

Design and Implementation of Financial Intelligent Data Management

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ABSTRACT

With the in-depth study of artificial intelligence technology, various industries have been deeply affected, including the securities industry. The emergence of artificial intelligence has greatly strengthened the efficiency and accuracy of financial management of securities companies. The emergence of artificial intelligence has greatly strengthened the efficiency and accuracy of financial management of securities companies. In the face of the new era, the traditional teaching of financial management has become increasingly unsuitable to meet the needs of the times. This paper introduces the current situation and problems of financial management teaching concept in Colleges and universities, introduces the theoretical basis of the establishment of financial management teaching concept in Colleges and Universities Based on artificial intelligence, and constructs the modern teaching concept of financial management in Colleges and universities on this basis.

Keywords: *Financial management; artificial intelligence; Improvement and development*

1 INTRODUCTION

In recent years, with the rapid development of China's market economy, China's securities industry is also developing steadily and playing a more and more important role in China's capital market. The rapid development of artificial intelligence in China is both an opportunity and a challenge for financial accounting staff, although the development of artificial intelligence has little impact on the accounting industry. In the current environment of the popularization and development of artificial intelligence, securities companies need to effectively consider their own interests and development, and also need to bear great management pressure within the company, especially in the financial management of their own enterprises. In the current environment of increasingly developed science and technology, the more traditional financial management has gradually failed to meet the needs of the development of securities companies, and even caused some obstacles. However, with the continuous development of artificial intelligence technology, the impact on the accounting industry is bound to deepen, which virtually brings certain pressure to the development of the accounting industry, so that financial accountants need to constantly absorb new ideas and update their working methods, so that they will

not be eliminated by the society and the industry. From the current development speed of artificial intelligence, In the future, the more basic parts of the accounting industry, such as basic accounting, will probably be replaced by artificial intelligence, resulting in more fierce competition in the accounting industry. Therefore, only financial accountants continue to learn new knowledge, improve their working skills, combine their working methods with artificial intelligence, and maximize their own value.

Colleges and universities belong to public institutions, and their financial system is very different from that of colleges and universities. They pay more attention to accounting reflecting financial status than management and decision support. In recent years, with the change of school running environment, the financial management of colleges and universities is also facing an unprecedented new situation. The original financial management system has increasingly shown its lag and adaptability, which restricts the further development of college reform to a certain extent. Looking at the trend of social development, under the background of the socialist market economic system, the traditional financial management model is far from meeting the needs of modern social development for the future development of colleges and universities, which requires the financial management department of colleges and universities to make further improvement and innovation. In order to better realize the innovation of the mode of logistics

financial management in Colleges and universities, it is necessary to find and find the problems existing in logistics financial management in Colleges and universities by establishing and attracting competition mechanism, and then take positive and effective measures to improve and innovate the financial management in Colleges and universities, which has become an important problem that colleges and universities need to face[1].

2 RELATED WORK

2.1 *artificial intelligence technology*

(1) Development and application status of artificial intelligence technology

① Development process of artificial intelligence technology

Artificial intelligence technology appeared in the late 1980s. Today, it has made many achievements in both depth and breadth, and the development speed is accelerating year by year. As an emerging technology, the development process of artificial intelligence technology is full of twists and turns, and it is not plain sailing. In the process of people's use, many unsatisfactory defects and deficiencies are found. Relevant technical experts collect these problems for research. After understanding these defects and deficiencies, technicians break through technical obstacles and continuously improve the technology, It makes it more convenient for people to apply, and the artificial intelligence system has more and more perfect functions and wider coverage, which can meet people's various needs and be applied to more and more industries. In addition, in recent years, artificial intelligence technology has developed by leaps and bounds, and new development paths have emerged, which are more closely combined with many emerging industries and integrated with multiple disciplines, It has promoted the forward development of innovative technology. In addition, it has integrated more and more fields, and the connection between different industries is closer and more comprehensive. In view of this phenomenon, artificial intelligence technicians are also constantly updating the technology to make it more meet people's current needs and make the society in a rapidly advancing intelligent era.

