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The Impact of Digital Technology on Accounting - Auditing Training in Vietnam

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Abstract: The nature of Industry 4.0 is based on digital technology and integrates all smart technologies to optimize production processes and methods; emphasizing that the technologies that are and will have the greatest impact are 3D printing technology, biotechnology, new material technology, automation technology, robotics... including cyberspace systems, the internet of things and cloud computing. Due to the application of the achievements of Industry 4.0, many industrial sectors are automated to replace people and the skill requirements of workers will be high. If workers do not improve their capacity and skills to quickly adapt to changes in production, they are excluded from the labor market. Industry 4.0 affects most industries and accounting - auditing training is no exception. The article presents what higher education needs to do for the accounting - auditing industry to adapt to the new situation.

Key words: Industrial Revolution 4.0, training, accounting, auditing, Vietnam.

1. Introduction

Industry 4.0 is a trend of automation and data exchange in production technology. The nature of Industry 4.0 is based on digital technology and integrates all smart technologies to optimize production processes and methods; emphasizing that the technologies that are and will have the greatest impact are 3D printing technology, biotechnology, new material technology, automation technology, robotics... including cyberspace systems, the internet of things and cloud computing. Thereby, creating smart factories with self-connected machinery, self-organization and management. This is also known as the digital revolution. Due to the application of the achievements of Industry 4.0, many industrial sectors are automated to replace people and the skill requirements of workers will be high. If workers do not improve their capacity and skills to quickly adapt to changes in production, they are excluded from the labor market. According to many comments, we are talking too much about Industry 4.0, but in fact, what

universities and the education sector need to do is still an open issue. However, Industry 4.0 is still happening day by day, hour by hour and will definitely affect higher education as well as employers.

Therefore, universities cannot be satisfied with the accreditation results of organizations that have been licensed by the Ministry of Education and Training, but need to proactively approach the practices of Industry 4.0 to always refresh themselves. As for employers, instead of criticizing the output quality of students, their job is to actively cooperate with universities. The article only refers to higher education in general and training in accounting - auditing in particular in the industrial age 4.0, the necessary preparations for universities to improve the quality of training to meet the new situation requirements.

2. Situation of accounting - auditing training in Vietnam

Up to now, Vietnam has built a complete legal system and accounting standards, with many contents for the integration and development of the market economy. However, the Department of Management and Supervision of Accounting and Auditing, Ministry of Finance said that one of the biggest challenges ahead of integration is that Vietnam's accounting and auditing force is still thin. Currently, there are only nearly 5,000 people with international accounting and auditing certificates. This number is too modest compared to other countries in the region such as Singapore and Thailand. The Ministry of Finance also statistics that the audit service market currently consists of 150 enterprises, serving about 40,000 customers, including foreign and domestic enterprises. In order for enterprises to build a formal financial and accounting system, Vietnam urgently needs appropriate strategies to supplement accounting and auditing human resources to meet international standards (Tran Ngoc Thuy, 2017). Currently, the country still has about 200 universities and colleges training accounting professions. Many schools are not specialized, but accounting is considered a key major. According to the Ministry of Labor, Invalids and Social Affairs, like the pedagogical sector, the accounting sector is in crisis. For many years, due to not doing a good job of forecasting the demand for the labor market to train in the right direction, helping learners have a clear orientation, it has led to a crisis in some professions. Therefore, it is necessary to conduct a specific survey and evaluation, see the "planning" to train to meet the needs of the labor market, avoid the current situation of rampant and wasteful training. The accounting - auditing industry, although the supply is high, the unemployment rate is high, but the recruitment demand is also high, the question is why there is such a paradox. Explaining the phenomenon of unemployment, excess quantity but lack of quality, according to feedback from HR recruitment enterprises for the accounting department, up to 80% - 90% of recruited students do not have immediate access to real accounting work. Currently, there are many unemployed people but positions that need high professional capacity such as financial director, chief accountant,... of many enterprises are currently assigned to foreigners with terrible salaries, ranging from 100 to 200 million a month (Tran Ngoc Thuy, 2017). The quality of accounting - auditing training will be even more demanding in the Industry 4.0 era.

