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Research Article

Model Innovation and Teaching Effect Evaluation of Accounting Teaching in Higher Vocational Colleges in the Era of Big Data*

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Abstract

In the era of big data, all walks of life are affected by internet, internet of things and cloud computing, the big data brings qualitative change to accounting development, and enterprise's demand for accounting talents is also changing. However, in the traditional higher vocational colleges, there are some problems in accounting teaching, such as the low awareness of internet, too much attention to theoretical knowledge and the weakness of teachers. In the face of the change of the new situation, higher vocational colleges, which train the specialized accounting talents for enterprises, should make positive changes. This paper analyzes the predicament of accounting education in higher vocational colleges, and points out that under the background of big data, the teaching of accounting in higher vocational colleges should emphasize the cultivation of professional practice ability, optimize the setting of accounting courses, and construct the monitoring mode of digital teaching effect evaluation.

Keywords

Big Data • Higher Vocational Colleges • Accounting Teaching • Teaching Evaluation

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In the field of accounting, higher vocational colleges, which train professional applied talents, should train students with the ability of accounting and management, and deliver a large number of specialized accounting talents to enterprises. The basic ability of financial data analysis is one of the necessary abilities for accounting students. The talents in accounting specialty in higher vocational colleges must have the ability of mining and processing financial data. However, under the background of big data, in addition to the traditional accounting and supervision functions, higher vocational colleges should actively change the concept of training, carry out self-renewal in the teaching mode and evaluation, and pay more attention to the training of students' accounting management ability. Under the dual function of knowledge and practice, we should cultivate comprehensive application-oriented talents, pay more attention to the structural optimization and rational allocation in the specific curriculum setting, and actively carry out the innovation and reform of the teaching mode, to explore a more diversified teaching evaluation model system and train more accounting talents for the society to adapt to the era of big data.

Influence of Big Data Age on Accounting Teaching

Generally speaking, the traditional accounting teaching mainly teaches the students the ability to record the economic business, and trains the professionals who have the ability to process the economic data, but with the arrival of the era of big data, the cognition of traditional accounting work and teaching has been revolutionized, accounting work has also changed from traditional emphasis on accounting and supervision to deep mining and application of data, and the nature of accounting function has changed. In the era of big data, accounting personnel pay more attention to information and digitalization, and the financial affairs of enterprises begin to expand to the R & D and sales, all of which make the demand for accounting talents change (Griffin & & Wright, 2015). Therefore, it poses a challenge to the accounting teaching of higher vocational colleges which export accounting talents, and the accounting teaching in higher vocational colleges needs to train the talents with higher quality and working ability. At present, the big data has infiltrated into every aspect of the society. In the economic field, more and more enterprises have updated their accounting and started to use intelligent accounting software, which are not available in traditional accounting teaching. The arrival of big data era has a great impact on the traditional accounting teaching in higher vocational colleges (Janvrin & Watson, 2017).

First of all, in the era of big data, the setting of accounting curriculum in higher vocational colleges will inevitably change and adjust, because the big data emphasizes the change of accounting tools, and as the basic work of accounting, accounting work changes from standard program to software. More and more enterprises have introduced intelligent tools in the accounting, and AI starts to participate in enterprises' accounting, tax, audit and others. These intellectualized accounting forms will completely replace the traditional manual operation, and intelligent equipment realizes the automation of financial management and monitoring and replaces manual work such as data entry and collection (Cockcroft & Russell, 2018). In traditional accounting curriculum, there is no optimization in the identification of financial processes, and in the era of big data, accounting courses in higher vocational colleges need to be adjusted.

Secondly, the big data also has an influence on the means and methods of accounting teaching. In the era of big data, the traditional feeding teaching method in accounting will be eliminated. As the data become more

and more, the analysis of information will be increased. These all need talents with abilities of independent thinking and innovation. Therefore, the accounting teaching method must pay attention to train student's abilities of analysis, summary and communication. In addition, in the era of big data, information network technology is applied more and more frequently, more information technologies are introduced in teaching, the integration of information technology and teaching will be improved, and the initiative of students is enhanced (Coppage & Baxendale, 2001).

Big data will affect the evaluation of teaching effect. On the one hand, in the evaluation of higher vocational colleges, the traditional teaching evaluation does not meet the needs of big data era, a few simple examination questions cannot fully reflect the students' level, and the result from learning by rote does not have sufficient explanation power. On the other hand, in the social evaluation, more and more employers not only pay attention to students' ability of accounting, but more on the students' comprehensive abilities, including the ability of analysis and communication.

Dilemma of Accounting Teaching in Higher Vocational Colleges

Lower awareness of using Internet in accounting teaching

At present, most of the accounting teachers in higher vocational colleges are senior teachers, and the age structure of the teachers is out of balance. For example, Figure 1 shows the status of the teachers in accounting specialty of a professional college in Guangdong Province, China. As can be seen from Figure 1, the number of young teachers in accounting is relatively small, and most of them are old teachers with old qualifications. Elderly teachers in the large number of teachers are not familiar with the Internet, and most of them are not familiar with electronic equipment such as computers. Lack of the motivation of learning, they cannot keep up with the pace of the big data era and update their own teaching methods, so they still use the traditional teaching methods in teaching, sticking to the old way of thinking (Zheng, Xiao & Gong, 2010).

