



ABOUT SOME ISSUES OF TRAINING PROFESSIONALS FOR THE DIGITAL ECONOMY

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ABSTRACT

In this article, summarizing numerous approaches of defining the concept of the digital economy, the author suggests considering the digital economy as a result of the evolution of society, its technical and scientific progress. The analysis of the state of digitalization of the economy has shown that all the processes of informatization of society do not only affect technological problems, but also organizational, legal, managerial, and educational ones. Based on the functioning conditions of the digital economy, the author considers a number of topical issues of future economic development and training professional personnel in the higher educational system of the Republic of Uzbekistan. The author suggests some strategies for further active improvement of the digital economy by creating new directions in the system of higher educational institutions.

KEYWORDS: *digital economy, digital information environment, digital competence model, higher educational system, network information educational environment.*

INTRODUCTION

In the modern economy, the system of higher professional education is one of the key and most promising platforms for the global competition of States for economic power and political influence in the XXI century. To compete in the new knowledge economy, the Republic of Uzbekistan must dramatically increase the share of highly qualified people in the labor market.

According to the world economic forum, digitalization would carry huge potential for business and society over the next decade and could bring in more than \$30 trillion in additional revenue. In General, the contribution of the global economy of digitalization of all spheres of activities are estimated at \$100 trillion until 2025 [1,2].

LITERATURE REVIEW

The sphere of digital economy in the system of professional education is quite recent for science. In existing research, we can note a significant preponderance in the direction of studying the practical aspects of its implementation, which creates certain restrictions on the depth of its theoretical

study. Many experts believe that all Informatization processes are only technological and do not affect organizational, legal, managerial, or educational problems. The problem of widespread introduction of information and communication technologies in industries and spheres is covered by the works of many scientists.

These are the works of such scientists as A.V. Bogoviz (2018) [3], N. Chakpitak (2018) [4], H. Goldstein (2017) [5], G. Gupta (2019) [6], C. P. Martin-Shields (2017) [7], M. Pilik (2017) [8], K. H. Tan (2017) [9], I. C. Tsai (2018) [10], B. A. Begalov, I. E. Zhukovskaya (2016)[11], O. I. Popova (2018) [12], A.V. Konon (2019) [13], A. I. Chuchalin (2018) [14] and others.

RESEARCH METHODOLOGY

The methodological basis of the research consists of dialectical method, system and synergetic approach, methods of logical and comparative analysis, synthesis, grouping and generalization, expert assessments, methods of the observation, the analogy and the quantitative analysis, the analytical and predictive methods.



ANALYSIS AND RESULTS

According to the research of the Center for economic research and reform national labor market and human capital, the only way for the country to keep it competitive in the global economy — to carry out the scenario ahead of modernization is a qualitative change in the labor market and increase the share of highly skilled professionals.

Of course, higher education is the fundamental human right and the main driving force for human development. It creates opportunities to improve people's lives by providing them with knowledge and skills, so that people in adverse socio-economic conditions will eventually be able to get out of poverty on their own [15].

A new impetus to radically improve the scope, a radical revision of the content of training at the level of international standards, and to ensure execution of the Strategy five priority directions of the development of the Republic of Uzbekistan in the years 2017-2021, effective and timely implementation of tasks defined in the Message of the President of the Republic of Uzbekistan to Oliy Majlis on January 24, 2020 [16], joint sessions and organizational meetings of the chambers of Parliament approved the **State program for the implementation of the action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021 the "Year of development of science, education and the digital economy"** [17].

In addition, in order to radically revise the content of training in accordance with the priorities of socio-economic development of the country, creating the necessary conditions for training of

specialists with higher education on international standards the decision of the President of the Republic of Uzbekistan from April 20, 2017 PP-2909 "On measures for further development of the system of higher education" [18].

According to the decree approved the Program of complex development of the higher education system for the period 2017 — 2021 quality and radically improving the level of higher education, strengthening and modernizing the material-technical base of higher educational institutions, provide modern teaching and research laboratories, information and communication technologies.

However, despite the significant achievements that Uzbekistan managed to achieve in this area in recent years, international competition puts the country in the field of higher education absolutely new tasks, which allow you want the country to remain a full, independent and respected member of the world community by mid-century.

