

Research on the Path to Align Accounting Talent Cultivation with Industrial Demand in the Era of Intelligent Finance

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Abstract: *With the development of intelligent financial systems, many parts of accounting have changed; now it is no longer only about recording and reporting, but also about data analysis and strategic support. Therefore, the structure of the demand for accounting talents in the industry has also changed to focus more on technological integration, higher-order thinking and business skills. However, the current accounting talent cultivation system is out of date and does not meet the demands of the industry; specifically, there are deficiencies in the integration of knowledge systems, in the construction of competency frameworks, and in the design of evaluation mechanisms, etc., and it cannot keep up with the changes in the industry. The first two problems of adaptation will be discussed in this paper, and then an effective talent development plan for the intelligent finance era will be proposed. Based on the above studies, it has been proposed that the training goals should be in line with a competency map; knowledge and skills can be integrated through interdisciplinary curricula and contextualised teaching models; finally, a dynamic quality assurance mechanism based on continuous feedback needs to be established. The above measures will promote the all-around development of the talent cultivation system in line with the needs of the industry.*

Keywords: *Intelligent Finance, Cultivation of Accounting Talent, Industrial Needs, Development Path, Competency Matrix, Cross-disciplinary Integration*

Introduction

With the development of technology clusters for automation, data analytics and artificial intelligence, intelligent finance has changed the tools and methods of accounting work, and at a deeper level, has also modified the logic of value creation for the accounting function and the structure of competency requirements that the industry demands from accounting talents. The professional role of accountants is changing from that of information processors to that of value interpreters and management supporters, and as a result, problems in the current accounting talent cultivation system have become more prominent. At present, there is a structural mismatch in the supply and demand for talent because the accounting knowledge system has been slow to integrate technology; there is a shortage of high-level thinking and digital literacy in the competency development system; and there is a gap between the evaluation mechanism and the changing demands of the industry. Therefore, we need to systematically study how to align the cultivation of accounting talents with the demands of all industries, guide the direction of innovation in accounting education, and ensure the continuous vitality and value contribution of the accounting profession in an era of technological change. Based on the above, the purpose of this paper is to put forward some practical ways to achieve dynamic alignment by exploring functional transformation and investigating the current situation of the cultivation system.

1. Transformation of Accounting Functions and the Evolution of Industrial Demand in the Era of Intelligent Finance

1.1 The Connotative Expansion of Accounting Functions Driven by Technology

The development of intelligent financial systems has changed the boundaries of value creation in accounting work. Traditionally, the function of accounting has been to record and measure transactions; that is, to provide data for post-hoc analysis and control. With the development of technological clusters, automation, Big Data and artificial intelligence, etc., accounting has moved away from the traditional recording of process flow and is now focused on analysing data to provide decisions. The

aim of its work is no longer to organise financial data; now, all kinds of information in the ecosystem, such as business processes, data flow and external environment data, have been added. Therefore, the accounting function will be extended to cover more links in the front-end of business operations and strategic decision-making at all levels^[1].

The main work of the accounting function has changed considerably in recent years. The basic and routine work of bookkeeping and financial statement preparation is gradually being replaced by automated solutions, so the focus of accounting work is shifting to rule setting, anomaly detection, process optimisation and system management. The output forms of the accounting function are changing significantly; in recent years, in addition to the traditional standardised financial statements, many other analysis documents have started to appear for different decision-makers in the form of real-time dynamic dashboards, predictive model-based business intelligence, etc. With the development of the functions of accountants, they are now expected to assume many more responsibilities, such as data analysts, business consultants and risk managers; their main value is to provide practical decision support for management based on data and technology.

1.2 Structural Changes in Industrial Demand for Accounting Talent Competencies

Changes in the foundation of industrial technology have led to changes in the structure of demand for accounting talents. The requirements of the enterprise's accounting profession have risen, and now it is expected that professionals can offer strategic advice and support for the company's development in all aspects. The demand for change has been organised in a particular way, so people do not need to learn a few skills. At the demand side of the industry, accounting talents are now expected to have a strong foundation in general accounting knowledge and also be able to learn basic data science and applications of information technology, effectively use intelligent financial tools for data processing and model analysis, etc.

