

Digital Human Resources in Europe and Some Experienced Suggestions for Vietnamese Interprise

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Abstract:

Digital economy and digital transformation are being deployed by most countries and regions in the context of the current industrial revolution 4.0. Therefore, attracting, building and developing digital human resources is a paramount issue of many countries around the world. Digital human resources is an effective form to implement green human resources and will be able to meet the requirements and do better for sustainable economic development. Depending on economic, cultural and social conditions, each country chooses different countermeasures to attract, train and develop this elite group of human resources to serve the digital economy. The article focuses on the experiences of developing digital human resources in Europe, from which some recommendations are drawn for Vietnam.

Keywords: Digital human resource, digital transformation, Europe

1. Some Basic Concepts

To have a tool to review and research the topic, the author uses related terms as follows:

Digital economy is an economy based on digital technologies, in which economic activities use digital information and digital knowledge as the main factor of production. Using the internet and information network as an operating space, taking telecommunications and information technology (ICT) services as the core and main driving force to increase labor productivity and optimize the economy.

Human resource is the sum total of quantity and quality of human being with a combination of intellectual and physical criteria and moral-spiritual qualities creating human capacity to mobilize in the process. creative labor for the development of society.

Contents of digital human resources: If the nature of the digital economy is knowledge-based, applying digital technologies, the role of knowledge is considered as a resource for the development of the economy. That requires human resources with high quality, well-trained, strong in expertise, strong in ethics, capable of mastering technology, creativity and ability to quickly adapt to changes in the world. technology in the economy.

Similar to the term "digital economy", there are now many different conceptions of the term "digital workforce", but the authors believe that the digital economy is a higher development direction of the knowledge economy. Therefore, digital human resources can be considered as a special form of science and technology human resources, bearing the characteristics of science and technology human resources such as:

- Capable of mastering digital technology devices in the interactive process of economic activities.
- Ability to adapt in the fastest time to the working environment and new scientific and technological advances.
- Have a disciplined manner and work ethic.
- Having the ability to think through breakthroughs at work, also known as creativity, is considered a sufficient condition and a characteristic criterion of science and technology human resources.

In addition, human resource groups forming digital human resources are basically the same as science and technology human resources, specifically including:

Firstly, human resources doing scientific research (research assistants, researchers, lecturers...), working in scientific research institutions or organizations (academics, research institutes, etc.) University...)

Second, the team of human resources who specialize in technology (technicians, engineers, etc.) work in science and technology organizations and enterprises

Thirdly, the contingent of cadres doing the state management of science and technology at all levels from the central to local levels, participate in or direct research work to serve the making of important decisions. science and technology within its competence.

Fourth, a team of overseas Vietnamese intellectuals and foreign experts working in the field of science and technology in Vietnam.

Fifth, all individuals from all social classes participate in the creation, improvement and application of science and technology to life.

In addition to the above-mentioned approaches, according to the research team, the concept of digital human resources can be understood in a broader sense, that is, including human resources who are qualified to meet the digital economy and human resources. Human resources are non-human forms but have many working characteristics similar to humans. These human resources exist in the form of: AI, Robot, Automation technology system... This could be the research team's new approach to the problem of referring to human resources suitable for the context of digital transformation. and industrial revolution 4.0 today.

2. The development of digital human resources in Europe

It can be said objectively, in addition to the US, Japan and the UK, European countries are one of the leading countries in the world in terms of digital economy. Economic development associated with high technology that the core force to implement is digital human resources is considered as a key factor in development policy in this region. The European Union has established The European Network of Public Employment Service (PES) with the aim of researching, managing, and suggesting policies and strategies to develop human resources in the region. The workforce, especially the digital workforce, meets the expectations of the constantly changing labor market in the digital era. Public employment service organizations have pointed out challenges affecting recruitment, recruitment and retention of national human resources in the current digital transformation context, including internal and external challenges. economy.