② Current situation of financial application of artificial intelligence

"The working principle of artificial intelligence system is mainly to imitate human brain nervous system. The system has many management links. It imitates the structure and working principle of human brain and establishes network connection with the help of various channels". If financial accountants want to improve

work efficiency and realize effective management of all financial links, there will be two management systems involved. The first system is the financial query system and the second system is the financial operation system. These two financial management systems can basically include all financial work. Firstly, it can realize the effective planning and allocation of various resources and optimize the use of various resources. This technology will promote the healthy and long-term development of the resource industry and play an important role in resource planning. Secondly, classified management, artificial intelligence system can scientifically summarize and classify different things, sort out the uniqueness of different things, and explain, classify, distinguish and explain the operation behavior of these unique information; Finally, expert systems can be set up to help solve problems in some fields that are particularly professional and need strong understanding and analysis ability.

(2) Re planning and analysis of accounting personnel in Colleges and Universities under the background of artificial intelligence

"The development of artificial intelligence technology benefits from the progress of modern science and technology. Therefore, modern science and technology has given birth to the emergence, development and growth of artificial intelligence technology. Historically, every scientific and technological progress will always eliminate industries and personnel with backward technology and do not seek change, resulting in a large number of unemployment, and the emergence and development of artificial intelligence technology is no exception". This technology has promoted industrial change all over the world and set off a new wave of change. If the relevant staff do not change their working methods in time and can not flexibly master and use the new technology, they will face the unemployment crisis. "For financial accountants, the financial accounting method will have significant changes, and the daily work mode of accounting will be very different from that in the past.". Financial work will face the following problems: first, there is a shortage of senior skilled financial personnel with strong professionalism and high working ability requirements. From the current actual situation, although there are many staff engaged in accounting, most of the daily work is simple work with strong repeatability and mechanization such as accounting, However, the emergence of artificial intelligence will replace this part of the financial comparison foundation. Therefore, this situation will bring great challenges to colleges and universities. Because there will be no great change in financial posts, there will be no suitable talents for senior financial posts, and the career of a large number of staff in basic posts will greatly hinder the development

of colleges and universities. Second, there are many changes in financial posts and work contents in Colleges and universities. As the basic financial work is replaced by artificial intelligence, some accounting posts will be cancelled, and artificial intelligence will continuously improve the efficiency of accounting work. Therefore, individual posts need to be re integrated and merged, and the repetitive and Mechanical work contents of staff will be less, Furthermore, the workload will be greatly reduced, the daily work content and work mode will also be changed, the connection between accounting posts in Colleges and universities and other posts will increase, and they may be merged with closely related posts, so as to make all work more integrated, scientific and systematic.

2.2 Problems existing in the concept of financial management education in Colleges and universities at the present stage

The financial management process of colleges and universities is shown in Figure 1:

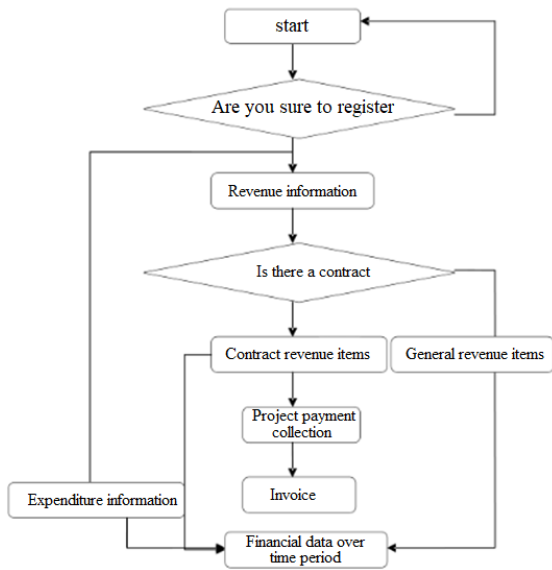


Fig. 1. Financial management flow chart

In the current work of logistics financial management in Colleges and universities, there are mainly the following problems, such as unclear logistics property rights, imperfect management system and imperfect management system.

(1) The property right of logistics in Colleges and universities is not clear. In the previous planned economic system environment, the logistics property of colleges and universities is subordinate to the school, and colleges and universities can carry out unified management

and planning of funds. However, under the existing market economic system environment, the ownership of logistics funds is not clear, which is mixed with the assets of colleges and Universities, especially in the process of financial management, accounts are often confused, So that it is difficult to make a clear division in logistics asset evaluation. Although so far, the development of the socialist market economic system has been continuously improved, the problem of logistics property rights in Colleges and universities is still unclear, and it is not fully integrated with the market economy. Therefore, the effect of post and pre financial management is still poor.

