 The practical Application of Intelligent Finance

### 2.2.1 The Impact and Application Status of Intelligent Finance on Traditional Accounting Teaching

As the "first position" of talent cultivation, colleges and universities shoulder the mission of developing high-quality talents in the field of intelligent finance. Intelligent financial technology has brought

profound changes in the field of teaching, affecting the content, method and development path of accounting teaching. In order to cope with the impact of the development of digital economy on the traditional accounting profession, the practical community is carrying out financial digital transformation in full swing. Various scenarios such as "financial sharing center" and "financial robot" emerge one after another. Intelligent finance applies digital technology such as "big intelligence moving cloud area" to the financial field, which has many advantages compared with traditional finance in data processing and analysis, decision support, real-time, financial cost and accuracy.

In the current stage of accounting teaching, it is a complex and arduous task to integrate smart financial technology, integrate educational resources, and realize going hand in hand with the digital economy. Yu and Zhang (2023) pointed out from the perspective of intelligent accounting practical training platform construction that boosting the construction of intelligent financial practical training platform under the concept of industry-finance integration is a key part of promoting the change of accounting teaching. The research results in the "2023 Chinese Colleges and Universities Intelligent Finance and Accounting Education Development Research Report" show that only 50% of the learners believe that digital technology is being cultivated in the current learning and development programs, most of the colleges and universities in the recovered questionnaires have already integrated intelligent finance into the talent cultivation program, and 37% of the colleges and universities have opened a special enrollment direction of intelligent finance and accounting, and only 9% of the colleges and universities have not yet integrated the intelligent Relevant knowledge in the field of finance. It can be seen that the application of intelligent financial teaching is still in its infancy, to be integrated into the teaching system, the realization of intelligent financial systematic teaching is a long way to go, to break the intelligent financial and accounting teaching and mutual fragmentation, a binary situation is the inevitable choice to drive reform in accounting education and optimize talent development programs.

### 2.2.2 The Application of Intelligent Finance in the Enterprise

Accompanied by the general trend of the development of digital economy, intelligent finance has been more widely used in corporate finance, such as financial planning and budgeting, intelligent auditing, automated accounting and reporting. Zhang (2020) believes that intelligent finance should contain at least three core elements: artificial intelligence, intelligent tools and big data analysis, enterprise financial intelligence is the general trend, to realize the application of enterprise intelligent financial system construction must be integrated with the three elements. Although intelligent finance has a wide range of applications in the enterprise, block chain, intelligent audit, automated financial reporting and so on, but with the development of digital technology, the contradiction between supply and demand in the market is becoming more and more prominent, and there is a talent gap in the field of intelligent finance, and with the gradual maturation of the degree of digitization represented by the "big, intelligent, mobile, cloudy, and material" and other technological innovation, financial management is facing a new situation. Financial management is facing new opportunities and challenges, financial intelligence has become a must and have for the work, the traditional accounting type financial work

logic is relatively lagging behind, and can not effectively play the effectiveness of financial management, and management and value-based intelligent financial urgent need to receive more attention to realize the digital economy under the background of the management of the "empowerment".

At present, many technology and e-commerce companies have taken the lead in building an intelligent financial system, taking Alibaba Group as an example, the group has built a unique intelligent financial system. The first is the intelligent cost budget management system. The intelligent cost budget management system empowered by RPA provides the Group with project fund budgeting and cost control, which greatly improves the efficiency of fund utilization. Through the intelligent cost budget management system, the Group has established a complete system of intelligent cost budget management, including preparation, approval, and reporting. The second is the intelligent tax system. The intelligent financial and tax system empowered by big data and cloud computing provides the group with real-time analysis and systematic integration of tax policies, tax returns, tax management, etc. The tax returns at all levels can be released by the company, realizing the automation of financial accounting, automation of reporting and integrated implementation of financial and tax management in the cloud. Third, the intelligent financial consolidation system. The financial intelligent consolidation system constructed by Alibaba Group can integrate data from the financial systems of different subsidiaries (e.g., EPR system, etc.) to realize the systematic integration of group finance. The application of intelligent cost budget management system, intelligent fiscal system and intelligent financial consolidation system greatly improves the financial management efficiency of the enterprise and is an inevitable move to realize digital transformation.