Regarding external challenges, Europe is also affected by the general trend of the world job market, which is a change due to scientific and technological progress or a change in demographics (population aging). , labor diversity) ... Specifically, those challenges include:

- Information technology: requires human resources to master and be proficient in digital technologies and digital content;
- Automation: requires the development of robots - artificial intelligence AI as part of the digital workforce;
- Demographics (population aging): requirements to make the most of working capacity and age limit of human resources;
- Orientation of human resource development policy: requires the ability to forecast the development of the economy, the speed of digitization of the economy, the employment system...

These challenges are forecast to grow larger in the next 5-10 years. Especially, when technology is developing more and more, the need to digitize the economy is increasing, the issues related to the labor market, especially the development of digital human resources, are increasingly important.

Regarding the internal challenge, it reflects the intrinsic in human development, in particular the ability of European Governments to attract and utilize human resources as employers. Those challenges include:

- Maintain the ability to attract a large number of digital workers as "employer" at the national level in a highly competitive recruitment environment (especially from countries with strong development ambitions). such as the US, Singapore, China...);
- Always in a state of readiness to adapt to technological innovations, economic models, employment forms...;
- The rationality of human resource development strategies, including the acceptance of stakeholders and the intrinsic of each economy.

The current state of Europe's digital workforce also reflects certain limitations. According to statistics at the end of 2017, 10% of the total workforce did not meet the goal of digital transformation, which is directly due to the fact that they do not use the Internet. The rate of failure to meet basic qualifications and skills in jobs in the digital era is 35% (EC, 2018). This is a relatively large percentage with a strong developed economy like Europe. With the need to develop the digital economy with a focus on digital transformation, digital skills are a prerequisite for workers when participating in the labor market and help the digital transformation to take place quickly and strongly. The number of professionals with advanced digital skills and information technology qualifications employed in Europe is 8.4 million people, accounting for 3.7% of the total workforce in 2017 (EC, 2019). This number has not yet met the demand and potential from the labor market. The European Union has implemented a number of solutions synchronously, especially the policy to encourage large businesses and corporations to establish NGOs to improve the education and training system. and improve the digital skills of the workforce in the market. This policy has brought certain effects when increasing the number of highly qualified professionals by more than 800,000, exceeding the threshold of 9 million in 2018. However, according to the survey, this number still does not meet the expectations of European Union businesses, when 64% of large enterprises and 54% of small and medium enterprises surveyed said that the number of The number of job positions related to information technology professionals is still not filled, there is a shortage in recruitment (EC, 2020) 6. To continue to solve the problem of developing digital human resources, Europe is implementing the following policies:

Firstly, build the infrastructure for the digital platform, increase the space, conditions and working environment for the digital workforce. The European Commission (European Commission) has proposed a "digital market" strategy by 2025 in which the establishment of a very high-speed Internet network (100Mbps) with global coverage and uninterrupted 5G coverage throughout Europe. EESC, 2017).

Secondly, the European Commission has implemented the project "Initiative on improving digital skills and digital content jobs" to improve the ability to predict careers in the digital industry, career guidance and dissemination of information technology. information to all levels of education thanks to the close cooperation between the Government, social organizations and educational institutions) 7.

Thirdly, European authorities continue to support and promote research, expand the scale and improve the quality of training information technology experts. In particular, continue to encourage the socialization of digital human resource training resources from large enterprises and corporations in the region.

Fourthly, Europe considers robots and artificial intelligence to be the future manpower of the digital era. That's why the European Commission named this campaign "artificial intelligence for Europe", specifically:

- Encouraging investment in AI technology development from both the public and private sectors, the European Commission continuously increases investment in AI by 70% annually, reaching 1.5 billion euros in the period 2018-2020 (EC, 2020).

- Connecting AI research centers across Europe, preparing scenarios for the socio-economic changes brought about by AI, and encouraging member states to invest in the current education system. Grand.

- Ensure the legal framework, develop regulations on artificial intelligence for members of the bloc from the publication of the annual white paper on artificial intelligence.