(2) The management system is not perfect. As we all know, the current level of logistics financial management in Colleges and universities is not high, and the current financial management system has long been unable to meet the needs of logistics development in Contemporary Colleges and universities, which is inconsistent with the content of socialized reform. In the process of financial accounting, it has been in a passive state for a long time, can only carry out bookkeeping and reimbursement, and has lost its initiative. However, the existing university financial management system is not perfect, resulting in the lack of communication between the university logistics management department and the competent department of the University, and there are many disharmonious phenomena in the logistics financial management.

(3) The management system is not perfect. The imperfect financial management system of university financial logistics is also one of the main problems of Houle financial management. Its imperfect management system leads to the lack of standardization of management. At present, the current university logistics financial management system should be far from meeting the requirements of university logistics work in the new period, which is not conducive to the smooth development of logistics financial management. Especially in the management process, the lack of the role of budgeting leads to the lack of effective evaluation mechanism in fund management, so the utilization rate of funds is not high, which is not conducive to the long-term development of logistics work in Colleges and universities.

3 DATA ANALYSIS

3.1 The current situation of financial management teaching concept

At present, the teaching of financial management in Colleges and universities mainly emphasizes the teaching of basic theories and basic quantitative analysis

methods, and in various types of assessment, the assessment of financial management tends to test the ability of calculation. Therefore, under the pressure of various examinations and employment, teachers take teaching basic theories and various quantitative analysis methods as their own responsibility, while students follow the disadvantages of exam oriented education in this environment - develop traditional learning habits, that is, passive acceptance, not active exploration, lack of independent thinking, analysis and problem-solving ability. In short, the current wealth

$$\begin{cases} E(t)\dot{x}_k(t) = f(t, x_k(t)) + B(t)u_k(t) + d_k(t) \\ y_k(t) = C(t)x_k(t) \end{cases} \quad (1)$$

The teaching concept of business management focuses on the state of "emphasizing basic theory over practice, emphasizing operation skills over quality".

Based on the former teaching concept of financial management, the teaching method adopted by teachers is old and inflexible; Teachers write and students write; It is a paradigm under the traditional examination oriented education of "teachers' examination and students' Recitation".

Although some colleges and universities have set up financial management case teaching courses, or simply use modern information technology to teach courses in the form of text information, but this is not in essence multimedia teaching or modern technology teaching, the selected cases are generally old and outdated, so the final teaching effect is not very ideal. In this teaching method, students can only memorize the theory and master all kinds of calculations, but they can't understand the thought and connotation of financial management systematically and deeply. They lack sufficient professional judgment and working ability, so they are difficult to adapt to the increasing professional requirements.

The following problems can not be ignored in the teaching practice are shown in Figure 2.

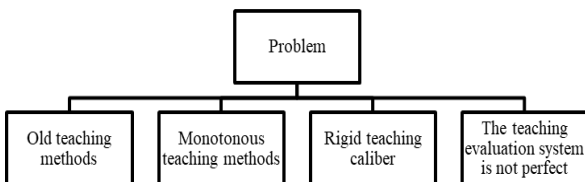


Fig. 2. Problems in teaching practice

(1) The teaching method is old and it is difficult to stimulate the students' enthusiasm for study

Under the restriction of traditional teaching concept, "cramming teaching", "one speech class" and "full

teaching method" are full of them. Students in the classroom have no time and space for feedback after thinking, and they go to the "memory" teacher's explanation blindly, and they are in the passive listening situation. In this case, not only can not stimulate students' enthusiasm for learning, even the innate desire to explore the potential of exploration has been gradually destroyed.

$$\begin{cases} E(t)\dot{x}_d(t) = f(t, x_d(t)) + B(t)u_d(t) + d_d(t) \\ y_d(t) = C(t)x_d(t) \end{cases} \quad (2)$$

(2) Monotonous teaching means, slow information transmission and less information

Although some colleges and universities are using so-called multimedia teaching methods, if we can not understand the connotation of modern education technology and give full play to the teaching assistant role of modern education technology, the teaching means are still "one sky"[2], a chalk, a blackboard, a slide, a recording and an image. That is all. In the view of students, this "one sky" is not essentially different from the one speech of a teacher in the past, with little information exchange, less information and vague impression.

