

# Cultivation of International Accounting Talents under the Background of Informatization

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**Abstract.** With the rapid development of new technologies such as the internet of things, big data, artificial intelligence, mobile internet, cloud computing and block chain, accounting professional education is facing profound changes and challenges. In the future, finance will transform from financial accounting to management accounting. Under the background of informatization, it is urgent for colleges and universities to keep up with the pace of social development and take industrial development and enterprise transformation and upgrading as the guidance and the support of personnel training and knowledge innovation. It is also necessary to strengthen the training of international accounting personnel from comprehensive, applied, cooperative and innovative aspects.

**Keywords:** Informatization, Big Data, Internationalization, Accounting Education

## 1. The Background of New Scientific and Technological Revolution

Under the background of new era, new orientation and new goal of economic and social development and new scientific and technological revolution, accounting professional education is facing profound changes and challenges [1]. The rapid development and application of the internet of things, big data, artificial intelligence, mobile internet, cloud computing, blockchain and other new technologies as well as VR/AR and other new technologies have challenged educational transformation. Technological innovation is driving the transformation of education and school forms.

The work of traditional accounting professionals will be more and more replaced by computers in the era of great wisdom shift cloud, and the number of common accounting professionals will gradually decrease. The value, content, scene and tools of accounting work will obviously change profoundly. However, it is also recognized that the forecasting, analysis, decision-making and other work involved in management accounting requires the comprehensive ability, keen insight and comprehensive professional judgment of accountants [2]. In this context, the development of management accounting ushered in a very good opportunity. Higher education needs to provide intellectual and human security and guidance for this development opportunity.

For business financial and strategic financial personnel engaged in higher-level functions, they give up the original simple and repetitive accounting and turn to more value-added financial forecasting, decision-making, analysis, control, risk management and other aspects.



## 2. Analysis of The Impact of New Scientific and Technological Revolution

### 2.1. Changes of Driving Business Model and Management Model

Under the impetus of the new scientific and technological revolution, all industries must share the basic resources, technical resources, human resources and other resource elements, reduce the cost of information search, transportation, production, service and transaction, and the type and size of transaction costs among various business entities will change accordingly. The emergence of shared business model makes the corresponding management model inevitably change. How to reduce transaction costs, how to put forward new requirements for accounting information, accounting objectives and functions will change accordingly.

### 2.2. Simplify the Routine Accounting Treatment Procedures and Greatly Improve the Efficiency of Accounting

The influence of the new scientific and technological revolution on the accounting procedure is mainly reflected in the routine business processing and methods. The promotion of new technologies such as VR/AR and practical applications such as financial robots and tax auditing and sharing platforms have basically realized the informatization and standardization of routine accounting processing procedures and greatly reduced the processing costs, which will inevitably have a revolutionary impact on traditional accounting [3]. The application of accounting computerization changes paper storage into digital storage and improves the efficiency of accounting and inquiry. RPA applications are relatively mature, while artificial intelligence is just beginning to be used in financial functions. The use of these technologies provides an opportunity to automate the management of a growing number of daily financial tasks, freeing up time and energy for more value-added activities [4]. With continuous development of information technology, the accounting standardization, specialization, streamline work will be replaced by the computer, more and more accounting personnel will be liberated from the mechanical work, will have more energy to focus on accounting as “management activities” needed to solve problems, gradually involved in the business management level, data management level, and the strategic management level of management decision-making activities.

### 2.3. The Nature of Accounting Has Not Changed, but Its Functions and Requirements Have Changed Greatly

With the development of information technology, the work of accounting “information processing” can finally be replaced. The essence of accounting as a management activity is clearer and more important, and its function gradually shifts from business management to strategic management.

(1) The powerful force of new technology is enough to support larger radius and stronger function of accounting activities, but it also puts forward higher requirements for the standardization of accounting information. How to collect and standardize more comprehensive data, how to support more complex algorithms and analysis, how to support the identification of underlying profit opportunities and risks, and even how to help make business decisions are the objective requirements for the transformation of accounting functions in the context of the new scientific and technological revolution.