At the top of this list are higher-order cognitive functions and business acumen, etc. The accounting industry has begun to pay more attention to the essential thinking ability of accounting professionals in handling problems under accounting standards and professional judgment. At the same time, a deep understanding of business processes, cross-departmental communication and cooperation skills, and the ability to make data-driven business recommendations are now the new requirements for the value of accounting professionals. It can be seen that the model of industrial demand has changed; it is no longer an "operations executor" but rather a "strategic supporter" and "value co-creator". Although the old knowledge still needs to be obtained, the new knowledge will be combined with technology literacy, business sense and strategic thinking to form a complete system of all-round abilities.

1.3 Problems of Alignment in the Evolution of the Accounting Professional Role

Over the years, the role of accounting professionals has changed, and now they are facing all kinds of problems in adapting to the intelligent finance environment. The main reason for this change in the role is to become an interpreter and organiser of information, but there is a lag between the supply of knowledge and actual demand. The knowledge structure built by the old accounting education system and career paths has an inherent inertia and is slow to adapt to the new knowledge environment that has arisen due to technological integration. Accounting professionals should retain the original strength of accounting and learn new knowledge from areas such as information science and statistics at the same time. The change in the system of knowledge is a typical problem of alignment.

Another problem is that the sense of professional identity and the standards for valuing it are not clear. As the division of labour has become less distinct, the boundary between the accounting profession and other management functions (such as business analysis and operations management) is blurring, and its original professional characteristics may be lost. At the same time, the old indicators for measuring the value contribution of the accounting function, such as the accuracy of financial data and the timeliness of information disclosure, do not cover all the new contributions in areas such as data analysis, risk control and decision support. A delay in the reward system for this achievement will result in a mismatch of incentives for career development and thus reduce the motivation and will of accounting professionals to leave voluntarily. Therefore, the change in role is not only about the improvement of ability but also a problem of the entire system that requires reorganising the professional ecosystem^[2].

2. Structural Analysis of the Current Accounting Talent Cultivation System

2.1 Lag in Integrating the Knowledge System of the Accounting Discipline with Intelligent Technology

The structure of the knowledge system in the current accounting discipline has a long history, and its main curriculum cluster is still firmly rooted in traditional areas such as Financial Accounting, Management Accounting, Auditing and Tax Law. Material on intelligent technology, such as the basics of data analysis, principles of machine learning or design of intelligent systems, is often added to the periphery of the existing system in the form of independent elective courses or fragmented modules, but it is not organically and interdisciplinarily integrated with the core accounting knowledge. According to the structure of the core-periphery curriculum, technological knowledge is considered external support for rebuilding the theoretical system of accounting recognition, measurement, reporting and auditing and is not part of this system. Knowledge transfer is still at the level of software operation and process automation; it has not yet been explored in depth how algorithmic logic, data governance and ethics are integrated into and change accounting principles and professional judgment.

Another reason the knowledge system is outdated is that updates to the content of the textbooks have not kept up with new academic research and changes in technology. The coverage of new technologies in the classic accounting textbooks is limited to the introduction section, and there is no continuous theme of technological integration in the rest of the book. At the same time, the faculty in charge of teaching were mainly formed during the pre-intelligence period and did not have the ability to integrate new technology concepts with accounting theory. Due to this delay in the creation of knowledge and problems with its dissemination, the structure of the knowledge system for these learners has been damaged. In other words, although they are familiar with the rules of traditional accounting, they do not know the basic data logic and model mechanisms of intelligent financial systems, so they lack the analysis and adaptation ability to handle complex, unstructured business situations.

2.2 Lack of Higher-Order Thinking Skills and Digital Literacy in the Competency Development Framework

The Design Orientation of the current competency framework for training accounting talent has not been fully shifted away from training in standardised professional skills in the industrial era. Although information technology courses have been widely introduced in the cultivation programs, the understanding of "digital literacy" to be fostered is often shallow; it is frequently mistaken for proficiency in particular financial software or basic programming skills. Actually, the characteristics of digital literacy should be as follows: critical thinking about data, awareness of algorithms, digital security and ethics, the ability to use digital tools for collaborative innovation, etc. The top-level content is not in the current competency development system. Most of the application of technological tools in teaching is limited to verifying known conclusions or completing established processes; it has not yet been used to inspire students' exploration of the unknown or solve ill-defined, complex business problems^[3].