(3) The teaching caliber is rigid, which is difficult to meet the needs of students' personalized development

At present, the evaluation of students' learning effect in university education still adopts the unified teaching caliber of "step by step" and "one-sided" such as unified examination method, unified scoring method, unified teaching requirements and unified evaluation method. In this way, students become memory machines, computing machines, obedient machines, and lose their own personality development and comprehensive quality ability training. In the past, what will be the "average code products" produced in batches will be taken out of the university campus. What should we talk about the characteristic education and quality education?

(4) The teaching evaluation system is not perfect, which is difficult to reflect the actual situation and effect of teaching from many angles, which deviates from the original intention of teaching evaluation

In the current teaching evaluation index system, whether for teachers or students, the evaluation method is single, the evaluation method is unified and the flexibility is poor. It is difficult to reflect the characteristics and status of the evaluated object, which deviates from the original intention of teaching evaluation[3].

3.2 *Artificial intelligence promotes the transformation of financial management workers, and then promotes the transformation of financial management*

The securities industry is an important pillar of the financial industry, covering securities companies, fund management companies, securities investment consulting institutions, securities credit evaluation institutions, financial asset management companies, securities departments of listed companies, banking investment departments and fund departments, and deal with data. The difference with other industries is that the securities industry has strong digital and virtual nature. Therefore, the financial data inside the company is very large.

Artificial intelligence technology is one of the important achievements of information technology[4]. Under artificial intelligence, the financial management of securities companies can improve the traditional financial management as follows: first, it can liberate the financial management workers inside the company from the tedious financial work; Secondly, it can improve the efficiency of basic financial work, and make the data more scientific and accurate; Third, it can save the human resource cost for the securities company effectively; Fourthly, the introduction of artificial intelligence technology can effectively reduce the probability of the profit situation of the internal artificial operation of securities companies, and further improve the quality of accounting work of securities companies.

The financial management of artificial intelligence is shown in the following aspects: firstly, it can transform the especially complex financial knowledge into many simple problems through the knowledge, experience and skills related to intelligent management[5]; Secondly, it can identify financial data scientifically, and then classify them effectively; Thirdly, it can share relevant financial information to relevant staff, improve the transparency and efficiency of financial information processing; Finally, it can simulate human neural network, carry out crisis early warning, data mining, risk investment assessment and other analysis work.

$$\begin{aligned}
 E(t)\dot{x}_{d+1}(t) - E(t)\dot{x}_{k+1}(t) &= E(t)\Delta\dot{x}_{k+1}(t) = \\
 f(t, x_d(t)) + B(t)u_d(t) - f(t, x_k(t)) - B(t)u_k(t) - \\
 d_k(t) &= f(t, x_d(t)) - f(t, x_{k+1}(t)) + \\
 B(t)\Delta u_{k+1}(t) - d_{k+1}(t)
 \end{aligned}
 \tag{3}$$

At present, the consequence of the widespread application of AI is the rapid improvement of the relevant financial data, while the traditional financial management form can not be fully adapted, but artificial intelligence

can not completely replace the financial management personnel. At the same time, the financial management worker is the main body of financial management and an important factor in the transformation[6], The areas that financial managers are responsible for under artificial intelligence will gradually move closer to the aspects of overall planning, forecasting, analysis, etc. Therefore, the demand of the junior financial managers will be gradually reduced, and the higher financial managers should fully meet the information needs of the management decision-making level of the securities companies. The concrete performance is as follows three aspects.

3.3 *Improvement of college financial management education concept based on Artificial Intelligence*

(1) Strengthen fund-raising management and provide financial guarantee for steady development

Facing the pressure of expanding the enrollment scale and the fierce competition between schools, the lack of funds seriously restricts the development of colleges and universities. On the basis of scientific demonstration, colleges and universities should formulate a reasonable debt raising plan and moderate debt, which can not only alleviate the capital pressure, but also make effective use of the financial leverage effect. At the same time, colleges and universities should also actively use the capital market to raise funds through multiple channels, such as vigorously developing school run industries, actively converting scientific research achievements to the market, logistics socialization and BOT similar to financial leasing, which can effectively alleviate the financial pressure of colleges and universities[7].

