Innovative Training Model for Accounting Talents under the Background of New Liberal Arts

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Abstract: The cultivation of innovative talents is an inevitable requirement of the new scientific and technological revolution and industrial transformation, and it is also one of the important contents of the new liberal arts construction. In the context of the VUCaera, the career development of accounting professionals is facing severe challenges. At present, the traditional training mode of finance and accounting talents can no longer adapt to the development of the times, nor can it meet the needs of the market. It is especially necessary to explore a set of training mode of finance and accounting talents with environmental adaptability under the background of new liberal arts construction. Based on the analysis of existing related research, this paper first discusses the influence of the new liberal arts construction on accounting majors, then analyses the obstacles faced by the cultivation of finance and accounting talents against the backdrop of the new liberal arts development, and finally proposes ways to improve and innovate the training model of finance and accounting talents.

1. Introduction

In China, the concept of "new liberal arts" was first proposed in August 2018 when the country emphasized the development of the "four new" construction. Its meaning is that, against the backdrop of new technological revolution facing the world, the economy entering a new development stage, and Chinese social development entering a new era, interdisciplinary integration, inheritance and innovation, collaboration and sharing are the main paths to promote cross-disciplinary integration, make efforts to break through the thinking mode of traditional liberal arts, and ultimately form innovative and development all liberal arts education.

According to Table 1, it can be seen that since the official launch of the "New Liberal Arts" construction in 2019, relevant Chinese departments have continuously formulated and issued a series of documents in recent years to fully accelerate the construction of new liberal arts. In this context, major universities and disciplines across the country are actively exploring new talent training models, hoping to provide strong support for the country's high-quality development of talent reserves. Finance and accounting majors have also improved their training objectives under the background of scientific and technological progress and changes in social needs. They no longer only focus on cultivating accounting-type accountants, but transform to cultivate compound accounting professionals who are familiar with accounting business and can use Big Data
technology to analyze and make decisions. At present, many colleges and universities in China have taken action. Tsinghua University, Southwestern University of Finance and Economics, Central University of Finance and Economics, Dongbei University of Finance and Economics and other colleges and universities have set up special courses on "artificial intelligence and accounting development" and "Big Data and financial decision-making", or related professional courses, which shows that under the background of the new liberal arts, the training mode of innovative accounting talents is gradually improving.

Table 1: The Construction Process of New Liberal Arts in China

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
<th>Significance</th>
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<tbody>
<tr>
<td>2019.4.29</td>
<td>The Ministry of Education's &quot;Six Excellence and One Top-notch&quot; Program 2.0 was officially launched.</td>
<td>Marking the &quot;new liberal arts&quot; from concept to practice.</td>
</tr>
<tr>
<td>2020.11.3</td>
<td>The Ministry of Education issued the &quot;New Liberal Arts Construction Manifesto&quot;.</td>
<td>The importance of building new liberal arts is emphasized again, and it is proposed to build a talent training model with Chinese characteristics based on the state of China.</td>
</tr>
<tr>
<td>2021.3.2</td>
<td>The Ministry of Education launched a work conference on the implementation of new liberal arts construction.</td>
<td>The decision to start a new liberal arts research and reform practice project is proposed, which helps to comprehensively promote new liberal arts construction.</td>
</tr>
<tr>
<td>2021.11.2</td>
<td>The Ministry of Education announced the first batch of 1011 new liberal arts research and reform practice projects identified.</td>
<td>Contribute to the implementation of the new liberal arts construction and build a world-class liberal arts talent training system with Chinese characteristics.</td>
</tr>
</tbody>
</table>

2. Related Research Status

With the advent of the digital economy era, the external environment such as the economic environment, technological environment, and competitive environment in which enterprises live has undergone earth-shaking changes. The production and operation models adopted by enterprises and the coping strategies they choose have also changed. Based on this, it is necessary and urgent to innovate the training mode of accounting talents under the background of new liberal arts.