3. Trends of world higher education development and opportunities for Vietnamese universities to train accountants - auditors

3.1. Trends of higher education development in the world in the 21st century

- ✓ World university education entering the 21st century is under great pressure:
- ✓ Population explosion
- ✓ Moving from elite higher education to mass higher education.
- ✓ Fast development of science and technology, short technology life cycle
- ✓ Financial pressure
- ✓ The need for cooperation and competitiveness in the context of globalization

- ✓ In the context of development under the impact of globalization, the development of the knowledge economy, information and communication technology requires higher education to be at the center of development.
- The major trends of the development of higher education in the 21st century are:
- ✓ Massification

3.2. Opportunities for Vietnamese universities in accounting - auditing training

According to experts in the education sector, in the new era, people will no longer be so important to a formal degree, to the origin or relationships, the issue is knowledge, qualifications, skills... In the Industry 4.0, the opportunities for everyone are the same. Someone who is truly competent, well qualified, skilled, and able to create a lot of value for society, that person will succeed.

For universities, Industry 4.0 requires the training of human resources with new skills and higher levels of education than 10 years ago, because the market requires workers with higher levels of education and training. In fact, higher education as a whole has yet to meet the needs of employers. A 2013 study by the Lumina Foundation/Gallup found that only 11 percent of business leaders believe that college graduates in their chosen profession are employable. This figure is far different from the 96% of training staff at universities and colleges who are very confident that their schools are training students for future careers. The size of the skills shortage varies by industry sector. Surveys by the Manufacturing Academy and Deloitte with 450 manufacturing executives show that the areas where workers lack the most skills are: Technology and computers (70 percent), Problem solving (69 percent), basic technical training (67 percent) and computing skills (60 percent) (Nguyen Cuc, 2017). The 4.0 Industrial Revolution has the most direct and largest impact on education - where directly training human resources for industry 4.0. In order to meet the demand for human resources for the new industry and at the same time take advantage of the strengths of information technology, many universities around the world have been comprehensively innovating and accordingly, Education 4.0 is being evaluated as a suitable model. The Industrial Revolution 4.0 poses many challenges for workers in Vietnam in general and accounting - auditing workers in particular:

- The demand for accounting labor will decrease, the demand for accounting labor quality will increase
- Decreased advantage of cheap labor
- The strong division between the group of low-skilled workers and the group of high-skilled workers; the trend of skilled labor movement in the region and the international 4.0 Industrial Revolution will change the business environment; increase competition in the market and technical and technological progress; influence the organization of the accounting apparatus. The most powerful impact is cloud computing and the application of Blockchain.

Cloud computing

When cloud computing is applied to accounting, it allows businesses to reorganize the Accounting apparatus in a compact way, because it is not affected by geographical location. The goods purchase and sale information is sent to the "cloud" and processed "in the cloud" by independent network service providers without the need to have knowledge and experience in technology as well as no need to care about the infrastructure serving that technology. Cloud computing is very popular because of the convenience that not all forms have such as timely updates, anytime and anywhere, continuous backup to avoid data loss.

The practical benefits of online accounting software are actually gradually changing the habits and working processes of accountants and business leaders in a more professional way, reducing the pressure on costs, human resources and infrastructure. In order to manage finance in the traditional way,

businesses need to spend a lot of money on investing in buying new or upgrading servers, even hiring staff to administer and maintain servers, while stored accounting data is difficult to ensure safety because of risks such as malfunction, theft, fire, etc. With cloud accounting software, everything becomes too easy because there is a service provider to take care of it all. All financial and accounting data is backed up regularly and managed centrally at an address on the cloud server system.