(2) New technology improves the capability of financial management .ERP and SAP software application, make enterprise logistics, cash flow, information flow comprehensively integration, accounting is no longer an independent accounting departments and provide financial information, but in the overall management of the integrated into the enterprise, by integrating enters sells saves the information flow, provide financial planning, financial analysis, financial decision-making and so on, improve enterprise business processes, improve enterprise core competitiveness. Enterprise management software makes accounting step out of the boundary between departments and become a change at the enterprise level.

(3) New technology facilitates the realization of financial services. Financial shared services is a kind of innovation management mode, its essence is driven by information network technology, the

change and innovation of management mode, through the enterprise each business unit “decentralized” certain repetitive business and process integration to the Shared service center for centralized processing, in order to promote the enterprise focus on the limited resources and energy to focus on their core business, to create and maintain a long-term competitive advantage, and achieve integration of resources, reduce costs, improve efficiency, ensure the quality and the purpose of customer satisfaction. Under the new scientific and technological revolution, due to the large amount of standardized and repetitive work in the financial field, it is easier to integrate into the centralized operation of the sharing center [5]. The establishment of the financial sharing center by group enterprises can give full play to the advantages of scale, reduce the operation cost, improve the operation efficiency and ensure the service quality. Small and medium-sized enterprises can adopt the service outsourcing mode and transfer the financial accounting work to the sharing center to complete.

(4)The big data and cloud computing technology makes unstructured, non financial information to collect and apply to enterprise management decision practice, the enterprise can make use of the crawler technology and OCR recognition technology, the enterprise internal and external a lot of financial and non-financial information data collected and stored in the cloud computing platform, provides the accurate decision-making service for managers, broke through the accounting information obtaining a limitation that difficult and not comprehensive, improve the quality of accounting information.

(5)Block chain technology makes no one node can record financial data alone, to avoid the single financial data by artificial control and the possibility of tampering with fake, because node enough charge to an account at the same time, theoretically ruled out the loss of financial data, to ensure the safety of financial data, authentic, reliability, solved the problems in the field of accounting integrity problems, accounting information will enter the era of free and fair.

#### 2.4. The Influence of Professional Education in Accounting and Finance

With the increasing use of robot process automation and artificial intelligence, the impact of new technology on the accounting profession has become the most concerned and urgent issue at present [6]. As new technological developments provide opportunities for automated management of an increasing number of daily financial tasks, giving accountants the time and energy to perform more value-added, creative activities, “data service officers” will play an extremely important role in the future. In addition, the application of new technology improves the presence of the financial department in the whole enterprise, and improves the agility and responsiveness of the financial team. It also enables the finance department to move up the value chain and play a more strategic role throughout the enterprise by working with the business team to increase revenue levels.

**Table 1.** Comparison of curriculum systems of accounting major in typical universities at home and abroad

Sample schools	Course category	General studies		Basic Courses (Accounting)		Specialized Courses (Accounting)		Optional courses		Others (internship, practice, thesis)	
		Credits	Proportion	Credits	Proportion	Credits	Proportion	Credits	Proportion	Credits	Proportion
DZ Universities(abroad)	120	40	33.33%	45	37.50%	21	17.50%	11	9.17%	3	2.50%
YLYN Universities(abroad)	124	42	33.87%	49	39.52%	26	20.97%	7	5.65%	0	0.00%
MXG Universities(abroad)	120	54	45.00%	28	23.33%	17	14.17%	21	17.50%	0	0.00%
XM Universities (Domestic)	164	52	31.71%	38	23.17%	52	31.71%	0	0.00%	22	13.41%
SHCJ Universities (Domestic)	169	62	36.69%	36	21.30%	44	26.04%	4	2.37%	23	13.61%
DWJM Universities (Domestic)	173	59	34.10%	42	24.28%	27	15.61%	17	9.83%	28	16.18%

Note: Due to data confidentiality, the names of the sample universities are abbreviated with initial capital letters only.