Some scholars combined the era background of "Internet +" and artificial intelligence to conduct research on the cultivation of innovative accounting talents. Cai Can(2022) combined the impact of artificial intelligence on the accounting industry, analyzed the current situation of the accounting talent training model in colleges and universities, sorted out the challenges brought by artificial intelligence to the accounting talent cultivation in colleges and universities, and proposed that colleges and universities should focus on talent training plans and goals, talent training ideas and methods, talent training structure and other aspects of innovative accounting talent training model[1]. Li Guiying (2016) believes that under the background of the vigorous development of "Internet +" technology, the society needs more innovative and high-quality accounting talents. It is expected to cultivate innovative accounting talents who can adapt to the new era [2]. Warren Jr J D and others(2015) hold that Big Data helps the development of finance and accounting, such as the video, audio, and textual information make available via Big Data can provide for improved managerial accounting, financial accounting, and financial reporting practices[3]. Ann C Dzuranin and others (2016) discussed the role of IT auditors in helping organizations meet compliance requirements and ensuring that information systems add value to the organization and addressed the future of IT audit in a world of advanced analytics and emerging technologies[4]. Alnoor Bhimani and Leslie Willcocks (2014) conclude that the possibilities for the digitally enabled business create a range of ‘information literacy’ challenges as well as new possibilities for accounting information providers [5].

Accounting majors can be specifically divided into accounting majors, financial management...
majors, and auditing majors. Some scholars use specific classification majors as objects to explore. Tang Yanjun and others (2020) have explored a reform path for the cultivation of accounting talents, specifically integrating ideological and political education with professional education, integrating on-campus tutors with off-campus tutors, integrating digital technology courses with professional courses, and integrating theoretical teaching with practical teaching, the culture of the industry and the culture of the campus are integrated to jointly build a new path for the cultivation of new liberal arts accounting talents based on the concept of cross-border integration [6]. Based on the new liberal arts education concept, Zhang Xiaofei and others (2020) analyzed the reform of the financial management curriculum system and the improvement and optimization of the teaching content under the background of the new liberal arts, so that it can be beneficial to the cultivation of financial management professionals, and provide references for managing professional talents and reforming education and teaching [7]. Tang Yanjun and others (2021) took the opportunity of the construction of the new liberal arts to construct an audit talent training target model that adapts to the new era: the "Diamond" model, and explored the "four spans" training program of cross-disciplinary, cross-cultural, cross-technical, and cross-organizational circles. The training program is aimed to cultivate audit talents with international strategic vision, Big Data analysis ability, strong comprehensive quality and sustainable development ability [8].

In addition, some scholars have taken specific colleges and universities as examples to explore a training model for accounting talents that is suitable for the development of the current era under the background of the new liberal arts. For example, Lu Sha and others (2022) took Sichuan Normal University Business School as an object, and based on the existing resources and capabilities, explored a "cross-disciplinary, cross-content, cross-process, cross-platform, cross-time-space, and cross-dimensional" accounting talent training system [9]. Cai Xianjun and others (2022) took the reform of intelligent accounting personnel training in Nanjing Audit University as an example, analyzed the current problems in the cultivation of intelligent accounting personnel from the perspective of new liberal arts construction, and discussed the principles and specific practical methods that need to be followed in the reform process, with a view to inspire the reform of accounting personnel training system in colleges and universities in China [10].

3. The influence of the Construction of New Liberal Arts on the Development of Accounting Majors

3.1. Digitalization and Intelligence of Accounting

Today, with the vigorous development of technologies such as artificial intelligence, Internet +, and block chain, most of the traditional accounting work can be replaced by artificial intelligence. What the market needs are more accounting talents who can fully tap the value of the enterprise's accumulated data using Big Data, intelligent systems and other technologies, and conduct multi-dimensional analysis to empower the for business decision-making. Due to the large number of daily business transactions and the huge amount of accumulated data, it is difficult to achieve efficient analysis and decision-making by relying solely on traditional financial capabilities or manual processing. Based on this, many new technologies have emerged in the field of accounting, such as the current OCR technology, RPA technology, building a SaaS platform, using software such as python to clean and analyze the data accumulated by enterprises, building data centers, cloud accounting and so forth. All of which are the embodiment of digitalization and intelligence in accounting.
3.2. Compounding of Accounting Talents