Cultivation of high-order thinking skills, such as critical thinking, systematic thinking and innovative problem-solving, has been overlooked in the current form of curriculum evaluation, which favours knowledge memorisation and rule application. If they are not well designed, case teaching and project-based learning will be reduced to a formality; they will fail to reproduce the actual decision-making conditions in the intelligent finance environment and will not have the characteristics of information redundancy, model uncertainty and multi-stakeholder games. Thus, the graduates will only be capable of carrying out routine operations and lack other skills. However, when facing the output of an intelligent system, we should not be ignorant of its basic assumptions, ascertain whether there is bias, and consider the business environment to make reasonable judgments and decisions. Therefore, there is a significant discrepancy between the competency structure mentioned above and the high-level thinking and all-round judgment required in the industry.

2.3 The Disconnect between the Talent Cultivation Evaluation Mechanism and Changing Needs of the Industry

The Evaluation Mechanism for Talent Cultivation is to guide the teaching and learning behaviour of students. Most of the current assessment systems focus on evaluating students' learning of deterministic

knowledge and their ability to solve standardised problems, and they are in the form of closed-book tests and standardised test papers. The evaluation model above will promote memorisation and imitation, but it will not encourage exploration and innovation. It is difficult to know how well students can integrate various knowledge, use intelligent tools, apply professional judgment and offer solutions in dynamic and open-ended situations. The contents of the assessment do not meet the main performance indicators that the industry values, such as the ability to solve real-world problems, the desire for lifelong learning and teamwork; thus, there is a gap between the signals of educational outcomes and those required by the labour market^[4].

Another is that there is only one point for evaluating subjects. Most of the evaluation authority is held by the teachers of the university, and industry professionals or other external expert groups are rarely included in the assessment of the main links in the training chain. There is no continuous flow of feedback from the demand side, so the educational institution will not be informed in time of any changes or shifts in the weighting of competency demands by the industry. The feedback loop of the evaluation results is to determine the academic level; it is not used to find problems in the cultivation system and improve the iteration of curricula and teaching methods. With the change in the demand for talents in the industrial technology ecosystem and the development of intelligent finance business models in recent years, the old static and inward-looking evaluation model can no longer meet these new demands, and thus, the talent cultivation system has shown some inertia in responding to external changes.

3. Building a Path for the Alignment of Accounting Talent Cultivation with Industrial Needs

3.1 Repositioning the Objectives of Accounting Talent Cultivation in Light of a Competency Matrix

The new goals for cultivating accounting talent should be based on an actual map of all levels of professional ability. The matrix should organise the attributes of knowledge, skills and literacy in the intelligent finance environment systematically. The three are the general qualities of an accounting professional: technological literacy and application skills, as well as business acumen and strategic thinking. Horizontally, it shows the progress of ability in all areas from beginner to advanced. The aim of this repositioning is to change the focus of training from learning individual knowledge points to cultivating all-round abilities that can be flexibly combined and used to solve all kinds of problems. The goal of the training is to nurture accounting value managers who are good learners of intelligent systems, can use data for decision-making, and possess professional ethics.

According to the competency matrix, the goals of education should be set in reverse order. The objectives of training should be in the form of observable and measurable learning results, and these need to be specified in all sections of the curriculum and teaching activities. Therefore, the old general goal of teaching disciplinary knowledge should be replaced with specific promises of new kinds of output, such as the ability to build analytical models, process design skills, risk assessment capacity and human-machine collaboration decision-making ability. The purpose of the above restructuring is to change the form of industrial demands into definite and visible requirements for schools. Therefore, it will be guaranteed that the exit conditions of the talent cultivation program meet the entry requirements for the intelligent finance position. To carry out backward design, one should reduce the management barrier among departments and disciplines and form curriculum development teams that include disciplinary experts, technology specialists and industry representatives, etc. Therefore, the demand for competence can be divided and combined without loss in the design, implementation and evaluation of each teaching unit to build a new system of talent education that is highly consistent in terms of goals, process and results.