### **3. Current Situation and Thinking of Accounting Teaching Mode**

Integration of artificial intelligence and updating the concept of education is an important initiative to boost the high-quality development of education and cultivate innovative talents, and the current integration of science and technology into education has become an inevitable choice to improve the quality of independent cultivation of talents. The more the economy develops, the more important accounting is. Many problems still exist in the current accounting teaching field. First, it emphasizes theoretical education and neglects practical teaching. The traditional accounting teaching mode overemphasizes the teaching of theoretical knowledge, but ignores the cultivation of practical operation ability. Secondly, there is a lack of technology application and neglect of cutting-edge teaching. In the rapid development of intelligent finance today, most universities have not really established the "Internet +" accounting personnel training model, artificial intelligence and other emerging technologies need to be integrated with the development of accounting teaching. Third, the mode of mass, ignoring personalized talent training. Many colleges and universities are still stuck in the traditional unified talent training mode, while ignoring the cultivation of personalized talents in the context of smart finance.

#### 4. Innovative Paths for the Deep Integration of Smart Finance and Accounting Teaching and Learning

##### 4.1 Constructing an Intelligent Financial Teaching Practice Platform and Strengthening Systematic Teaching Application

Promoting the application of smart finance in the field of finance teaching and exploring the possibility of integrating smart finance technology into accounting teaching, including the "big data, AI, IoT, Mobile Internet and Cloud Computing", are an inevitable choice for cultivating high-quality accounting talents to meet the needs of the new situation. Constructing an intelligent financial platform and systematic teaching with the help of this platform is a possible innovative path (Figure 2). Through research and selection of appropriate teaching tools and platforms, finance and accounting teaching with the help of intelligent teaching platforms, at the same time, the existing course content should be updated to integrate the concepts and practical cases of intelligent financial technology. Integrate smart financial technology and financial education, such as big data analysis, artificial intelligence and blockchain, so that students can understand and apply the role of these technologies in the financial field. Simulation practice in the intelligent financial platform to enhance students' systematic learning and practical operation ability. On the basis of the initial exploration, we will further deepen the teaching content and practical application, and gradually promote the integration of intelligent finance into the curriculum practice of accounting teaching.

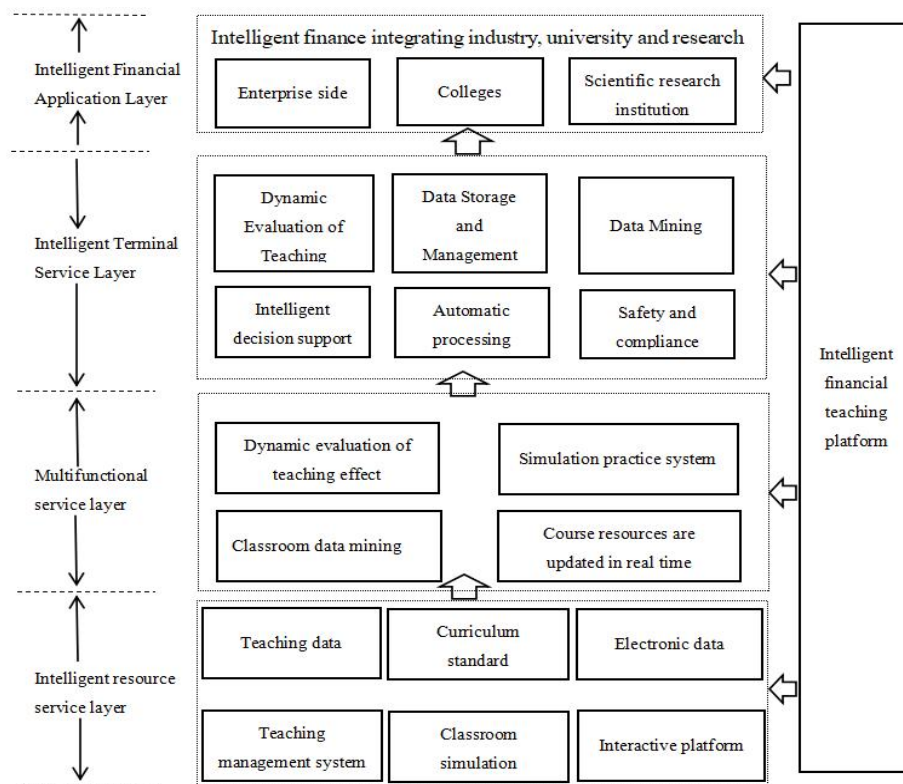


Figure 2. Financial Intelligent Teaching Model

#### *4.2 Promoting the Integration of Industry, Academia and Research and Realizing the Transformation of Teaching Results*

In the era of digital economic development, promoting the integration of industry-academia-research (enterprises, universities and research institutions) has become an important direction of educational innovation. There is insufficient endogenous power for the formation of vertical integration mode and mechanism among enterprises, universities and research institutions, and to promote the deep integration of industry and academia, it is not only necessary to consider interdisciplinary content, combine intelligent financial technology, data analysis and accounting practice, break the disciplinary barriers, and realize the interdisciplinary intersection and fusion, but also need to establish contact with industry partners to understand the industry's needs for intelligent financial technology, and to integrate these needs into teaching to improve the relevance and effectiveness of teaching. The integration of industry-university-research has been practiced and explored in many fields and levels, and policy documents such as the National Implementation Plan for Vocational Education Reform emphasize the importance of the integration of industry and education, encouraging school-enterprise cooperation and collaborative education between industry and education. The systematic teaching and application of smart finance can be effectively promoted through the multi-dimensional and multi-level deep integration of industry, academia and research.

