Study on Reform Practice of Educational Informationization in Accounting Major in Higher Vocational Colleges*

Chunling Shao
Yiwu Industrial & Commercial College
Yiwu, China 322000

Abstract—The spread of modern information technology causes the deconstruction and reconstruction of education ecology, and promotes the transformation and reform of traditional financial model at the same time. The reform practice of educational informationization in accounting major in higher vocational colleges, based on the "problem-practice-goal" oriented reform and innovation, not only innovates the traditional education model, but also creates an information teaching environment. The practice of the informationization reform of higher vocational accounting education should adhere to the principles of resource sharing, system integration and overall promotion. Based on the structural reform of education supported by information technology, the practice and innovation of educational informationization in accounting in higher vocational colleges should be promoted through the combination of concept innovation, the improvement of teachers' information-based teaching ability, the reform in hybrid teaching ecology, and the establishment of a process information-based academic quality evaluation system.

Keywords: accounting major in higher vocational colleges, educational informatization, information technology, reform practice

I. INTRODUCTION

In the 21st century, the Internet, big data, cloud computing, 3D printing, virtual reality and other emerging technologies have injected new impetus into the application of modern information technology. Informationization reform, innovation and development have become the major strategic choice of educational reform in various countries, and modern education is in a critical period of jumping from 1.0 to 2.0. In the era of education 1.0, class teaching was based on the classroom, led by teachers, and based on books. Learners were accustomed to receive knowledge passively in the form of containers. In the era of education 2.0, due to the comprehensive and deep integration of information technology and education, as well as the popularization of online resources, the role of learners has become the connector, creator, cooperator and builder of knowledge and skills.

The embedded mode of information technology has opened a new era of education, and many countries have realized the urgency and necessity of educational informationization reform. In July 2010, Japan issued the "Outline of Outlook on Education Informatization", advocating the use of information technology to effectively promote the reform of educational informatization in Japan. [1] In 2013, the department of education of Alberta, Canada, in its "Policy Framework on Learning and Technology", emphasized student-centered, personalized learning and focus on cultivating students' creative abilities. In 2015, the United States released the national education technology plan, "Preparing for the Future: Redesigning the Role of Technology in Education." In June 2016, the Ministry of Education of China issued the "13th Five-Year Plan for Educational Informatization", proposing to "build a networked, digitalized, personalized and lifelong education system". In April 2018, Ministry of Education specified specific implementation actions such as "popularization of digital resource services, innovative development of smart education and comprehensive improvement of information literacy" in the "Education Informatization 2.0 Action Plan".

With the rapid development of technical tools such as big data, Internet and mobile terminals, and the continuous popularization of intelligence, automation and informatization, the traditional financial model focusing on accounting has been greatly impacted. Financial accounting intelligent robots will gradually replace regular, repetitive basic daily financial work. With the continuous improvement and popularization of the intelligent and automated supply chain information system platform, the accounting model of enterprises will be further deepened from business accounting to management. With the extensive application of digital payment, electronic bills and electronic data files, most of the basic accounting work can be quickly completed through the Internet, big data and cloud accounting, and the financial work of enterprises is increasingly turned to financial analysis and financial decision support. Therefore, the collection, classification, processing, screening, analysis

and application ability of network electronic data based on business and financial data fusion will become the core professional competitive advantage of accountants in the network information era. The new generation of accounting talents should not only have the ability of accounting management, high professional quality, the ability of career transfer, critical thinking, doing integrated thinking well, the initiative of continuous learning, but also have the ability of expanding the vision of information, big data analysis and processing. As the main position of cultivating accounting talents' big data vision, information literacy, innovation spirit and practical ability, exploring the new path of education in the information economy era will inevitably become the primary task in the teaching reform of higher vocational colleges.