Table 1
Age Structure of Accounting Professional Teachers in Higher Vocational Colleges in a Certain City of Guangdong Province

Age	Number	Percentage
Under 35 years old	26	23.2
36-45 years old	30	26.8
46-55 years old	31	27.7
Above 56 years old	25	22.3

Emphasis on theoretical knowledge and lack of application cases

The traditional accounting teaching mode of higher vocational colleges generally pays attention to the teaching of theoretical knowledge, teachers simply impart knowledge and do not pay attention to training students' hands-on ability, which makes most students unable to adapt to the work of enterprises immediately after graduation. The need for a period of internship will indirectly delay the development of the career. As a strong application-oriented specialty, accounting teaching in higher vocational colleges should focus on case

analysis rather than simply imparting theoretical knowledge. Therefore, accounting teaching in higher vocational colleges now focuses on theory and lacks application case teaching, which reduces the interest of most students in accounting.

Resource sharing cannot be expanded effectively

There are many teachers with rich teaching experience among the teachers of accounting specialty in higher vocational colleges. These elderly teachers also have their own advantages. In the long-term teaching, most of them have accumulated more mature teaching courseware and good experience. But most teachers lack the means of sharing and can't use the Internet to share information well (Chen, 2010). At present, although there are a lot of accounting teaching videos, the quality of most video teaching is not ideal and many students need to spend time to screen, which result from the failure of sharing resources.

Most colleges and universities lack good teachers

In the era of big data, there are higher demands for the ability of the students majoring in accounting, they not only need to master the management cost of data and finance, but also the basic ability of analyzing data. They should also have the basic investment foresight risk ability, carry on the accurate estimation on the investment strategy plan, and evaluate companies' financial situation, all of which need the better specialized teachers. However, the quality structure of teachers in higher vocational colleges is not very good, the number of good specialized teachers is not enough, and most colleges and universities have not trained and improved the existing accounting teachers (Li, 2015).

Reform of Accounting Teaching Model and Effect Evaluation in Higher Vocational Colleges in the Era of Big Data

Reasonable setting of accounting teaching course

In the era of big data, the course of accounting teaching should not only guarantee some objectivity, but also should carry on appropriate innovation. In the course of accounting teaching in higher vocational colleges, we should actively deal with the change of thinking in the internet age, and change the traditional teaching method of the scripted course (James & Otsuka, 2009). Higher vocational colleges need to optimize their accounting courses and highlight the innovation of the curriculum, so that the content of the course should adapt to the development of Internet technology. The purpose of the course is to serve the enterprise. We can also make full use of the various platforms of "Internet +" to carry out higher quality curriculum education and maximize resource sharing. In the specific curriculum setting, the accounting specialty can rely on the Internet resource sharing platform to realize various kinds of education on innovation and entrepreneurship, and optimize different advantageous resources by integrating the forms of online and offline, on-campus and off-campus, in-class and extra-class resources, and others. It's necessary to optimize the different advantageous resources,

develop the characteristic accounting education, and thus provides a kind of new thinking idea for the education innovation (Du & Zhang, 2012).

Positive transformation and change of teaching mode

First of all, higher vocational colleges need to change the traditional method of rigid and dogmatic teaching, the current teaching reform of accounting specialty is not successful, because entries are stipulated according to accounting standards and accounting system. Unlike Chinese class, for which teachers can lecture an article vividly, but in fact, teachers can lecture it from a new angle, mainly from the angle of management, and introduce the case teaching method in teaching. The accounting knowledge is vividly reproduced with cases, and the traditional teaching method of learning by rote is changed.

Secondly, in the specific teaching process, the accounting teaching in higher vocational colleges should actively guide students to think and summarize, and on the other hand, the accounting teaching mode in higher vocational colleges should be changed in teaching means. In the specific accounting teaching, the information-based teaching features should be emphasized. The information-based teaching means include multimedia technology, network technology and others, which have the characteristics of wide transmission mode, large information content and strong interaction. Reasonable information teaching mode is beneficial to improve the efficiency of course teaching. Specifically speaking, in the teaching of accounting courses in higher vocational colleges, we can adopt the teaching forms such as flipped classroom, MOOC and micro-classroom in a comprehensive manner, and the diversity of teaching means will make the boring accounting courses more interesting and inspire students' learning motivation to analyze and solve problems in an intuitive scenario. For example, regarding the product cost control, in the course teaching, the production process flow, production link and enterprise internal control flow of the products can be reproduced in the form of small products, and the students can be guided to learn to analyze and independently search for the cost control indexes through the entity demonstration. The cost data are deeply mined via the cost control system, so that the cost control is effectively realized. In addition, the teaching can be carried out by constructing the teaching management and service platform of the campus network, for example, the most popular mobile phone terminal APP, which integrates the electronic mobile device and the data and can realize high data fusion. Relying on the network platform, the accounting teaching can acquire massive teaching information instantly, and can utilize the powerful function provided by the mobile terminal to process audio, video, image, animation, and even multiple tasks (Oyama, `2008). On this basis, mobile learning based on smart phones breaks up time restriction and can feed back all kinds of information in time, so students can learn various professional contents anytime and anywhere, thus greatly improving learning efficiency, and teachers can also use mobile phone APP anytime and anywhere with any way instruct and manage students in learning.