This paper summarizes the curriculum system of accounting major in typical universities at home and abroad, and makes a comparative study. It is found that the current international curriculum

system of accounting major is not enough to meet the needs of new technology and intelligent talents. The details are shown in Table 1.

The high integration of new technology and traditional accounting, the impact of new technology and new technology on the form and learning mode of higher education and the acceleration of the rate of scientific and technological progress urgently require school education to keep pace with the pace of social development, so as to support and guide the talent cultivation and knowledge innovation for industrial development and enterprise transformation and upgrading.

### 3. Suggestions on International Accounting Personnel Training under the Background of New Scientific and Technological Revolution

#### 3.1. Expand the Knowledge Graph of Students and Get Out of the Small Circle of Accountants

##### (1) Shift the center of gravity

The cultivation of accounting talents should adhere to the goal of adapting to the needs of national development strategy, and fully explore the characteristics, abilities and development trend of accounting talents in the digital and intelligent environment. The accounting education should expand the degree of professional compound on the basis of consolidating the accounting theory. We should set up the overall concept, expand the enterprise financial thinking, from the micro specific accounting work to expand the macro comprehensive business management work, control the operation of funds, enhance the vitality of the enterprise, become the creator of corporate profits, capital market control.

##### (2) Expand interdisciplinary courses and rebuild the curriculum system

The realization of the training goal depends on the scientific curriculum system. To embed the informationization, internationalization course of accounting professional training scheme, rather than simply replaced, but by adjusting the original professional course system, optimize course structure, course content, achieve the goal of training talent of "soft", according to replace the embedded type and adjust the thinking of professional courses, improvement of the teaching plan has not changed the original both the advantage of professional training, and can achieve the training objectives of information and international talents.

By revising the curriculum syllabus and curriculum standards, the curriculum content system is reconstructed, and the contents such as big data, informatization and intelligent audit are included in the teaching and assessment scope of this course [7]. Add big data analysis technology and audit informationization courses to the talent training program, such as big data audit, financial audit, information system audit, resource and environment audit, engineering audit, financial audit and other special audit modules; through the model of cross-specialty co-construction with the School of Information Engineering, relevant knowledge is taught.

**Table 2.** Curriculum system of international accounting majors

Names of Course Category	Courses	Credits	Percentage of total credits
General courses	Chinese literature, English, Writing, Oral communication, History, Western literature, Situation and policy, Professional ethics education, Sports, etc	72	33.03%
Specialized Basic Courses	Management, Computer science, Mathematics, Linear Algebra, Probability and Statistics, Cost Accounting, Marketing, Audit, strategic Management	42	19.27%
Major Direction Courses	ACCA and CIMA 14 courses	68	31.19%
Professional Elective Courses	China accounting, China Financial Reporting, China Tax Law, China Accounting Standards	6	2.75%
Practice teaching	Professional practice, Graduation practice, Graduation thesis, etc	30	13.76%
Total credit		218	100%

Firstly, increase the class time ratio of strategic management, organizational behavior, innovation management and other courses and improve their assessment requirements.

Secondly, add data structure courses to cultivate students' data structure knowledge and enhance their ability of data analysis; Increase the training of computer programming, data mining algorithm, financial decision-making and strategic management knowledge; In the teaching process, it builds a variety of commercial real scenes, constructs a new big data and cloud computing integrated teaching experiment platform, improves students' comprehensive ability, forward-looking and innovative thinking, and enhances students' ability to adapt to the new technological environment and market competitiveness.

Thirdly, Add courses of statistics and econometrics. Data collection and collation is no longer a difficult problem, and finding new research content through data mining and analysis will become a skill that must be developed by researchers. New technologies will enable future research paradigms to make a leap from empirical research to intelligent research.

