Research on the Challenges and Response Strategies of Cultivating Accounting Specialists in the Intelligent Financial Era

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Keywords: Intelligent Finance, Master of Accounting, Talent Training, Challenges, Coping Strategies

Abstract: The arrival of the intelligent financial era has put forward new requirements for the cultivation of accounting professional master (MPAcc) talents. With the rapid development of information technology, big data and artificial intelligence and other fields, the arrival of the digital and intellectual era has brought great opportunities and challenges for the accounting industry, and also put forward higher requirements for the cultivation of accounting master's degree talents, so how to build accounting talents in line with the needs of the digital and intellectual era has become a problem that needs to be researched by universities at present. However, at present, the training of accounting master's degree talents still exists problems such as lagging teaching content, insufficient practical ability and weak teacher strength, which is difficult to fully adapt to the needs of industry development. This paper deeply analyzes the challenges faced by accounting master's degree personnel training in the context of intelligent finance, and combines the current trend of education reform to propose coping strategies such as optimizing the curriculum system, strengthening school-enterprise cooperation, and enhancing the capacity of teachers, with a view to providing reference and reference for the cultivation of accounting personnel in the new era.

1. Introduction

The rapid development of intelligent technology is profoundly changing the traditional financial management model, is an application of digital technology, that is, big data, strong algorithms, big arithmetic power like the human brain organically combined, so as to liberate people from the complicated and trivial daily work[1]. The application of artificial intelligence, big data, blockchain and other cutting-edge technologies in the field of finance not only significantly improves work efficiency, but also promotes the transformation of the role of finance practitioners. The development from traditional accounting to the high value-added direction of data analysis and decision support has become a new trend in the development of finance careers[2]. The new type of accounting personnel training program is not only a realistic requirement to adapt to the changing demand for accounting personnel in the era of digital intelligence, but also an inherent requirement to cultivate high-quality and innovative accounting personnel.

As an important way to cultivate high-end applied accounting talents, Master of Professional Accounting (MPAcc) faces new opportunities and challenges in the era of intelligent finance[3]. The popularization of intelligent technology has put forward interdisciplinary integration requirements for the knowledge structure and skills of accounting professionals; traditional teaching content and methods lag behind the development of the industry to a certain extent, resulting in a disconnect between talent cultivation and enterprise demand[4]. In order to better adapt to the needs of intelligent finance, it is imperative to deepen the reform of accounting master's degree education[5]. This paper takes intelligent finance as the background, analyzes the challenges faced by accounting master's degree talent cultivation, and discusses the strategies to cope with these challenges. By optimizing the curriculum, strengthening practical teaching, and improving the faculty, we promote the deep integration of accounting education and industry development, and comprehensively enhance the professional competitiveness and industry adaptability of accounting master students[6].

  DOI: 10.25236/icssem.2025.010

2. The Impact of the Intelligent Financial Era on the Training of Accounting Specialists

With the rapid development of artificial intelligence, big data and other technologies, the work mode in the field of finance is undergoing profound changes. The traditional bookkeeping and accounting-based work content is gradually replaced by data analysis, forecasting and decision support, which puts forward new requirements for the knowledge structure and skill system of accounting specialization talents[7]. Students not only need solid knowledge of financial fundamentals, but also need to master data processing, the use of technology tools and the ability of interdisciplinary integration, in order to adapt to the industry's demand for composite talents. In the era of digital intelligence, the repetitive content, low-level and tedious voucher entry, report generation and other low-value and meaningless work will be replaced by intelligent financial robots, and the demand of enterprises for traditional financial accounting will be greatly reduced[8]. Financial Performance Measurement:

$$\text{Financial Performance} = \frac{\text{Revenue} - \text{Cost of Goods Sold}}{\text{Total Assets}} \tag{1}$$

The popularization of intelligent financial technology has promoted the transformation of the role of financial practitioners from "executive" to "decision-making", which poses a serious challenge to the education model. Traditional teaching is mainly based on theory and lacks systematic cultivation of students' practical operation ability and technical application ability, which makes it difficult to meet the demand of enterprises for high-quality applied talents. Accounting master's degree education must realize innovation in teaching content and mode, in order to comprehensively improve students' ability to solve complex problems, showed in Figure 1:

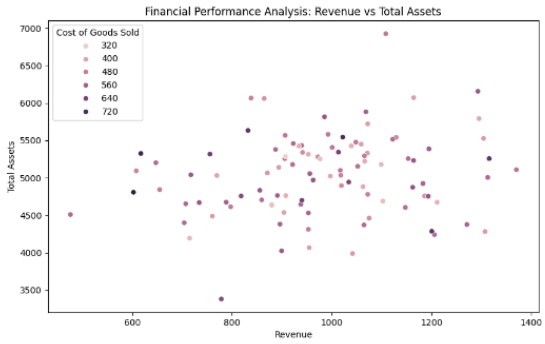

Figure 1 Financial Performance Analysis: Revenue vs Total Assets

The demand for composite talents further emphasizes the importance of cross-discipline. High-end accounting talents in the era of intelligent finance need to have both financial, technical and management capabilities[9]. Existing master's degree programs in accounting are mostly single-discipline oriented, ignoring the combination of technical tools and business decision-making, resulting in a lack of multi-dimensional knowledge support and practical experience when students face actual work. This singularity restricts students' adaptation and competitiveness in the intelligent environment. The rapid iteration of intelligent technologies makes practitioners need to continuously learn new technologies to maintain professional competitiveness[10]. This environment requires master of accounting education to focus on the cultivation of students' lifelong learning ability and the ability to adapt to changes in the industry while cultivating their knowledge base. Schools need to provide broader support for students' future career development and technological adaptability by dynamically updating the curriculum and enriching educational resources.

3. Major Challenges in the Training of Personnel for the Master's Degree in Accounting

In the era of intelligent finance, the cultivation of accounting specialists is facing the demand for comprehensive innovation from teaching content, teaching method to faculty strength[11]. The training of high-quality, application-oriented accounting specialists with the ability to identify problems, analyze them and solve them creatively. Teaching content is difficult to quickly follow the

technological updates, practical teaching is out of touch with the industry needs, and the faculty's insufficient mastery of emerging technologies has become a major bottleneck restricting high-quality accounting master's degree education[12]. The following will be an in-depth analysis from three aspects: the difficulty of updating teaching content, the insufficiency of combining teaching methods with practice, and the transformation challenges of the faculty, showed in Figure 2:

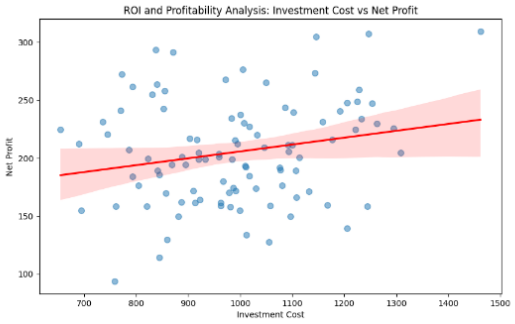

Figure 2 ROI and Profitability Analysis: Investment Cost vs Net Profit

3.1 The challenge of updating teaching content

With the rapid development of intelligent financial technology, the requirements for knowledge and skills in the accounting field have changed significantly. However, the teaching content in accounting master's education often fails to quickly adapt to such changes, resulting in the curriculum lagging behind the industry's needs. The accounting courses in some universities are still dominated by traditional financial knowledge and lack a systematic introduction to emerging technologies such as artificial intelligence, big data analysis, blockchain, etc., making it difficult for students to adapt to the requirements of modern financial work directly after graduation. The arrival of the digital intelligence era has put forward higher requirements for the cultivation of applied talents, but due to the unique environment and rigid model, it is difficult to adapt to the complex and changing financial environment in the digital intelligence era, and the lack of innovation and adaptability has led to a mismatch between the teaching content and the professional objectives, showed in Figure 3:

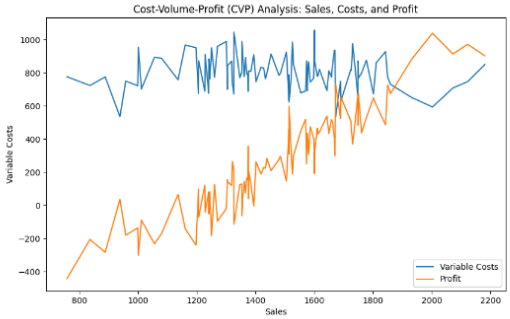

Figure 3 Cost-Volume-Profit (CVP) Analysis: Sales, Costs, and Profit

The updating speed of teaching materials is also an important manifestation of the lagging teaching content. Many colleges and universities still use more traditional teaching materials, failing to incorporate new theories, methods and technologies related to intelligent finance in a timely manner. This situation not only limits students' understanding of the cutting-edge industry dynamics, but also weakens their competitiveness. The lagging problem of teaching content is further aggravated by the fact that the preparation of teaching materials requires a long cycle. The era of intelligent finance requires composite talents, while the existing curriculum of accounting master's degree is usually oriented to a single discipline, ignoring the integration of interdisciplinary knowledge. The in-depth integration between accounting and information technology, management science and other fields has not yet been fully embodied in the curriculum, making students lack the ability to deal with complex financial issues and multidisciplinary synergy. This shortcoming is particularly acute in practice,

especially in scenarios where technology needs to be integrated with managerial decision-making. ROI (Return on Investment):

$$\text{ROI} = \frac{\text{Net Profit}}{\text{Investment Cost}} \times 100 \tag{2}$$

