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# Solution for Improvement of Professional Education and Training: A Case in Vietnam

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#### Abstract

The 4.0 industry is starting to take place based on the digital technology platform and integrating all the smart technologies. In the face of this, in order to bring Vietnam from a developing country on the basis of an agricultural country with 70% of its labor force becoming a modern industrialized country, having a reasonable level of structure, occupational structure is more urgent than ever. The quality of education has made positive changes, some schools have breakthroughs (advanced program, high quality). However, in some schools, some quality training is still uneven. At the request of the market and the economy, the quality of our human resources has not kept pace. Graduates are either unemployed or very difficult to find a job. The inadequacies of the quality of education revealed more and more cause social anxiety and urgent.

Keywords: effectiveness, efficiency, education and training management

#### Introduction

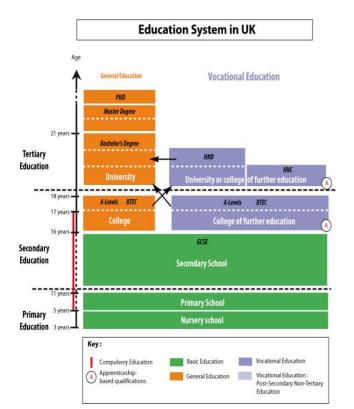
The 4th Industrial Revolution or the Fourth Industrial Revolution is a major trend affecting the socio-economic development of each country, region and the globe. This 4th Industrial Revolution is based on the fields of information and communication technology, artificial intelligence, nanotechnology, biotechnology, etc. This revolution is the foundation for economic transformation, strong from the resource-based model, low-cost labor to the knowledge economy. In particular, industry 4.0 will bring about major changes in labor supply and demand in the world. At the World Economic Forum in early 2016 in Switzerland, economists and scientists warned, during the Fourth Industrial Revolution, the labor market would be severely challenged and labor demand, as well as labor structure. In some areas, according to forecasts, with the appearance of the robot, the number of employees needed will be only 1 tenth of the current. Thus, the remaining 9 out of 10 people will have to change jobs or lose their jobs. Labor market will be strongly divided between low skilled labor and high skilled workers. Cheap labor is no longer the competitive advantage of many countries as before. Even middle-aged and college-educated workers will be affected if they are not equipped with new skills - creative skills for the 4.0 industry. With these characteristics, developing the industry is a great opportunity for Vietnam to accelerate the process of industrialization and modernization and narrow the development gap in the process of international integration. Especially, according to many experts, the young labor force is the great advantage of Vietnam because it is the best absorbing force in science and technology. According to the General Statistics Office, by the end of 2015, Vietnam had 49.69 million people in working age; of which 51% were young workers aged 15-39. Moreover, with the rapid increase in the number of employees working in the industrial and service sectors, it is a good sign that Vietnam is moving towards the 4.0 industry faster. Specifically, in the period 2005-2015, agricultural workforce has decreased by almost 10 percentage points; Labor in the industrial sector rose to 4.19 percentage points; Labor force in the service sector increased by 5.71 percentage points. However, in the 4.0 industry with the widening of application of information technology, control and automation, Vietnam has faced many problems in human resource quality. Specific:

Firstly, the technical qualification of Vietnamese laborers is low and there is a great gap for

other countries in the region. At present, there are two different ways of calculating labor in terms of technical qualification. According to the Ministry of Labor, Invalids and Social Affairs, workers have a level of qualification, including from training less than 1 year and from primary level up. Meanwhile, according to the General Statistics Office statistics, skilled workers are qualified workers and have certificates or more. With the calculation of the Ministry of Labor, Invalids and Social Affairs, in 2015 there are 28.05 million people with technical qualifications, accounting for 51.64% of the total labor force. However, according to the General Statistics Office statistics, the number of people with technical qualifications is only 10.56 million, accounting for the low proportion of total labor force (20.78%) (Table 2). And, if only based on simple skill work, Vietnam will not be able to catch up with industry 4.0.

Second, labor mainly works in the agricultural sector, low productivity. In the period 2005-2015, although the labor force in the agricultural sector decreased, it still accounted for the highest proportion, reflecting the "agricultural" structure of the economy. In addition, according to Vietnam Labor Force Survey in 2015, Vietnam's labor productivity at current prices reached \$ 3,660, just 4.4% of Singapore; 17.4% of Malaysia; 35.2% of Thailand; 48.5% of Filipinos and 48.8% of Indonesia.

Thirdly, the trained manpower does not meet the needs of the labor market and enterprises in terms of skills and other soft skills. This is reflected in the high unemployment rate of trained workers. According to statistics of the Ministry of Labor, Invalids and Social Affairs, by the third quarter of 2016, there are 1.1 million unemployed people in the country, of which the number of trained workers is not small: 202,300 people with university degree or above; 122,400 people are college graduates and 73,800 people are professional graduates. Although some of them are due to unreasonable labor supply-demand structure, not meet the requirements of employers [2].