Thus, the continuous analysis of the situation to find the limitations in the development of digital human resources and forecast the job market from the future digital era, Europe has come up with plans and scenarios. action plan to cope with the rapid digital transformation of the European economy. Thereby, consolidating its position in the group of leading regions in terms of economic development in general and digital transformation in particular. These are also practical lessons for Vietnam to forecast digital transformation trends and digital human resource development in the near future.

3. Some experienced suggestions for Vietnam

The Industrial Revolution 4.0 includes the Internet of Things (Internet of Things), big data (Big data), artificial intelligence (Artificial Intelligence), cloud computing (Cloud computing) and blockchain technology. Blockchain) has had a comprehensive impact on the contemporary world, it has redrawn the world economic map, with the decline of power of countries based mainly on resource extraction and the increase in power of The country relies heavily on technology and innovation. In that trend, the economic model in the world is also changing at a rapid pace, from an economic model based on natural resources or a part of natural resources to an economy based mainly on science. learn technology (digital economy). The digital era also has a strong impact on Vietnam, creating new opportunities for our country to integrate more deeply and effectively with the world economy, narrowing the development gap with other countries if we take full advantage of it. take advantage of the breakthrough achievements of the industrial revolution 4.0. The world is getting flatter in many ways and the approach and pursuit of organizations, corporations and businesses will be faster than ever. Opportunities will come to those who master trends, have intellectual property, have a strong and powerful digital workforce, and have a good mechanism for encouraging the development of businesses, organizations, and corporations. group.

Therefore, in order to successfully transform Vietnam's economy to a digital economy, it is necessary to have a high-quality human resource, namely an abundant and high-quality digital workforce to serve the transition. change, shape and develop the digital economy in Vietnam. This is also the main workforce that determines the success or failure of this transformation. Therefore, the transformation of the economic model in our country to a digital economy is the process of shifting labor structure and developing digital human resources is inevitable. Accordingly, digital human resources will take the leading role in the total labor force of the whole society.

In fact, the European Union and Vietnam have many huge differences in terms of economy, politics, culture and society. Therefore, it is not reasonable to apply completely similar to European policies and measures to develop digital human resources for Vietnam. However, because it is a slower developing country, it is necessary to study the experiences of previous countries and will bring efficiency and practical meaning if Vietnam learns and applies the lessons flexibly. experience to avoid making mistakes and limitations of previous countries. In our country today, the digital workforce is only in the early stages of development, lacking leading experts and well-invested, professional and large-scale scientific and technological organizations. So to be able to create a force sufficient in both quality and quantity according to the requirements of the digital transformation, it is necessary to synchronously implement the following groups of solutions:

In the short term, an effective solution to develop digital human resources is to recruit staff and experts who are studying and working abroad. These are professionals with high knowledge due to access to international education and working environment. However, in reality, most of the attraction and use of digital human resources is mainly done by private businesses and corporations, while digitalizing the economy requires a combination of both state and business. To do this, the Government needs to develop a reasonable remuneration policy, from the system of wages, bonuses, allowances and other non-material incentives. This is one of the most concerning issues today, as this is a highly intelligent human resource who is enjoying very attractive remuneration from non-state agencies and organizations in both Vietnam and the world. economic. When the remuneration policy is not satisfactory, the job does not make full use of the knowledge they have accumulated during their studies, it is very difficult to attract them to work in the State agencies. At this point, Europe and the world's powers offer extremely attractive remuneration in terms of salary, housing support, means of transportation, no administrative time management, working geography but only Careful guarantee of work results, and especially the policy of granting citizenship after a long period of service, leads to a large number of "brain drains" of talented people in developing countries who want a good environment. high-quality living environment in these superpowers. However, considering that the country's economic conditions are still difficult, salaries are low due to budget constraints, practical policies such as opportunities, clear promotion

roadmap, and favorable conditions should be applied. Continuing to learn and develop yourself will bring positive effects in attracting and retaining talented people. Connecting and taking advantage of Vietnamese experts with science and technology expertise who are working for domestic corporations and enterprises or living and working abroad by forms of cooperation and association. will bring high efficiency and save costs. Utilizing resources in these areas will reduce the payroll burden on the State Budget, while still promoting high-quality human resources for necessary jobs in the public sector.