Constructing the digitized teaching effect evaluation model actively

The traditional evaluation of accounting teaching effect is mostly in simple review form. For the course of management class, the evaluation mode of the teaching effect is mainly the result examination, among which

the representative is the case analysis and the scheme design. Some higher vocational colleges also use the information network to evaluate the teaching effect by means of non-paper examination and unsupervised examination, as well as the evaluation and examination by the employing unit.

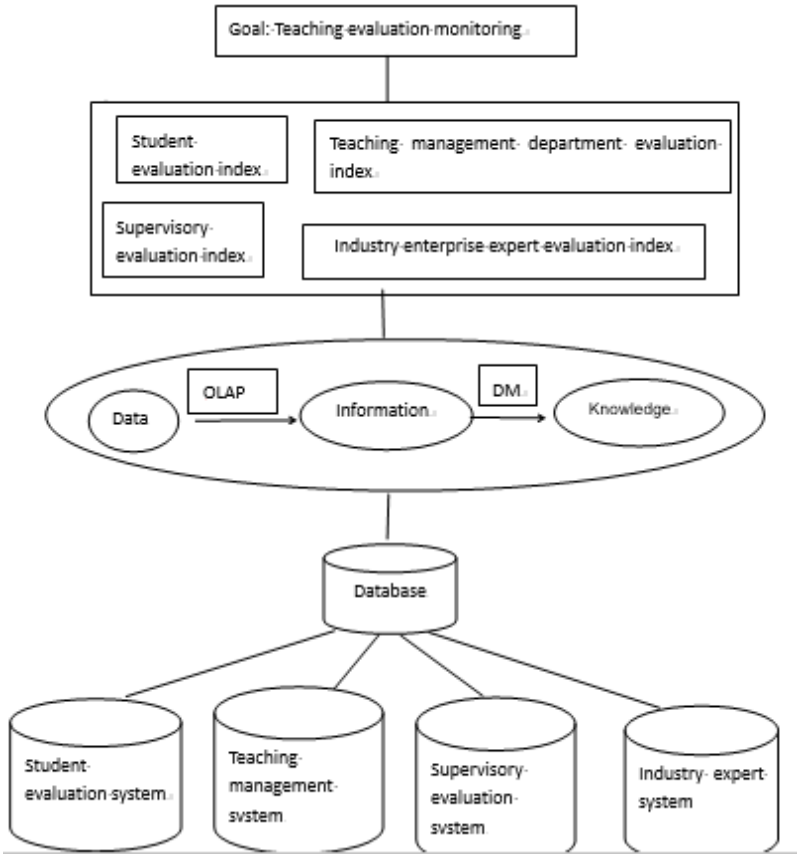

Figure 1. Digital teaching evaluation monitoring mode.

Although these existing evaluations of teaching effect have their own points, the traditional evaluation mode of teaching effect has exposed certain problems in the era of big data. Based on the real characteristics of information and digital, to fully mine data, the big data analysis method may be adopted to effectively evaluate the effect of accounting teaching with the digital teaching evaluation monitoring mode, refer to Figure 1 for specific monitoring mode. Although the mode cannot directly evaluate and manage the teaching, it can effectively check the quality of teaching and provide effective information support for information management. This concept model (OLAP) can carry on multi-dimension analysis operation on the basic data, and provide the direct decision-making reference for the final decision-maker of accounting data. Among them, the data mining (DM) is able to carry on the highly automated analysis and the reasoning of the data, and select the valuable data. With the application of big data concept and technology, we can comprehensively process the evaluation system of accounting teaching effect in higher vocational colleges, thus

making the previously closed monitoring link become an open mode and turning a traditional static data stream into a dynamic data stream. The application of big data concept and technology in teaching evaluation can realize the demonstration and leading role of sustainable development within the regional scope, and is worthy of application and popularization.

Conclusion

To sum up, higher vocational colleges need to adapt to the development of the times in the teaching reform of accounting specialty. Accounting specialty should adapt to the background of the big data era, so we should change certain concepts and emphasize the cultivation of students' management ability. On the basis of knowledge training, we should also pay attention to the training of students' ability of practice, management and innovation in accounting. The basis of teaching reform is to lay stress on the carrier of teaching and the rationality of concrete courses, and advocate the adaptability and innovation of courses. Under the background of innovating Internet and emphasizing big data era, the reasonable setting of the course should realize that the course setting conforms to the background of the Internet, and correctly evaluate the teaching effect of the accounting course through the digital teaching effect evaluation mode, so as to effectively solve problems of current accounting teaching in higher vocational colleges.

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