With the rapid development of artificial intelligence, in most people's perception, accounting will be the most easily replaced industry. In fact, some accountants are facing severe challenges of unemployment. The introduction of the new liberal arts concept, through the interdisciplinary approach, changes the traditional accounting work methods and content, which may alleviate the employment situation of accountants, but at the same time, it also puts forward the requirements for the level of professional frontier knowledge of accountants. For accounting majors, it is necessary to inherit the advantages of the traditional training model, and at the same time integrate science and engineering into accounting majors to form a cross-integration of arts and sciences, break through the traditional thinking mode, and achieve new thinking and new cognition. Finance and accounting students should grasp the trend of the times, apply professional knowledge such as computers and statistics to the accounting industry, integrate various disciplines, and become a compound accounting talent who is not only familiar with accounting business but also able to use intelligent technology to make analysis and decision-making.

4. Obstacles Facing the Cultivation of Accounting Talents under the Background of New Liberal Arts

4.1. Outdated Concept of Educating People

The target of talent training is students. One of the necessary conditions for the innovative training model to be effective is that students' self-positioning must meet the requirements of the times under the background of the new liberal arts. At present, because the training mode of colleges and universities is still in the process of reform, the traditional training mode still affects the students' self-positioning. The courses offered by traditional accounting majors are only related to the accounting major itself, and usually only involve accounting and supervision, and there are few courses related to the efficient decision-making analysis ability required by the current market. Based on this, the imperfect concepts of cross-education and collaborative education in colleges and universities have made some accounting majors still position themselves in the traditional accounting of accounting and reimbursement. Nowadays, the demand for accounting talents in the market is more for compound talents who can fully tap the value of accumulated data and empower business decisions. This change forces universities to change the outdated positioning of the talent training model, otherwise it will not be able to meet the requirements of the new era.

4.2. Insufficient Teaching Staff and Lack of Ability

In domestic colleges and universities, the teaching resources of accounting majors are generally composed of young doctors and teachers with rich qualifications. Although young doctors can bring fresh blood to the teaching team and provide cutting-edge accounting expertise, most of them stay in colleges and universities after graduating from doctoral degrees, lacking practical experience, and accounting majors just attach great importance to practical operations. If students only learn by receiving professional knowledge, but cannot apply it well in practice, then the cultivated accounting talents are just "all show and no substance" and cannot meet the needs of market talents. Most of the teachers with rich qualifications are finance and accounting personnel who have been working for many years before and have turned into college teachers. There is no doubt that they are leaders in the accounting industry and can fully guide and educate students in practice. However, most of these teachers used to be engaged in traditional accounting work, the understanding of the accounting industry in the new era is relatively scarce. Therefore, the courses they teach usually
only involve traditional accounting knowledge related to accounting and supervision, and cannot well integrate Big Data, artificial intelligence and accounting. It is difficult to achieve the purpose of cultivating new accounting talents. In addition, scientific research papers account for a large part of the assessment and reward and punishment mechanism for teachers in colleges and universities, which makes teachers spend a lot of time and energy in scientific research work and complete college assessments by publishing papers, so it will crowd out a lot of research on how to optimize teaching model of the course, reducing the teachers' willingness to explore the new training mode of accounting talents or improve the teaching plan, but relying only on the traditional teaching mode of accounting, which is against the original intention of training accounting talents in the context of the new liberal arts.