3.2 Innovation in Interdisciplinary Curricula and Contextualised Teaching Models

The newness of the curriculum system should be the integration of all kinds of knowledge. We need to add technology-oriented courses, but more importantly, we should achieve an actual intersection between accounting and other fields such as data science, information management, behavioural economics, design thinking, etc., by restructuring the content and system of the curriculum. Some courses will cover all the above, such as "Accounting Data Analytics", "Design and Governance of Intelligent Financial Systems" and "Business Process Automation and Internal Control". The teaching content of these courses will be based on real-world financial and business problems, so the combined application of algorithmic logic, data pipelines and accounting rules will be naturally integrated. The

first step in curriculum construction is to set out difficult problems and thus motivate students to learn and integrate knowledge from all subjects organically^[5].

Curriculum reform should be carried out in many areas of teaching. The teaching model should aim to create a very simulated or completely realistic work environment, such as analysis projects based on real enterprise data pools, financial due diligence and valuation model construction that imitate the entire process of a corporate merger and acquisition, or response exercises to deal with failures and ethical problems in intelligent financial systems. Project-based learning and case studies have been made more interesting, and at the core of this is the creation of a decision-making situation under conditions of information asymmetry, time pressure and conflicting goals. Students should be able to use all parts of their competency matrix in this setting, and by working in a group, they will learn through tools and experiences. At this time, they will absorb the knowledge, improve their thinking, and build mental maps to face the unknown.

3.3 Cultivation Quality Assurance Mechanism Based on Continuous Feedback and Dynamic Adjustment

The Quality Assurance System for the Alignment Path should have some flexibility in the face of changes in the external environment. The first is that a feedback loop has been established among all parties to continuously gather and learn about the quality of cultivation. Expand the sources of feedback data beyond the traditional internal evaluation of academic performance and graduate questionnaires; regularly collect evaluations from industry mentors, process the performance data of students during internships and in project-based work, track alumni career development information, and obtain dynamic intelligence on industry technical standards and job competency models. All the above data points are indicators that can be used to determine whether the cultivation results meet the demand. In order to obtain reasonable feedback, we will develop a single rubric for evaluating competency performance and unify the method of data collection. Learning analytics technology can be used to collect and analyse many kinds of data on students' behaviour, process artefacts and final results in integrated curricula and contextualised projects. It can help us find the strengths and weaknesses of competency development and plan corresponding countermeasures^[6].

Based on the information gathered from all sides, we will modify the teaching plan and teaching materials at the school accordingly. Periodically analyse the collected feedback data and, on the basis of this, adjust or improve the cultivation plan, modify the content of the courses, enhance teaching methods, allocate teaching materials, etc. Break away from the fixed management of a fixed curriculum and have the teaching team flexibly adjust it according to the circumstances. Continuous quality assurance should be carried out, and it should not only be done at the time of an accident. The goal is to build an intelligent and open talent cultivation system that can learn from changes in the industrial ecosystem, adapt accordingly, and meet the various needs of the industry in a timely manner.

Conclusion

Research on the development of accounting functions, changes in the structure of industrial demand, and the alignment gap with the current talent cultivation system in the era of intelligent finance should be carried out. Based on the above research, the main direction for the development of accounting functions is now data analysis, process governance and strategic insights; as industrial demand gradually changes, it is moving towards composite capabilities that integrate technological literacy, business acumen and high-level cognition. At present, there is an inertia in the cultivation system of knowledge integration, competency development and evaluation feedback. Therefore, this paper puts forward a way to achieve all three goals of objective repositioning, innovation in curriculum and teaching, and dynamic quality assurance. Therefore, a competency map is used for backward design, knowledge and skills are integrated through deep interdisciplinary collaboration and contextualised teaching, and the cultivation system can be adjusted according to changes in the environment by collecting feedback from all sides and making prompt revisions. In the future, we will continue to improve and quantify all parts of the competency matrix, strengthen the construction of the industry-education collaborative ecosystem, explore how intelligent technology will change the theoretical system and ethical foundation of accounting, and make corresponding adjustments in light of this alignment.

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