Lagging teaching content not only affects students' knowledge base, but also weakens their career adaptability. In the context of rapidly changing intelligent finance, universities need to accelerate the pace of curriculum reform and introduce more content on cutting-edge technology and industry dynamics to ensure that students can maintain their advantages in the fierce market competition. It is also necessary to keep the teaching content in line with technological development through a dynamic updating mechanism, so as to inject new vitality into the education of accounting master degree.

3.2 Inadequate integration of teaching methods and practice

Accounting master's degree education still focuses on theoretical lectures in teaching mode, and the proportion of practical teaching is relatively low, which is difficult to meet the high requirements for practical operation ability in the era of intelligent finance. Although many colleges and universities have opened some practical courses, their content design is out of touch with the industry demand, and they can't provide students with real intelligent financial application scene experience. This phenomenon of fragmentation between theory and practice directly affects the ability of students to adapt to modernized financial work after graduation. The era of digital intelligence requires accounting talents not only to have professional financial knowledge and the ability to apply accounting expertise, but also to have a high level of digital and information technology literacy, as well as an in-depth knowledge of intelligent tools and systems. Cost-Volume-Profit (CVP) Analysis:

$$"\{Profit\} = "\{(Sales\} - "\{Variable\ Costs\}) - "\{Fixed\ Costs\} \tag{3}$$

Inadequate construction of practical teaching platforms is another key issue. The application of intelligent financial technology needs to be based on advanced experimental environments and technical tools, but many colleges and universities have obvious shortcomings in resource allocation. Problems such as obsolete laboratory equipment and single function of simulation system make it difficult for students to get in touch with real intelligent financial technology and data processing processes. This lack of practical conditions seriously restricts the cultivation of students' technical application ability, showed in Figure 4:

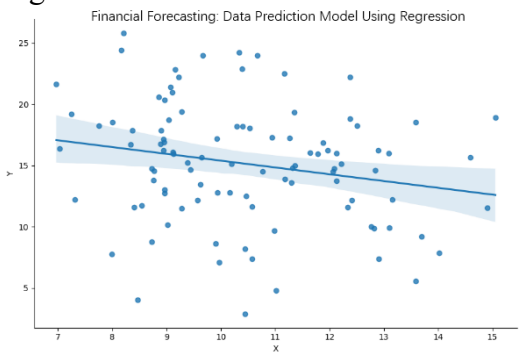

Figure 4 Financial Forecasting: Data Prediction Model Using Regression

The depth and breadth of school-enterprise cooperation is limited, further weakening the effectiveness of practical teaching. Although some colleges and universities have established cooperative relationships with enterprises, they mostly stay at the level of short-term internships or visits, failing to form a long-term, stable and in-depth cooperation mechanism. Students have limited opportunities to exercise in enterprise practice, lack a deep understanding of the actual needs of the industry and operational processes, and find it difficult to improve their comprehensive ability through practical teaching.

Insufficient innovation in teaching methods is also one of the important reasons. The traditional teaching mode based on classroom lectures has limitations in cultivating students' ability to solve practical problems. Case teaching, project-based learning and other methods that can effectively

enhance students' practical ability have not yet been widely used in accounting master's education. The homogenization of teaching methods makes students lack the necessary thinking training and practical experience support when facing the complex smart financial environment.