II.   OBJECTIVES OF EDUCATIONAL INFORMATION REFORM

A. Being "problem"- oriented to national strategic needs and setting up scientific concept of educational information

Education informatization has been included in the overall strategy of national informatization development, which specifies that is necessary to strengthen the construction of network teaching resource system, develop network learning course, establish virtual training room, improve teaching application information technology level, update teaching concept and promote teaching content, teaching means and methods modernization, in order to improve the teaching effect. In order to establish the characteristics, vigor and vitality of higher vocational education under the orientation of educational informatization 2.0, it is necessary to establish the concept of educational informatization, focus on the development of new information technology, and cultivate professional talents with strong market adaptability, big data vision, information literacy, innovation awareness and practical ability. This project will embed problem orientation in the teaching reform, such as the specific scope of the transformation and upgrading of accounting industry under the orientation of educational informatization 2.0? What positions in accounting are involved? What are the knowledge, skills and literacy requirements? How does accounting in higher vocational education connect with this change? In this research, case empirical study, quantitative and qualitative analysis, and multivariate data demonstration are used to analyze the job migration and career prospect of accounting industry in the era of educational informatization 2.0, so as to define the dimension indicators of talent target that meet the market demand. In the course resource system construction, the closed-loop teaching will be transformed into open-loop teaching, the shared professional resource pool will be built, the blended teaching ecology will be integrated, and the dynamic process teaching evaluation will be adopted to realize the diversity and individuation of education, thus providing a strong support and guarantee for realizing the demand for innovative talents in a modern socialist country.

B. Being orientated to the "practice" of integration of production and education and setting up the "teacher-student-enterprise" school-enterprise cooperative education resource platform

To do well in the teaching informationization of accounting in higher vocational colleges, it's necessary to rely on training base, entrepreneurial innovation studio, dock with local governments, industries and leading enterprises, promote the organic integration of education chains and industry chains, and guide teachers to cooperate with enterprises to develop new curriculum standards, new projects, new cases and new materials, so as to establish a trinity of "teacher-student-enterprise" open online course resources cooperative education platform Effort should be made to establish an informationalized teaching faculty team with double professionally titles and double capabilities to promote teachers, students and staff to participate in the development and application of practical training content of the resource pool, to attract outstanding students to participate in the service of local economic projects through the information-based intelligent platform, so as to provide students with a fully practical environment to demonstrate their innovative thinking. The trinity of "teacher-student-enterprise" online course resources collaborative education platform will effectively promote the training of compound, innovative and information-based talents, effectively improve students' core literacy of informationization, and enable higher level of accounting talent training to be "implemented scientifically and effectively".

C. Being oriented to the "goal" of training students' information literacy, and improving the level of accounting education information application

The fundamental purpose of educational informationization is to promote quality-oriented education, integrate the improvement of information literacy into education objectives, and cultivate innovative and application-oriented talent education suitable for the information society. The teaching reform under the guidance of educational informationization will integrate resources, environment and information technology in professional teaching, so that students can explore knowledge and skills independently in an open environment, and improve their self-learning ability and self-exploration ability The practice of accounting teaching should be transformed from handling and providing financial information to making students master the skills of analyzing and using financial information and information technology, from financial accounting courses focusing on business accounting to management accounting focusing on information technology courses, from the static information supply to the dynamic that can accurately predict the development trend of related information. [2] Great efforts should be made to train students to become analytical, advisory, decision-making and industry-financial-integrated versatile talent that know the business of finance, be good at analysis, capable of management and have broad vision and strong information technology, so as to achieve the transformation and upgrading of career development.

III. CURRENT SITUATION OF INFORMATIONIZATION TEACHING OF ACCOUNTING MAJOR IN HIGHER VOCATIONAL COLLEGES

With the formation of the Internet big data environment, enterprises put forward higher requirements for accounting talents' information and big data literacy. Facing the transformation and reform of professional positions, accounting personnel need to make new plans for their own careers, and they are in urgent need of mastering more cutting-edge and rich professional knowledge, and possessing broader ability to process and make decisions based on the information of industry and financial data. However, many aspects of these key abilities cannot be obtained from traditional paper books and cannot be guaranteed by traditional teaching concepts, methods and teaching methods. At present, there are the following problems in the implementation and promotion of informationized teaching reform in accounting major.