In the long term, in order to meet the demand for digital human resources in the context of the strong ongoing Fourth Industrial Revolution, the education and training system, especially vocational education, can quickly create This highly adaptable human resource team to the Industrial Revolution is the foundation and root of human resource development. . Especially in the structure of vocational training, it is necessary to pay attention to the direction in accordance with the direction of applying the digital economic model. Science and technology training programs need to be more socialized instead of being completely implemented by the State. At this point, Europe also encourages businesses to build a training system, both ensuring the purpose of maximizing resources and ensuring the benefits for the enterprises themselves when highly qualified human resources will serve. direct service to them after the training process.

Lessons from Europe's experience that can be applied in Vietnam are science and technology education programs associated with breakthrough technology products such as the Internet of Things, artificial intelligence, and robots that need to be implemented. from low to high school levels. The digital workforce will form and develop from many different sources, but mainly from within the national education system, with the core being the higher education system. It is a place to form and develop a team of experts, managers, professional lecturers, leading engineers, highly skilled workers, capable of researching or mastering the transferred technology. deliver; has the ability to manage, propose and organize the implementation of solutions to effectively solve basic problems in the process of economic development. Therefore, training institutions across the country need to apply the achievements of technology to improve teaching effectiveness, equip learners with knowledge to master science and technology from basic to modern. Universities also need to promote training and practice linkages with the business sector in information technology application because the business sector is the unit that directly recruits and attracts this human resource as well as the industrial sector. The field has better potential and strength than other schools in developing professional skills and competencies for students and trainees at schools. In particular, encouraging young people to pursue careers and fields closely related to science and technology through financial support, training funding, scholarships, and job search. This is a most effective and long-term solution that most countries in the world, even developed countries, still prioritize to implement.

Besides education and training solutions, it is necessary to spend more money from the State Budget to invest in the environment, the best working conditions for the digital workforce. This issue not only plays an important role in attracting and recruiting talent, but also plays an important role in retaining that talent to work in Vietnam for a long time. Therefore, first of all, it is necessary to review the budget allocation ratio to be reasonable, to ensure an appropriate rate for the workforce working in the technology sector. Creating conditions for digital workers to dedicate their talents and enthusiasm and enjoy the fruits of creative labor, commensurate with the value of their contributions. Compared to other countries in the world, such as Korea, China, and even Cambodia today, all have effective policies in attracting and using talents from abroad with incomes similar to those of other countries. develop. Besides, to create digital human resources with non-human factors such as Robot, AI, etc. needs to be identified as one of the focus in disruptive development. We can import technologies, attract high-quality foreign direct investment (FDI) to attract capital and technology associated with digital human resources; Along with that, Vietnam needs to have a start-up and innovation strategy with the encouragement and focus on research into automated, robotic and AI technologies to supplement its own special and extremely important human resources. important in the world of the present and the not-so-distant future of this industrial revolution 4.0 context.

Conclusion:

In the trend to meet the country's digital transformation requirements and the global trend. Vietnam needs to focus more on digital human resources, including a very comprehensive and holistic review. It is necessary to consider human resources in science and technology, including digital human resources that are not only human in flesh and blood, but also need to pay attention to human resources of technology, machines, robots, AI, and automation. The reality shows that countries that grasp and master technology will have the opportunity to develop rapidly at a speed far beyond the precedents of development in human history. Along with it, the research and policy proposals will make timely and effective adjustments to bring investment and development to individuals, organizations and the whole society. In summary, on the basis of analyzing the experience of developing digital human resources of the European bloc, the authors have proposed a few recommendations and useful suggestions for enterprises, public and private organizations. other during development. Doing this well will help Vietnam realize the goals of the Party and State in developing quickly and sustainably.

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