4.3. Imperfect Curriculum in Colleges and Universities

At present, the courses of accounting majors in most domestic colleges and universities are still set and arranged according to the traditional model, seldom linking courses with enterprise practice, and it is difficult to meet the needs of today's enterprises for accounting talents. In most domestic colleges and universities, the education and training for undergraduates and masters students is still dominated by traditional accounting courses such as basic accounting, financial accounting, financial management and auditing, while frontier courses such as Big Data and decision-making, artificial intelligence and accounting development professional knowledge is mostly popularized in the form of minors or lectures, which cannot meet the requirements for the cultivation of new accounting talents under the background of the times. Although domestic colleges and universities have begun to explore the aspect of accounting education, they are still unable to break through the shackles of the traditional accounting education model, making it difficult for accounting graduates to meet the talent needs of enterprises. In addition, although many colleges and universities offer non-accounting general education courses such as computer science, the teachers of general education courses generally do not have the knowledge background of accounting, so they only teach basic entry-level knowledge and do not discover how to apply what you have learned to the accounting profession. Based on this, students have limited abilities, and it is difficult to integrate the knowledge of other disciplines with their own professional knowledge. Finance and accounting colleges pay less attention to the education of general education courses that seem not to be strongly related to majors, such as computers. Subsequently, students learning enthusiasm is not high. In this era of digitalization and informationization, artificial intelligence is gradually replacing traditional accounting work. Students majoring in accounting urgently need to receive education in science and engineering such as computers and statistics to meet the needs of the Big Data era. However, the training mode cannot meet this demand.

4.4. Difficulty Adapting Textbook Content to New Requirements

Usually, the compilation of textbooks takes a long time. The textbooks of traditional accounting professional courses have been gradually improved after years of revisions, and will be adapted with changes in a series of standards such as accounting standards and auditing standards. The concept of "new liberal arts" was only proposed in 2018, which is only four or five years ago. At the same time, it has not been long for accounting majors to establish "Artificial Intelligence + Accounting" and "Big Data+ Accounting" and other personnel training courses to adapt to the new era of talent training, which is still in the stage of exploration and experimentation. In this context, the knowledge system of cross-disciplinary integration has not yet been completed, the relevant theories are still being perfected, and the corporate practice cases that can be compiled into textbooks still need to be further explored and analyzed. Due to the lack of support from relevant
theories and practices, the existing textbooks lack content with teaching significance, and it is
difficult to achieve the goal of cultivating financial and accounting talents under the background of
the new liberal arts. In addition, in order to compile teaching materials that meet the requirements of
the new era, it is difficult to rely solely on the teaching staff of accounting majors.

4.5. Lack of Practical Operation and School-enterprise Cooperation

For most colleges and universities and majors in China, a common problem is the lack of
resources for internship and practice. This problem is especially obvious for accounting, which
relies on a lot of practical operations. The first is the level of colleges and universities. On the one
hand, there is a lack of "practical factories" in the school. It is difficult for colleges and universities
to provide students with practical places and practical cases, and they cannot effectively cultivate
students' hands-on ability and still stay in the teaching of theoretical knowledge. On the other hand,
in terms of school-enterprise cooperation, the biggest problem is that it is difficult for universities
and enterprises to achieve real integration, especially for interns and fresh graduates to integrate the
theoretical knowledge learned in the classroom into the work practice of enterprises. At the
enterprise level, although enterprises are extremely eager to introduce talents, the working ability
and business level of most college graduates cannot meet the talent needs of enterprises. As a
profit-making organization, the business goal is to achieve profitability, but most college students
cannot bring profits to the company. On the contrary, interns may become a burden to the company.
If things go on like this, there will be an asymmetric supply-demand contradiction between
universities and enterprises, and more and more enterprises will not be willing to maintain
school-enterprise cooperation with universities. Especially since the outbreak of the global
COVID-19 in 2020, some enterprises are extremely difficult to operate, and even less willing to
accept college students for internship practice, and the requirements for talent recruitment have
become stricter.