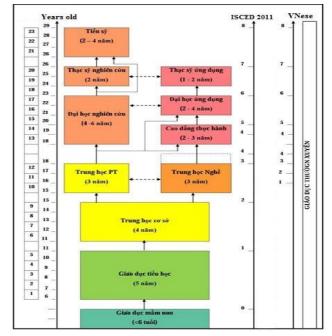


Fig.1: The Vietnamese education system in comparison with UK [1]

#### Solution group

The quality of human resources after training has not met the requirements of reality. According to the survey of 60 industrial service enterprises in Ho Chi Minh City on "Assessing the level of satisfaction of enterprises on the quality of students trained in the first 5 years after good (only based on theoretical knowledge, practical skills, foreign language proficiency, working style and professional competence), only 5% of the total number of students surveyed At a good level, 15% is good, 30% is average, and 40% is not good (8). This result not only reflects the limitations of higher education in Vietnam but also indirectly indicates a risk of labor in Vietnam lagging behind other countries in the region, while enterprises has been using automated technology in human resource management. Limitations on the ability to research and publish research results. Most of the advanced education of countries in the region and in the world today is capable of creating a large team of qualified scientists who study and publish research results in domestic and international in large quantity. In line with the trend of international integration, the quantity and quality of publications published in international scientific publications have become an important measure; the objective indicators reflect not only the development of science and technology. As well as scientific performance but also reflect the level and quality of the educational background of each country. In Vietnam, in recent years, despite of the interest of many educational institutions in creating a mechanism to encourage scientists to focus research and publish the results of research in the country and internationally, but the results are still limited, even tending to be far behind many other countries in the region and the world. Vietnam now has about 9,000 professors and associate professors, 24,000 PhDs and more than 100,000 masters. According to statistics from the Institute of Information Science (ISI), in the period 1996 - 2011, Vietnam has only 13,172 scientific publications published in internationally accredited journals, about one fifth of Thailand (69,637), one-sixth of Malaysia (75,530), and 1/10 of Singapore (126,881). Meanwhile, the population of Vietnam is 17 times that of Singapore, 3 times that of Malaysia and nearly half of Thailand. Not only in terms of quantity, the impact index of scientific research in Vietnam is also the lowest in comparison with other countries in the region. This modest rating is also consistent with the number of patents registered in the United States and the innovation index by the World Intellectual Property Organization (WIPO). Reduce in the competitiveness of the economy in the context of international integration. In fact, the inadequacies and limitations of higher education in our country today not only directly affect the quality of human resources, but deepen the competitiveness of the economy. It is in the context of deepening international integration.

## Firstly

On the standardization of the system, the Ministry of Education and Training will implement from the unified name of higher education institutions to the level of training in accordance with the ASEAN Reference Framework. Specifically, standardize the name of higher education institutions in foreign languages. Re-arrange education and training system. In the immediate future, the unification of professional secondary and vocational secondary schools into intermediate vocational education and training level has been included in the draft of the Law on Vocational Education to be submitted to the National Assembly for approval in the coming time. To implement the Law on Higher Education, our higher education institutions should be classified into 3 groups: research oriented university, applied university and vocational colleges) and currently ranked in each category.

#### Second

Accreditation of training includes accreditation of programs and accreditation of higher education institutions. MOET has established two centers for accreditation of education under the Vietnam University. In order to test the quality of all higher education institutions in the country, MOET stated that it is necessary to set up a number of centers for accreditation of educational quality in the regions in the whole country.

#### Third

Innovate training programs, develop high quality programs. First of all, the schools are self-reliant in developing the curriculum, actively choosing the curriculum selection system for teaching. The schools can build high quality curriculum with the correct tuition fees, Calculate the cost of training with the corresponding quality.

#### Fourth

Renovation of entrance examination. Implementing the Law on Higher Education and Resolution 29 of the 11th Central Committee of the Party Central Committee, the Ministry of Education and Training has asked schools to implement the right of enrollment. Schools must submit a self-assessment proposal to the Ministry of Education and Training before September 30, 2014 to implement the enrollment autonomy in the coming year. It is expected that from 2015 onwards, MOET will focus on organizing national exams for two purposes: Graduation from high school and college entrance. The draft national examination scheme has been widely publicized. Based on the unified

opinion on the national exam, MOET requires universities and colleges to consider taking the exam as their task to coordinate with the Department of Education and Training to take the exam seriously. At the same time, it is recommended that schools consider and select the method of enrollment in the different professions of their schools in the most suitable way to ensure the goal of improving the quality of training.

## Fifth

Strengthening the university governance system. Currently, MOET is completing the final version of the University Regulations on the basis of the Law on Higher Education and current regulations. The University Law provides for the establishment of the School Council for public education institutions. And ensure its authority in all its activities. For private university, current regulations are appropriate for Vietnam. Current legal documents create a harmony between the interests of investors and the objectives of education and training. A non-profit educational institution is, strictly speaking, a social institution of its own, no one is the owner so all profits will be reinvested in the development of the school.

Such models are difficult to implement in our country. Thus, the Higher Education Act determined that private universities are not profitable without dividing profit or dividing but not exceeding the interest of government bonds. The investor is still the owner of the school. The legal framework is now sufficient for non-public schools to operate. Fostering university management experience should also be done regularly and effectively, plan young and dynamic cadres training and gradually to the management positions to challenge. Schools need to develop plans to send qualified managers to study the management of foreign universities. The distinction between professional practice and management learning should be clearly distinguished.