3.3 Transformational challenges of the faculty

The arrival of the intelligent financial era has put forward new requirements for the faculty of accounting specialization education. Most traditional accounting teachers have a solid foundation in financial theory, but their knowledge and application ability in intelligent financial technology is relatively weak. Many teachers have a limited grasp of cutting-edge technologies such as artificial intelligence, big data analysis, blockchain, etc., and are unable to effectively integrate these technologies into course teaching. This has led to a disconnect between the teaching content and the actual industry needs, restricting the cultivation of students' technical application ability. The goal of enterprises is to maximize profits, so they always follow the market development trend. In order to cope with the fierce market competition and maintain their core competitiveness in the era of digital intelligence, enterprises will be more rigorously select technical personnel, so new composite talents with digitalization ability and interdisciplinary ability have become the immediate needs of enterprises. Data Prediction Model:

$$Y = \beta_0 + \beta_1 X + \epsilon \tag{4}$$

The teaching needs in the era of intelligent finance not only require teachers to have a certain degree of technological literacy, but also require them to have the ability to integrate across disciplines. Accounting master's degree education requires teachers to be able to organically combine financial knowledge with information technology, data analysis, management and other fields. However, the academic backgrounds of many teachers are still biased toward traditional accounting disciplines, and they lack interdisciplinary teaching experience and perspectives, which results in the inability to achieve adequate discipline integration in curriculum and teaching methods. This problem limits the cultivation of students' cross-disciplinary thinking and composite abilities, showed in Figure 5:

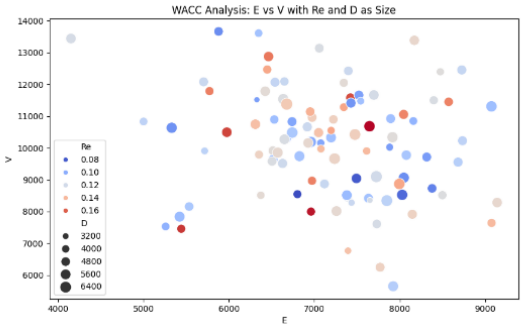

Figure 5 WACC Analysis: E vs V with Re and D as Size

Teachers' teaching concepts and educational methods need to be updated with the popularization of intelligent financial technology. Under the traditional education model, teachers often rely on traditional didactic teaching, neglecting the cultivation of students' practical ability. Facing the challenges of intelligent finance, teachers need to constantly innovate teaching methods, adopt case teaching, project-based learning, data-driven teaching and other methods to enhance students' practical ability and innovative thinking. Some teachers are still conservative in their teaching methods and lack the teaching concepts and means to keep up with the times. Teachers' lifelong learning needs are also becoming more prominent. With the constant updating of technology, teachers not only need to keep up with the pace of technology, but also engage in continuous professional development to keep their teaching content cutting-edge and practical. However, some teachers have limited opportunities for professional training, leading to the dilemma of lagging behind in technological updating in their teaching process. Enhancing teachers' technological literacy, interdisciplinary competence, and pedagogical innovation has become a core issue that needs to be addressed in the current education of accounting specialization.

4. Strategies for Meeting the Challenges of the Intelligent Finance Era

In order to cope with the challenges of the intelligent financial era, accounting master's degree education needs to be innovated and adjusted in many aspects to ensure that the students trained can adapt to the needs of financial work in the new era. According to the professional talent training objectives, combined with the social requirements for the quality of talents, a curriculum system that meets the characteristics of its own development is established. The curriculum system should be updated in a timely manner according to the development dynamics of the industry, incorporate cutting-edge technologies such as big data analysis, artificial intelligence, blockchain, etc., strengthen the intersection and fusion of disciplines, and build a composite talent cultivation model adapted to the needs of intelligent finance. Increase the course content of technology application and focus on students' practical operation ability on intelligent financial tools and systems. Future Value of an Investment:

$$FV = PV \times (1 + r)^n \tag{5}$$

Practical teaching should be docked in depth with the needs of the industry and promote the in-depth development of school-enterprise cooperation. Colleges and universities can promote the application of students' knowledge in the actual working environment by building internship bases with enterprises. By providing real project cases and data analysis platforms, students can exercise their problem-solving abilities in simulated or real financial scenarios. Schools should also encourage students to participate in all kinds of practical training projects for the application of intelligent financial technology, and enhance their innovative thinking and practical ability through project-based learning. The construction of faculty is the key to improving the quality of accounting master's degree education. Colleges and universities should increase the professional training of teachers, help them master the latest financial technology and application tools, and improve their ability to teach across disciplines. By inviting industry experts and technology innovators to participate in teaching, they enhance teachers' practical experience in the industry and promote the alignment of teaching content with the technological frontier. Teachers are encouraged to carry out continuous academic research, especially in the field of intelligent finance, in order to enhance the scientific research and forward-looking nature of teaching. The Weighted Average Cost of Capital:

$$\mathrm{WACC} = \frac{E}{V} \times Re + \frac{D}{V} \times Rd \times (1 - Tc) \tag{6}$$

Innovation in teaching methods is equally crucial. Traditional didactic teaching is no longer adapted to the needs of the era of intelligent finance, and schools should actively explore interactive teaching modes based on case teaching, project-based learning, teamwork and so on. These teaching methods can not only help students improve their ability to solve practical problems, but also stimulate their innovative thinking and independent learning ability. By encouraging students to participate in interdisciplinary projects and enterprise cooperation projects, they can cultivate their comprehensive quality and enhance their adaptability and competitiveness in the intelligent financial environment.