### 3.2. Further Improve Students' Ability to Observe and Explain Problems and Phenomena

Innovation ability is an important ability and quality for new accounting talents in the information society. Innovative talents should have strong innovation knowledge and the courage to practice and explore, and be able to find and solve problems keenly.

#### (1) Attach importance to the cultivation of theoretical literacy and positive logical thinking

Cultivate students' thinking quality and thinking ability, attach importance to cultivate students' dialectical logical thinking ability, cultivate a large number of people with innovative consciousness. Some colleges and universities still pay insufficient attention to the rigorous formal logic in their education and teaching, and they lack the reasoning training of formal logic and dialectical logic in both teaching content and teaching methods. Put an end to the "almost" "so-so" thought, strive to elaborate, fine, delicate; Enlighten the college students to know more about the nature, and get accurate results through in-depth empirical analysis, so as to better cultivate the college students' scientific thinking method and critical ability, and better cultivate the innovative spirit of breaking through the norm and daring to think and try.

#### (2) Better integrate academic research and teaching practice, and apply them to teaching practice

Under the background of informationization, teaching has changed from "teachers, classrooms and textbooks" to "student development, student learning and learning effect", and scientific research "presents a highly comprehensive development trend on the basis of high differentiation". These changes make it more and more urgent for teaching and research to develop together and promote each other.

The development of information technology creates conditions for the fusion of the two. Information technology has exerted a great influence on higher education, making education and teaching informatization widely available. "Intelligent learning", "interactive learning" and "project-based learning" have become the new normal education, and teachers and students have changed from one-way teaching into a learning community of joint exploration [8]. It can be predicted that with the rapid development of 5G technology, cloud computing, big data and artificial intelligence, education and teaching will gradually change from the intelligence of infrastructure to the internal empowerment led by information technology.

The proportion of repetitive skill training is reduced, which lies more in the guidance of principles and methods. The undergraduate tutor system can be established and implemented, and online and offline academic discussion activities can be organized regularly to help students fully understand the professional course system and the relationship between courses.

### 3.3. Attaching Importance to Business Ethics and Accounting Professional Ethics under the Background of the New Scientific and Technological Revolution

One of the core competitiveness of accounting is reliability, which is especially important for business ethics and accounting professional ethics under the background of informatization.

(1)When designing the curriculum system, consider the study of professional ethics as an independent unit.

(2)In professional ethics course teaching way, by the professional ethics of threats and challenges case studies and role playing, group discussion, and other related manner, prompted the use of professional judgment and moral judgment to deal with ethical dilemmas that may be met in future career, thus strengthening the professional ethics of sensitivity, improve the professional sense of responsibility.

(3)Further strengthen and professional bodies, education institutions and cooperation of various entities, on the one hand, by inviting outside school practice teacher to lecture, or lectures will be directly embedded in the curriculum system, through the guide students to think different Angle of view of accounting, strengthen the cohesion theory and practice, for the professional ethics have a more comprehensive understanding and intuitive; On the other hand, through social activities and internships, simulate social interaction, and cultivate students' professional ethics sensitivity and sense of responsibility from the undergraduate stage.

### 3.4. Pay More Attention to Our International Vision

Business model and management technology without national boundaries, economic globalization drives the global accounting standards. If we want to make accounting more effectively serve China's rapid economic development needs, the current domestic economic development direction and business model change and management requirements must be understood thoroughly, and to understand Chinese understand all over the world, if we don't understand all over the world, we can't really understand China. Only by understanding the institutional background and key factors of international differences can we better train the local talents our country needs.

## 4. Conclusions

Colleges and universities must strengthen the integration of industry and education and science and education, conform to the change of accounting from “accounting type”to “management type”, and integrate accounting major groups with new industries, new forms of business and new technologies across boundaries, form a mapping relationship with industrial post groups, and realize accurate docking. Implement dynamic adjustment of the profession, and form a smart accounting professional group with accounting as the core, consisting of financial big data application, management accountants, certified public accountants, tax agents, international accountants and other directions.

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