#### Sixth

Renovate the financial mechanism, investment centralized, synchronous and effective. Replication of financial autonomy model of public universities have more resources to invest in improving the quality of training and encourage eligible public schools to register for financial autonomy and tuition collection. Higher education institutions stop the construction of investment projects without clear objectives, not aiming for long-term direction. The investment project should be included in the overall development plan of the school in the medium and long term. To renovate financial work to create motivation for healthy competition schools to raise the efficiency of investment in the whole system. Investment in equipment must be accompanied by the training of personnel to use, exploit and maintain. To end the situation of procurement of equipment without any user or inefficient use, thus wasting state investment resources.

#### Seventh

Establish strategic goals for school development. Although the strategic goals for the development of higher education institutions have been announced by the Ministry of Education and Training, some schools have not yet developed a complete plan or have not yet shown their long-term goals as the development plan in each stage. Gradually develop monitoring and evaluation tools to maintain and improve the speed of school development. Evaluate output quality, continue to collect monitoring data such as: progress of learners; graduation and dropout rates; organized feedback from the labor market, from pupilstudent former, possibility of recruitment. At the same time, collecting evaluation data: on student satisfaction; courses, courses and support services for students in order to reflect the quality of training in general and the actual needs of employers for HSS vocational schools through surveys, interviews, statistics, annual comparison. To achieve the goal of higher education is the education of professional qualifications, practical skills, communication, creativity, problem solving, adaptability to the environment, self-study, research must "socialize" the process of training, cooperation and attracting potential partners in society, especially enterprises and producers, are involved in the training process, making learners closer to the lips. The school they will work for and learn what they need after graduation. To focus on overcoming the phenomenon of "the school has no social need, the society needs no school" or the "unilateral" training, while the company stood outside, only know the "select" the product has. Available to then "criticize" the school training is not close to demand. Practice shows that enterprises themselves do not want to prolong the situation. Conversely, they will be ready to join once they have the opportunity, especially for the farmer's children - an object of training that has suffered too much.

Over the years, the issue of improving the quality of education has been taken up by the whole society and it is initially reflected in concrete actions; the development opportunities of the school also have many advantages (industrial parks, tourism in the province of Central Highlands ... has been formed). At the same time, on the basis of the analysis of the current status of training quality, strengths, weaknesses, opportunities and challenges of the school, we propose solutions to improve the quality of training to meet social needs.

Investigating the actual labor demand in enterprises in order to orient the enrollment demand and shift the structure of training occupations. Send questionnaires to enterprises; Organize seminars, exchanges with enterprises every year. Direct interview the employer, send staff to visit the learning experience of other training units. In addition, the organization of advertising should introduce of image, scale, training branches to schools to determine the learning needs.

Classify into groups of learners to have training plans that bring efficiency and quality, and adjust the program based on the knowledge, skills and qualities that learners need. After graduation; Determine training objectives, content, theoretical proportion, practice in accordance with actual requirements, not overlapping. In order to respond quickly and promptly to the market demand, the school should have the discretion to choose the training sector;

Apply teaching methods to raise the problem, strengthen discussion and group exercises to help students become familiar with the methods of scientific research. Upgrading teaching staffs, teaching equipment in the direction of standardization and modernization to meet the requirements of comprehensive training, meeting the requirements of teaching method innovation and regularly organize lectures to train teachers and train pedagogical skills. Having preferential regulations and incentives in recruiting teachers to ensure the professional structure according to balanced branches; Facilitate teachers go to reality in enterprises, training institutions at home and abroad. The promotion, placement of staff, especially the postgraduate level in accordance with capacity works requirements and level of dedication.

Together with the investment in teaching aids, auxiliary works such as multi-purpose houses and libraries, it is necessary to renovate and upgrade the existing classrooms to meet the training scale. To focus on building prestige and brand name from now to 2020; standardized training in the form of credit and promotion of affiliation with foreign training institutions (qualifications).

Encourage specialized units (centers and faculties) to promote cooperative relations with individuals and units outside the university, on the principle of "Respect, equality and mutual benefit" Enjoy the prestige, honor and activities of the school. Continuing with the experts collaborated with the school to perform teaching and research tasks.

# Conclusion

In the first days of 2017, the University of Science, Hanoi National University completed the school-level accreditation of the ASEAN University Network (AUN-QA). This is also the first school in Southeast Asia to be accredited by AUN-QA. Higher education is in the process of renewal, improving the quality of training, meeting the increasing demands of society. MOET aims to strongly implement the accreditation criteria of the ASEAN Higher Education System (AUN). Concurrent with MOET's view, many educators believe that only through standardized, objective and independent testing standards will they help schools see where they stand among the universities in Vietnam and are. Where compared to the international. It is a fact that so far, schools have been training, how corporate societies are using their work, so it is not enough to stick to the labor market needs. It is also the fact that universities are reluctant to undertake scientific research, so it is necessary to undergo an assessment to determine which schools follow the research direction, while most should go in the direction of practical application.

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