5. Conclusion

The arrival of the intelligent financial era has posed unprecedented challenges to the training of accounting master's degree talents, and the traditional education model and teaching content have been unable to meet the needs of the rapid development of the industry. This paper analyzes the main problems faced in the cultivation of accounting master's degree talents, including lagging behind in the updating of teaching content, disconnection between practical teaching and industry needs, and difficulties in the transformation of faculty. In order to cope with these challenges, this paper puts forward a variety of strategies through optimizing the curriculum system, deepening university-enterprise cooperation, improving the capacity of the faculty and innovative teaching methods. These strategies not only help to improve the technical application ability and practical ability of accounting master students, but also enhance their comprehensive quality to adapt to the intelligent financial environment.

As the intelligent transformation of the financial field becomes more and more in-depth, accounting master's degree education must follow the pace of the times and constantly carry out reform and innovation. The future master of accounting talents will not only be financial experts in the traditional sense, but also have strong technical application ability, interdisciplinary comprehensive literacy and innovative thinking. By continuously optimizing the education system and improving the quality of teaching, we will be able to cultivate high-quality composite talents in line with the needs of the intelligent financial era and provide strong support for the sustainable development of the industry.

References

[1] Kiritsis D .Closed-loop PLM for intelligent products in the era of the Internet of things - ScienceDirect[J]. Computer-Aided Design, 2011, 43(5):479-501.DOI:10.1016/j.cad.2010.03.002.

[2] Cao X , Xiong Y , Sun J ,et al.Multidiscipline Applications of Triboelectric Nanogenerators for the Intelligent Era of Internet of Things[J].Nano-Micro Letters, 2023, 15(1):1-41. DOI:10.1007/s40820-022-00981-8.

[3] Yang M , Zhang S .Analysis of sports psychological obstacles based on mobile intelligent information system in the era of wireless communication[J].Wireless networks, 2023, 29(8):3599-3615. DOI:10.1007/s11276-023-03419-0.

[4] Sheng-Tun,Li,and,et al.Knowledge discovery in financial investment for forecasting and trading strategy through wavelet-based SOM networks[J].Expert Systems with Applications, 2008, 34(2):935-951.DOI:10.1016/j.eswa.2006.10.039.

[5] Zheng Z B , Zheng Y G , Zhou X ,et al.The Mystery of"i"Intel New Era Start to the Intelligent Applications[J]. Office Informatization, 2010, 88(16):187‑196.DOI:10.1016/j.corsci.2014.07.043.

[6] Maglogiannis I , Makedon F , Pantziou G ,et al.Pervasive technologies and assistive environments: social impact, financial, government and privacy issues[J].Universal Access in the Information Society, 2011, 10(2):111-114.DOI:10.1007/s10209-010-0200-1.

[7] Mengjiao Z , Yu L , Jie H ,et al.Artificial Intelligence Based Multi-Scenario mmWave Channel Modeling for Intelligent High-Speed Train Communications[J].China Communications, 2024, 21(3):260-272.

[8] Yu L , Wang S , Lai K K .An intelligent-agent-based fuzzy group decision making model for financial multicriteria decision support: The case of credit scoring[J].European Journal of Operational Research, 2009, 195(3):942-959.DOI:10.1016/j.ejor.2007.11.025.

[9] Gao S , Wang H , Xu D ,et al.An intelligent agent-assisted decision support system for family financial planning[J].Decision Support Systems, 2008, 44(1):60-78.DOI:10.1016/j.dss.2007.03.001.

[10] Wang H , Mylopoulos J , Liao S .Intelligent agents and financial risk monitoring systems[J]. Communications of the Acm, 2002, 45(3):83-88.DOI:10.1145/504729.504733.

[11] Leibold M , Voelpel S C, Tekie E B. Managerial levers in cultivating new mental space for business innovation[J]. South African Journal of Business Management, 2004, 35(4): 61-71. DOI:10.4102/sajbm.v35i4.669.

[12] Wang A , Liu Y .Intelligent financial management of company based on neural network and fuzzy volatility evaluation[J].Journal of Intelligent and Fuzzy Systems, 2020, 38(1):1-14. DOI:10.3233/JIFS-179798.