A. The training scheme of accounting professional for educational informatization needs to be reconstructed

Informatization talents are the key to the development of educational information. The accounting major in higher vocational colleges should actively provide professional talents who keep pace with the times for local enterprises, and finally respond to the implementation of national informatization strategy with high-quality and innovative talents. However, as far as the current accounting education is concerned, the talent training lacks informationized strategic positioning, the curriculum system is limited to the tradition, and the teaching resources are limited to a single. In the process of talent training, it focuses on the formation of students' accounting knowledge and professional skills, but seldom stimulates and systematically trains students' core information literacy, such as innovative critical thinking, data mining and analysis, and continuous self-learning ability. Therefore, it is urgent to deconstruct and reconstruct the standard professional talent program.

B. The implementation foundation of educational informatization of accounting needs to be improved

Accounting major has taken the lead in trying new forms and new technologies in the reform of education informatization, and has made gratifying achievements in the construction of professional online courses and the development of information teaching platform. However, under the influence of the traditional idea of running a school, it is difficult to get rid of the shackles of academic habitus on its reform and innovation. For example, the teaching materials are still mainly paper media, and the application of multimedia media is relatively less, lacking three-dimensional new form of teaching materials with strong logic and rich connotation. In terms of the construction of online courses, there are still many fragmented combinations, and "data island" is a common phenomenon. Systematic integration is rare, and it is difficult to form an overall personalized evaluation. In terms of teaching form, there are more people who dabble in various cloud platforms, flipped

classroom and hybrid teaching methods, while there are fewer in-depth innovators. It is hard for traditional teaching means, teaching methods, curriculum resources to cultivate information thinking accomplishment of accounting students in higher vocational colleges, which inevitable causes a disconnection between school talent training and social needs. Therefore, it is the key to improve the quality of talent training to improve the implementation basis of professional education informatization and really improve students' professional quality of informatization under the real situation.

C. Professional teachers' level of informatization needs to be improved

The exploration of educational information reform in accounting professional has been carried out. Professional teachers have deepened their understanding of education informatization in the process of developing online courses and participating in the construction of resource database in the early stage, and the informatization level of the teaching team has also been greatly improved. But there are still a lot of professional teachers have old concepts though in a new framework [3], lacking the impetus for continuous reform and innovation. The advanced information technology is still in the stage of demonstration and presentation tools, which is not well integrated with the innovation of course practice. A comprehensive approach should be adopted to solve these problems.

IV. PRACTICE PATH OF EDUCATIONAL INFORMATIONIZATION REFORM IN ACCOUNTING MAJOR IN HIGHER VOCATIONAL COLLEGES

The accounting major should grasp the opportunity of education information 2.0 era, adhere to the principle of resource sharing, system integration and overall promotion, and reconstruct professional standards. With educational informationization as the core tool of embedded reform, with online course resources as the carrier, it should promote professional teaching reform and innovation, take hybrid teaching, new form teaching materials, bilingual curriculum system, progressive whole-process practical training as the path, take high-level informationization education teaching team and multi-dimensional evaluation system as the guarantee, so as to cultivate accounting talents with big data vision, information literacy, innovation spirit and comprehensive practical ability. At the same time, with the informationization system of finance and accounting as the core, it should radiate and drive the development of finance and business majors, promote the sharing of resources among majors, coordinate the development, and build a platform for educational informationization and education.

A. Relying on the opportunity of "educational informatization + specialty", innovating the concept of specialty education

To promote the integration and innovation of educational informationization and specialty, it is necessary to establish the idea of informationization education. Informationization

should follow the constructivist learning theory, and learning activities should be reflective and innovative, so as to realize the reflection on work content, work environment and individual actions, thus promoting the innovative learning [4]. Educational informationization needs to convert the classroom into data, build a cloud resource system with the help of mobile network technology, and realize the sharing of high-quality teaching resources. It is necessary to transform the complex knowledge and skills and working situations into controllable learning situations, learning contents and communication modes by means of information technology, so as to provide information technology support for the knowledge construction of learners in the process of action. The reform mode and practice path selection of educational informatization are closely related to professional culture, talent training program and professional course teaching.