5. The Path to Optimizing the Training Mode of Accounting Talents under the Background of
New Liberal Arts

5.1. Optimizing the Positioning and Goals of Educating People

The construction of new liberal arts has put forward new requirements for accounting talents. The market has a large demand for compound talents who are familiar with financial business and proficient in Big Data technology, forcing colleges and universities to change their training goals for accounting talents. In the era of digital economy, the traditional accounting work of making accounts and repaying accounts is gradually replaced by artificial intelligence. Nevertheless, students should understand that the future career direction is not only repetitive accounting work that is easily replaced, but also many that require people to use intelligent technology to compare the advantages and disadvantages of various solutions in the actual environment of the enterprise, and make the most suitable strategic choice for the long-term development of the enterprise, such as tax planning, internal control, analysis and decision-making, etc. Colleges and universities should give accounting students ideological training and practical opportunities, so that students can experience the changes brought about by the rapid development of technology in our industry, and the urgency of schools to change their training goals. Based on this, students can clearly know that the traditional accounting work can no longer meet the needs of today's enterprises for accounting personnel. They should change their own positioning, clarify the future development direction, and learn computers, statistics and other courses more purposefully to improve their work efficiency and enhance their irreplaceability to meet the challenges of the era of digital intelligence.
5.2. Introduce Lecturers with Background in Science and Engineering, and Train Experienced Accounting Teachers

The profound changes in the environment of the accounting industry require colleges and universities not only to change the teaching mode of accounting teachers, but also to change the structure of the teaching staff. Among the old batch of accounting school teachers, most of the academic backgrounds are accounting majors. Most of the courses they study are only related to accounting and supervision, and there are few courses that empower decision-making. In addition to teaching, they require to do scientific research to achieve evaluation, and there is little time to innovate the teaching mode. As a consequence, the teaching content is rarely combined with intelligent technology, which cannot adapt to today's teaching requirements, and it is difficult to achieve the goal of cross-disciplinarity proposed by the new liberal arts. Based on this, colleges and universities should strengthen the skills training on the frontier knowledge of accounting for senior accounting teachers, so that they can fully understand the learning and improve their own level to achieve better teaching effect. In addition, in order to meet the needs of accounting data analysis and accounting management decision-making, colleges and universities should try to introduce a large number of teachers with computational mathematics, statistics, computer and other science and engineering backgrounds, who have rich practical experience in the accounting teaching team. This approach is conducive to intersection of accounting knowledge with Big Data, artificial intelligence, etc. And bring fresh blood to the School of Accounting. At the same time, colleges and universities should optimize the evaluation mechanism for teachers, increase the evaluation of curriculum design that adapts to the development of the times, and change the phenomenon of "emphasizing academics and neglecting teaching".

5.3. Create Cross-integrated Courses and Include Them in Compulsory Courses

In the era of digital economy, colleges and universities should grasp the new opportunity of digital and intelligent integration and development, and strengthen the intersection and integration of accounting disciplines and other disciplines. First of all, we can try to carry out intelligent accounting and other characteristic professional classes that can combine artificial intelligence and Big Data with accounting in the School of Finance and Accounting, introduce advanced international and domestic theories and training models, and cultivate new types of accounting talents. Teachers can take classroom forms such as scenario simulation, case teaching, and sand table simulation to teach, so that students can experience how to analyze and make decisions in a specific context. Secondly, in the teaching process, teachers can appropriately reduce the hours of traditional accounting courses and appropriately increase the proportion of cross-integration courses. The purpose of reducing the proportion can be achieved by combining multiple traditional courses into one course. For example, Basic Accounting, Intermediate Accounting, and Advanced Accounting can be integrated into Comprehensive Accounting, and Cost Accounting and Management Accounting can be combined into Cost and Management accounting and more. Thirdly, create cross-integrated courses such as "Artificial Intelligence + Accounting" and "Big Data + Accounting" that meet the new needs of the market, and if conditions permit, they can be established as compulsory courses. For example, the courses of "Computer Basics" and professional "Basic Accounting" are integrated, and the courses of "Python Programming" and "Financial Statement Analysis" are integrated. At the same time, "Big Data and Financial Decision-making", "Big Data and Accounting Application", Big Data and Audit Application" and other course are added. Based on this, computer, statistics, management and other disciplines are integrated into the accounting major to form a real interdisciplinary integration. The so-called integration is not only to open up the knowledge system between courses and improve students' knowledge in theory, but also to apply it in practice to solve the specific problems of enterprises in the actual operation.
5.4. School-enterprise Joint Compilation of Teaching Materials