In the past, accountants had to take a lot of time to gather and compare, it was difficult to have immediately every time the leader asked and had to switch back and forth, now, they are very fond of online accounting software because it can be used and retrieved anytime, anywhere and extremely quickly, as long as there is an internet connection. At the same time, online accounting software can also run on different operating systems, allowing users to work on computers or mobile devices such as phones and tablets, so it is very convenient for managers and leaders. often have to move, work outside, travel far away.

Blockchain

Three characteristics of Blockchain technology: (i) universality, Blockchain can provide identical entries for everyone. Regardless of the nature of the information or the object of receiving the information, Blockchain disseminates all updated information to all participants in the network; (ii) fixed, thanks to the blockchain structure, Blockchain resists any change in information once it has been updated into the system. The blockchain does not sign the entry for an independent transaction, but the following transaction confirms the previous transaction. Therefore, the decentralization of the Blockchain is very high; (iii) programming, some typical blockchains such as the Ethereum Blockchain can be programmed to become smart contracts for specific transactions without human involvement.

By creating a single ledger on a network of computers; companies, customers, banks and their tax authorities record and share information. When any of them add information, the ledger automatically verifies and adjusts the data. Each relevant party does not need to maintain their own ledger, so that the accountants will not have to do all the processing and adjustment of the transaction. Blockchain can reduce accounting errors and fraud. When a block of data is added to the chain, the rest of the network must verify it. When you make an on-chain transaction, all the computers in the network identify you and check if you have the right to trade. So if you need to pay \$200 that you only transferred \$220 by mistake, other blocks will point out that mistake.

In normal accounting, an accountant needs to write a double entry, while Blockchain only needs a single entry that can provide information to all parties without worrying about authenticity. Accounting records will not be able to be corrected or changed once they have been saved to the Blockchain, even if the owner of the accounting system requests it. Because on the Blockchain platform, every daily transaction is recorded and validated, so the integrity of financial records is guaranteed. Blockchain can influence the blockchain audit profession to create a real-time traceability record, so if Blockchain technology is widely accepted, the role of auditors in verifying transactions made in Blockchain will no longer be necessary. It is not only the accounting and auditing professions that face this influence. Blockchain is a peer-to-peer network that cuts out intermediary channels such as banks. Thus, as Blockchain technology develops, one of the first areas affected is the field of accounting, auditing and banking and finance.

4. The necessary preparations to meet the requirements of higher education in the era of 4.0 technology

First, improve the quality of training

Industry 4.0 with the internet makes teaching not limited by geographical distance. Learners in Vietnam can study in any country around the world. Big data gives people access to infinite knowledge, helping

people to learn anything they need to know but also have the limitation of unorthodox information. It makes us cautious when accessing information and using information (Trinh Xuan Hung, 2018).

With artificial intelligence, economic experts forecast, many industries are at risk of disappearing because of the trend of automation. Artificial intelligence can replace manual tasks. Artificial intelligence cannot replace humans, but it is changing the working environment and circumstances of higher education. So what do universities need to equip for higher education in the new situation? For the teaching process, it is necessary to move from the transmission of knowledge to the formation of qualities and development of learners' capacities or the organization of an open, practical and practical education; to move the development of education and training from mainly in quantity to focus on quantity, quality and efficiency; to move from focusing only on personality education in general to combining personality education with the best development of individual potentials; to move from the notion that knowledge is capable to the notion that knowledge is only an important factor of capacity, to organize classes to supplement knowledge to facilitate the force of lecturers, to train and foster lecturers to meet the requirements of high-quality training programs, to create a breakthrough in quality in universities. Currently, the number of lecturers who can teach talented and high-quality programs in universities in Vietnam is not much, there are two approaches and transfer methods of training and fostering lecturers from other countries to Vietnam: (i) at first invite some professors of advanced universities abroad to Vietnam to teach; (ii) select young, capable lecturers to send to advanced universities in the top 200 in the world to foster, acquire knowledge and experience in teaching and research. Thus, it is necessary to quickly innovate models, programs and training methods, from the enrollment stage to the assessment and accreditation stage, especially the assessment of graduates.