#### *4.3 Promote Mutual Learning and Personalized Teaching Based on Smart Financial Platforms*

Personalized teaching has become a new model for many universities to cultivate professionals. Central South University has been based on the cloud integrated personalized teaching space to empower data-driven personalized intelligent teaching. The cloud integrated personalized teaching space also benefits from the development of the digital economy change, in the rapid development of intelligence today, in order to better serve the needs of economic and social development and train of high-quality talents in the field of intelligent finance, it is necessary to integrate personalized teaching into systematic teaching, with the help of the intelligent financial platform of the diversified practice paths and positions, to meet the needs of different groups of students in the field of accounting and finance itself. In addition, intelligent finance system can be used to integrate intelligent finance with personalized classroom, and gradually explore the new path of personalized accounting teaching mode. Intelligent finance includes intelligent financial system design, intelligent financial operations, intelligent financial analysis and intelligent auditing, etc., and each link needs to be supported by intelligent accounting personnel in different knowledge areas, so it is necessary to carry out differentiated and personalized teaching, in order to cultivate high-quality talents in the field of intelligent finance who are adapted to the practical application of intelligent finance. Figure 2. Financial intelligent teaching model

### **5. Conclusion**

Intelligent finance is the result of the development of the digital economy, in the era of the digital

economy, financial intelligence puts forward new requirements for financial accounting work, and the promotion of the integration of intelligent finance with the field of financial accounting in colleges and universities is an inevitable choice for cultivating high-quality talents in the field of intelligent finance. At the intersection of financial intelligence and accounting teaching innovation, firstly, building a systematic teaching system for intelligent finance is the key to promoting the development of intelligent finance; secondly, data-driven and financial sharing effectively empower the development of intelligent finance, and strengthening the application and development of intelligent finance in practice is an important way to promote the integration of intelligent finance with the field of financial accounting in colleges and universities; and then, applying intelligent finance to the real world to serve the needs of Talent cultivation and corporate governance are important goals for realizing the innovation of the teaching mode path of intelligent financial accounting. In short, by building a systematic accounting teaching system, strengthening the systematic application and development of intelligent finance in practice with the core of "big intelligence, cloud and object area", we can promote the cultivation of high-quality talents in the field of intelligent finance, boost the digital transformation of the accounting industry, and serve the needs of high-quality development of the economy.

### **Acknowledgements**

**Fund Project:** This paper is a general project of Philosophy and Social Sciences Planning of Anhui Province (AHSKY2022D108); Research results of Hunan Province Education Science Planning Project (Project number: XJK19BGD005); Ministry of Education Industry-University Cooperative Education Project (Project number: 231107096041923); Anhui University of Finance and Economics Quality Engineering grassroots Teaching organization Demonstration project (acjcjxzz2023001) phased research results.

### **About The Author**

Chengfang Wang (1983-), male, Han nationality, born in Wenzhou, Zhejiang Province, Associate professor, PhD, School of Accountancy, Anhui University of Finance and Economics, research interests: Intelligent finance and corporate governance;

Ning Xu (2000-), male, Han nationality, born in Binzhou, Shandong Province, master candidate of School of Accountancy, Anhui University of Finance and Economics, research interests: Intelligent finance and corporate governance;

Bing Huang (1977-), female, Han nationality, born in Chenzhou, Hunan Province, PhD, Associate Professor, Business School, Xiangtan University, research interests: Accounting standards and intelligent finance.



## References

- Liu, M. L. et al. (2020). Research on the basic framework and construction idea of intelligent finance. *Accounting Research (in Chinese)*, (3), 179-192.
- Yu, B. B., & Zhang, M. (2020). Discussion on the Construction of Intelligent Accounting Training Platform. *Finance and Accounting Monthly (in Chinese)*, (19), 64-70.
- ZHANG, M. (2020). Enterprise financial intelligence: Elements-paths-stages. *Finance and Accounting Monthly (in Chinese)*, (17), 7-11.