In the process of promoting the construction of new liberal arts, significant emphasis has been placed on establishing a unique cultural identity that fully embodies the characteristics of China. The so-called Chinese characteristics combines existing Chinese historical experience, uses Chinese information and data to build a new liberal arts, and insists on being based on the reality of Chinese education. For the cross-integration textbooks of finance and accounting, it is necessary to combine the current era background, based on theories suitable for China's national conditions, select representative Chinese enterprises, and use available data to compile. At the same time, since it involves knowledge of computers, mathematics and so on, it is not enough to rely on the ability of accounting experts alone. It is necessary to jointly discuss with experts in mathematics, computers, etc. and jointly write a discipline-integrated textbook with practical teaching significance. In addition, the service objects of financial and accounting personnel are enterprises, and enterprises are the demand side of accounting talents. Therefore, in conjunction with the practical community, representative enterprises are included in the teaching materials as case backgrounds, so that accounting students can simulate or reproduce real-life scenarios. Immerse yourself in the role under the circumstances, and use Big Data technology and financial professional knowledge to analyze the situation of the case company in response to the specific problems faced by the case company, such as internal control and tax planning, fully tap the value of the company's existing historical data, and propose improved solutions in specific aspects. Based on this, it is necessary for multidisciplinary experts to jointly write textbooks with experts from the practical field to give them teaching significance.

5.5. Government-enterprise-university Cooperation to Optimize the Cultivation of Innovative Talents

Innovative talent training models require the joint efforts of multiple parties. First of all, the reform and innovation of the talent training model requires a large amount of capital investment, which requires the government to provide corresponding education funds to promote the digital and intelligent transformation of accounting personnel under the new liberal arts background. Secondly, most of the subjects of finance and accounting research services are enterprises, so companies are also required to provide case background support and provide students with a platform for practice to apply the skills they have learned to actual scenarios, not just theory without practice. Thirdly, the most important thing in talent cultivation is the efforts of universities. Universities need to provide a learning platform and integrate new technologies into talent cultivation. Based on this, it is necessary to build a virtuous circle mechanism of co-construction and sharing of "government-led platform, enterprise support, and university docking". For accounting majors, practical experience is especially important, but most colleges and universities can only provide simulated practice at present, and cannot provide real cases for students to analyze. In order to cultivate financial and accounting talents who meet the market demand, it is important to establish a "practice factory" in the financial and accounting colleges. Resources can come from the tutor's own project research, or from the school-enterprise cooperation of relevant project practice. With the support of the government's education funds, colleges and universities can choose to jointly establish production-education integration bases with large securities companies, financial software companies, accounting firms and other practical community. Under the leadership of the instructor, complete some real cases of enterprises, so as to cultivate the hands-on ability of accounting students and the degree of understanding of theoretical knowledge, so that students can improve their knowledge system and enhance their abilities in various aspects in the process of combining...
theory with practice. Furthermore, for the School of Finance and Accounting, by signing contracts with enterprises, sending high-quality students to practice, and jointly training accounting students with enterprises. It is possible to ensure that students can connect with enterprises and society more quickly after leaving school.

6. Conclusions

In today's era of rapid development of information technology, with the introduction of the concept of new liberal arts, accounting is gradually becoming digital and intelligent. The goal of training accounting talents in universities is gradually changing to cultivating compound talents with new thinking of cross-integration of intelligent technology and finance. However, the current talent training mode still needs to be further improved. This paper believes that, first of all, for the training of accounting professionals, it is necessary to abandon the outdated teaching concepts in the past and turn to meet the requirements of the new liberal arts construction, redefine the position of talent training, and optimize the teaching objectives. Secondly, it is necessary for colleges and universities to improve the curriculum system, add interdisciplinary teaching, introduce teachers with different professional backgrounds, and improve new teaching plans. Moreover, colleges and universities should strengthen cooperation with enterprises, add practical teaching content, and cultivate students' hands-on skills and practical processing ability. In the future, more high-quality accounting talents who meet the development requirements of the times will emerge to provide intellectual support for the long-term development of enterprises and the development of the national economy.

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