Secondly, spreading learning methods to students

As for learning, it is necessary to move from memorization and memorization to the formation of the ability to apply, adapt, solve problems, and think independently. Not only learning in books and through documents, but also learning through many other forms such as games, interactive contacts, crowdsourcing, project-based learning. In particular, students who are future workers need to change their once-in-a-lifetime learning mindset by studying for a lifetime to work for a lifetime. Thus, education needs to transform the way of education from the transmission of knowledge to the development of students' qualities and capacities (Vo Thi Yen Ha, 2017).

To renovate teaching methods

The educational method must also innovate more strongly in the organization of education via the Internet. Thereby, the form of education will be flexible in time and space, suitable for personal conditions and needs of E-learning development or the use of cloud computing technology, allowing teachers to provide learning materials to learners and collect the results of the teaching process from learners continuously and flexibly.

Fourth, strengthening links between universities and businesses

To create a mechanism to link training and scientific research with production and services in universities. So far, most of Vietnam's universities have fundamentally shifted towards the goal of linking training and research with the development of the socio-economic economy. However, this engagement has not really worked. In particular, the linkage between the school and businesses is still very limited.

Fifth, improve the quality of independent accreditation of higher education

Although the higher education systems of most developed countries are very diverse in model and extensive in scale, in general the quality and effectiveness of higher education is very high. The reason for that result is due to the importance of educational quality accreditation. However, this field in Vietnam is quite new. The Law on Higher Education 2012 has made accreditation mandatory for higher

education institutions and must disclose the accreditation results for social evaluation and selection, and serve as a basis for stratification and ranking of educational institutions. Currently, the Ministry of Education and Training has established two accreditation centers under two national universities and assigned these units to carry out accreditation for all higher education institutions according to the model and method of the US and US learning countries on accreditation. It is necessary to invest in these centers to operate effectively. In particular, it is necessary to use the accreditation results to rank educational institutions, as a basis for investing or reducing investment, even stopping training activities for unaccredited schools like in the US. In terms of quality accreditation, it is necessary to apply many different sets of quality accreditation criteria for different levels of study and for different forms of study. Reorganize educational accreditation centers into independent accreditation centers, outside the Ministry of Education and Training, and encourage the presence of international accreditation organizations in Vietnam". The disclosure of quality information is entrusted to an independent organization. The set of indicators may include: satisfaction level of students after graduation, employment rate of students 12 months after graduation, average income of students after graduation ... at the same time, encourage and have policies to support Vietnamese universities to participate in international rankings and comparisons. In the long term, accreditation and disclosure of quality information should be considered a mandatory and periodic activity for all higher education institutions, training programs of higher education and colleges in the country.

5. Conclusion

The quality of human resources will be significantly affected by the industrial revolution 4.0, in order to improve the quality of human resources, higher education institutions must be equipped with the necessary skills to adapt to the era; innovate more strongly in the organization of education via the Internet. Thereby, the form of education will be flexible in time and space, suitable for personal conditions and needs of E-learning development or the use of cloud computing technology, allowing teachers to provide learning materials to learners and collect the results of the teaching process from learners continuously and flexibly.

References

1. Nguyen Cuc (2017), The impact of the industrial revolution 4.0 on higher education institutions in Vietnam and policy suggestions for Vietnam - Political Academy of Region I;
2. Thuy Dung (2017), *Industrial Revolution 4.0 and labor problems*, Saigon Economic Newspaper, 2, 78-94.
3. Trinh Xuan Hung (2018), Understanding Blockchain technology and its influence on the field of Accounting - finance - banking, *Journal of Accounting and Auditing*, 8, 46-57.
4. Tran Ngoc Thuy (2017), Current situation of accounting human resources in our country and proposed some solutions for the coming time, *Journal of Industry and Trade*, 12, 108-119.
5. Vo Thi Yen Ha (2017), *Improving the quality of learning and scientific research of students in finance, banking - accounting at current universities*, Presenting the Seminar of University of Foreign Languages - Informatics.