B. Based on the opportunity of "educational informatization + major", improving the basic conditions of major

1) Online resources for professional courses: It is necessary to adhere to the concept of scientific education, carry out school-enterprise cooperation education and deepen the integration of industry and education. Based on the framework of professional standards and supplemented by typical cases of industry enterprises, the core professional courses and online resources standards of expanded courses should be formulated. At present, the construction project of a university-level accounting professional resource database has been approved, establishing the standard of professional online resource materials. Modern educational technology is adopted to facilitate the resource standardization, datamation and sharing of professional series core courses. The content of online course resources mainly includes text resources, video resources, animation resources, micro-course resources, demonstration videos of typical work tasks, etc., which are constructed in multiple dimensions based on talent training program, curriculum outline, curriculum setting, teaching design, electronic textbooks, academic evaluation, practical training guidance, and test question bank. The major has started to promote the accumulation and construction of material resources of 8 online courses including core courses and expanded courses, and has been actively promoted and applied in the finance and business professional group.

2) New forms of teaching material: With the integration of new Internet information technology, the major has cooperated with Jinhua Polytechnic, Shengye Accounting Firm and other sister universities and local industry leaders to build courses and practical training series of new teaching materials such as "Practical Training Course of ERP Financial Management System" and "Investment and Financial Management". Relying on paper textbooks, integrated with information technology means, paper textbooks are combined with digital resources. The two-dimensional code carrier is embedded in the paper textbook project task, which is integrated with video, audio, animation, online testing and expansion materials. The textbook, teaching resources and classroom are integrated, and the learning and application anytime and anywhere is realized through various terminal forms.

3) "Progressive full course training" system: Based on the intelligent system of Internet +, the existing business training base of the university should be upgraded and transformed by informatization, and the intensive training base of the combination of industry and education should be expanded. With the progressive practical teaching system of hand computation-computer calculation, single-synthesis, simulation-full truth as the core connotation, it is necessary to continue to optimize the "progressive full course practical training" mode of the superposition of on-campus and off-campus training bases.

By use of the Internet technology, with the help of finance and accounting cloud, smart cloud and other platforms, the professional practice system company should set up modules including enterprise real business data system, accounting teaching system, practical operating system, etc. and conduct real-time connection with partner enterprise cloud accounting system under the premise of information security and the cooperation enterprise cloud accounting system, to realize the real-time sharing of financial data, and create a new system for the integration of industry and education of simulation and practice of accounting major in higher vocational colleges.

C. Relying on the opportunity of "educational informationization + specialty", exploring a new form of blended teaching

Based on Internet + multimedia technology application, the accounting major should build a friendly and vivid informationized teaching environment, develop rich and vivid network teaching resources, provide multi-channel ways to acquire knowledge and skills, try to diversify the teaching methods of teachers and students, and explore a new form of hybrid flipped classroom teaching. Efforts should be made to guide students to integrate online and offline O2O learning, to make the traditional "learning from teachers" transformed to the interactive modes of "learning from experts" and "learning from resources". In this way, multi-ecology of teaching including independent learning, group learning, community learning, etc. can be expanded and the teaching structure can be reshaped. As a typical case of hybrid teaching, flipped classroom follows the process of "preparation of resource combination, self-study before class, deepening of class discussion and expansion and consolidation after class", and moves the focus of traditional classical classroom teaching structure forward and rebuilds classroom process. According to the characteristics of the different professional courses and technical conditions, it dynamically applies "regular flip, unit flip, class flip and continuous flip" and other types of flip class, so as to truly

implement the personalized teaching, give full play to student's main body status and the teachers' leading role and create a diversified way to learn, diversified learning style and visual learning experience.