(2) Establish the concept of financial risk and decision-making, strengthen financial analysis, and establish a financial analysis index system

With the expansion of the scale of higher education and the intensification of competition, colleges and universities are increasingly pursuing benefits. Risks and benefits are accompanied[8]. How to choose between risks and rewards and effectively control risks is a major challenge for college financial management. Colleges and universities should change the original concept of emphasizing accounting, neglecting management and lacking analysis, make financial related decisions scientifically and establish Decision making concept. The financial management department of colleges and universities should make full use of the existing financial and accounting data, comprehensively and systematically analyze the allocation of financial resources of colleges and universities, check and monitor the financial risks of colleges and universities, and need to establish a

special index system and early warning system[9]. We can try to establish a college financial management system similar to the financial management of colleges and universities, in addition to learning from colleges and universities. In addition to the original index system, colleges and universities can also set up some indicators consistent with their own characteristics, such as student arrears rate, growth rate of education and scientific research, completion rate of enrollment plan, etc., so as to form a set of financial analysis index system in line with the University.

(3) Form a reasonable and effective distribution mechanism to improve the use efficiency of personnel funds. The financial management structure of colleges and universities is shown in Figure 3. Colleges and universities should form an effective distribution system, regular assessment, strengthen expenditure management and optimize expenditure structure under the condition of knowledge economy[10]. They should establish a wage distribution system and incentive mechanism suitable for the characteristics of colleges and universities, change the egalitarian phenomenon in the current distribution of colleges and universities, and further deepen and improve the dynamic lump sum of total wages in Colleges and universities, which can be supported by colleges, departments and departments. The unit undertakes the lump sum of personnel and funds, promotes the comprehensive reform in the school, and takes practical measures to improve the treatment of excellent talents, academic leaders, backbone teachers and management backbone, so that the limited personnel and funds can be reasonably allocated and play the greatest effect.

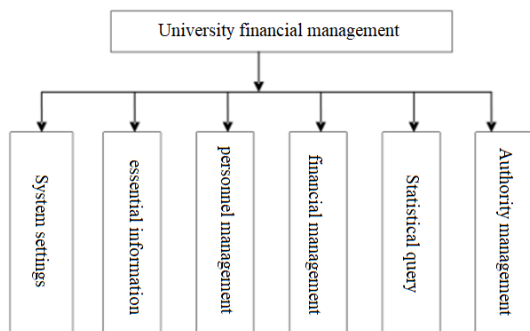


Fig. 3. Financial management structure of colleges and Universities

4 EXAMPLE ANALYSIS

4.1 management financial expert

The operation of securities companies will inevitably produce huge original economic data, and such data need to be analyzed, sorted and reasonably predicted by relevant financial managers. This is not replaced by artificial intelligence. Because the search and classification of front-end data are the scope that artificial intelligence can handle at present, and the subsequent judgment on data still needs human to execute. Therefore, the modern accountants who are proficient in computer technology and accounting knowledge will have a greater probability to become a management type financial expert.

4.2 risk control experts

If the securities company needs good operation, it needs the help of internal control and risk management[11]. Especially when the securities company is in a certain stage or scale of development, its economic activities and production operation will show complexity, and risk management and internal control will play a greater role. If we can help with the accounting information system based on artificial intelligence, it will play a half - function to supervise with professional financial management personnel.

4.3 Intelligent Consultant

The compound financial manager, which has both information system application and accounting expertise, plays a key role in the application of artificial intelligence and computer information system in the financial perspective. The compound financial management personnel can model the needs and make the financial management intelligent[12]. In this process, the compound financial managers also play a guiding role in order to ensure the artificial intelligent financial management can give full play to its role in securities companies such as information sharing and data identification.

5 CONCLUSION

The development of artificial intelligence is the necessity of the development of the times. The educational concept of financial management in Colleges and universities should follow the trend of the times. In the context of artificial intelligence, the transformation of

financial management of the company should be realized and the comprehensive strength of its own company should be improved scientifically. In this process, the financial management education concept of colleges and universities needs to strengthen the application of management accounting of the company, strengthen the information construction of the company, and vigorously train the compound financial management personnel, and strive to improve the market competitiveness of the company and more scientifically allocate the risks and benefits of the company. In addition, the financial management education concept of colleges and universities also needs to make strict requirements on management system and the ability of the employees in the company, and vigorously optimize the organizational structure within the company and improve the quality of the financial personnel of the company. As long as this can improve the speed of financial personnel changing towards management accounting, and then increase the economic benefits of the financial management education concept in Colleges and universities, Promote the healthy and sustainable development of the financial management education concept in Colleges and universities.

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