D. Relying on the combination of "educational informatization + specialty", the informationized teaching level of "double-qualified" teachers should be improved

To some extent, the transformation of the blended teaching form further forces the transformation of the teacher's role and the improvement of his ability. Different from the previous focus on lectern, classroom teaching and experience evaluation, the hybrid teaching form takes students as the main body, requiring teachers to integrate into students to "guide learning", "diagnose learning" with the help of big data, and "help students" in the clouds (by use of the cloud technology). Only by regularly and irregularly participating in all kinds of informationization training and skills competition, involving and immersing themselves in the latest accounting informationization frontier ideas, knowledge and skills and educational informationization reform, can professional teachers rapidly improve their level of informationized teaching. Relying on the opportunity of information construction, the accounting major should implements the construction of online course resource mechanism, encourages professional teachers to actively undertake the creation and application analysis of course resources, completes the teaching design, development and application presentation of eight series of micro-courses, and promotes the combination and application of information means. A series of assessment system measures has been formulated in this major   to encourage teachers to use information technology, resources and methods in daily teaching, organize and implement effective classroom information teaching, realize individualized teaching and individualized teaching for professional students, and lead students to form informationized thinking and quality of accounting.

E. Relying on the opportunity of "education informatization + specialty", carrying out the quality evaluation of process learning industry based on big data

The educational informationization reform of accounting major in higher vocational colleges should not only train students to master accounting professional knowledge and professional skills, but also train students' ability to analyze and solve problems based on informationized big data. Therefore, it is necessary to give full play to the Internet information technology, innovate the process evaluation method, and make a comprehensive scientific evaluation of students' learning attitude, knowledge and skills, information screening ability, data processing and problem solving ability [5]. At the same time, it is also helpful to implement the applied learning of informationized teaching supported by big data analysis technology, and to innovate the accurate docking between academic evaluation and diagnosis and learning assistance services. By use of Internet information

technology, professional teachers should carry out quality evaluation of procedural learning based on big data combining classroom evaluation with online evaluation, self-evaluation, mutual evaluation and teacher and enterprise evaluation, attitude evaluation, knowledge evaluation, quality evaluation and ability evaluation, so that the evaluation tends to be comprehensive, objective and effective, and students can better identify their own knowledge and skills, and timely improve the corresponding learning strategies. In this way, teachers can understand students' learning status, identify outstanding problems of students, make targeted teaching adjustments and provide personalized learning guidance services, so as to set the target and improve the teaching effect.

V.   CONCLUSION

In the era when information technology comprehensively promotes the reform of educational informationization, the objectives of talent training, teaching basis, teaching mode and teacher-student teaching relationship have undergone great changes under the impact of modern information technology, but the essence of talent training in education remains unchanged. Accounting major should rely on the opportunity of educational informatization reform and innovation, focus on improving professional teachers' informatization ability, and promote the overall reform of "personalized, intelligent and ubiquitous" of intelligent teaching environment. In this way, students can be guided to continuously stay in the information teaching environment, with the help of network resources, cloud classroom, new form of teaching materials, online and offline hybrid learning. It is necessary to establish a student-centered teaching ecosystem, build a platform for collaborative education of educational informationization, and effectively promote the comprehensive reform of education informatization.

REFERENCES

[1]   Zhong Zhixian, Zeng Rui, Zhang Xiaomei. A Study on the Evolution of the Policy of ICT in the Education in China (1989-2016) [J]. E-education Research, 2017, 38(09): 14-23. (in Chinese)

[2]   Pan Chun, He Puming. Design of a new professional curriculum system integrating accounting and computer technology in higher vocational education [J]. Vocational education forum, 2017, (30): 76-80. (in Chinese)

[3]   Feng Qi, Chen Lin. Exploration on the Innovative Development of Education in the Wisdom Era Supported by Informatization [J]. Distance Education in China, 2018, (06): 75-78. (in Chinese)

[4]   Zhou Yan-an. Promoting the Informatization in Vocational Education with an Eye to the Future Industry [N]. China Education Daily, 2018(07). (in Chinese)

[5]   Zeng Qifei. Research on Innovation Reform of Higher Vocational Education Against the Background of "Internet +" [J]. Journal of Hubei Correspondence University, 2008, 31(10): 136-138. (in Chinese)