Generalizing numerous approaches to the definition of the concept [5-14], the author suggests considering the digital economy because of the evolution of society, its technical and scientific progress. The digital economy exists and develops simultaneously with the types of economies known to science, because it does not replace the existing system of economic relations, but rather complements and modernizes it. In this regard, we will present some characteristic features of the digital economy in table 1.

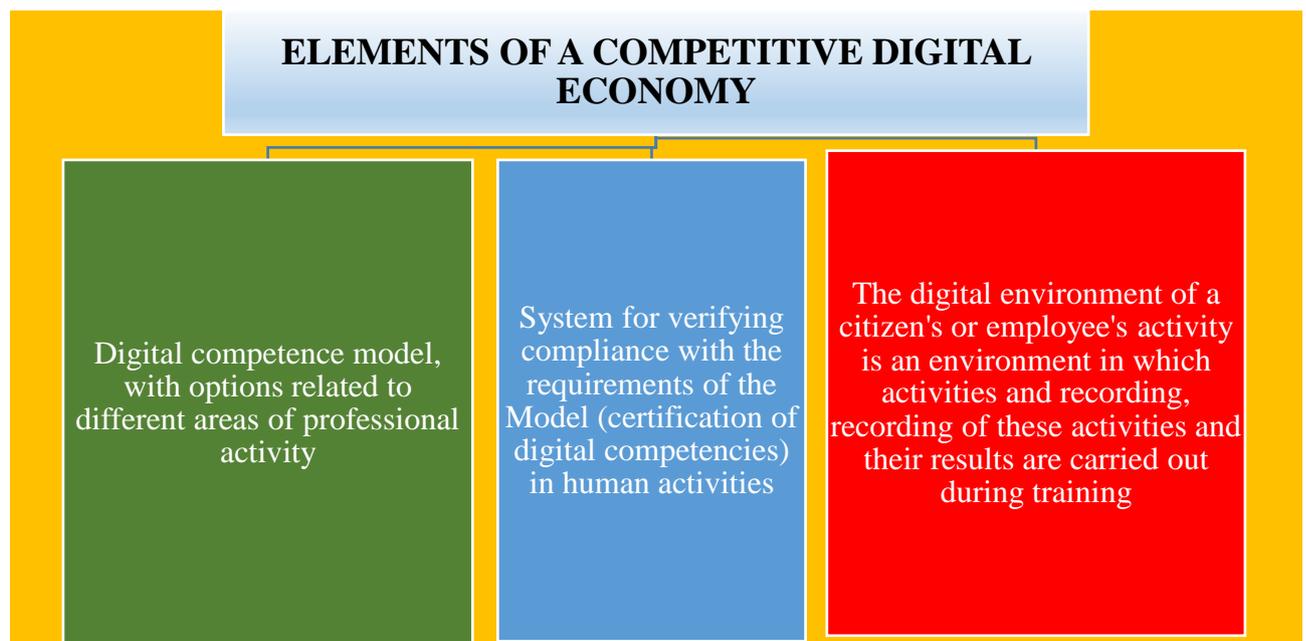


Table 1-Characteristics of the digital economy

Characteristics	Manifestation
Special - intangible form of sale	Conditionally, the digital economy is based on "indirectly" existing relationships, which are only possible in the form of electronic exchange of digitized data.
Special Tools	Complete and inseparable dependence of economic relations on telecommunications networks and computer technology, which distances the digital economy from the real (or traditional) economy. If telecommunications networks and computer technology are excluded from the relationship, the digital economy becomes impossible.
Unprecedentedly high speed of operations	This is true for both individual operations and the economic activities of entities as a whole. This factor is intended to have a favorable impact on the pace of development of virtual economic relations, but it can also serve as an aggravating circumstance in the event of crises. Lightning-fast connections can collapse with the same speed, causing a chain reaction ("Domino effect").
The appearance of not similar types of goods, services, and money	Their existence is possible only in digital (electronic) form. Examples of this are e-Commerce, the production of virtual (or digital) goods, and making payments using electronic money.

The described features of the digital economy serve as an impulse for further development of society, namely: the non-material form of the economy, implemented through specialized technical devices, requires the creation of an appropriate protection system that ensures the safe implementation of economic activities. All of the

above requires transformation of forms and methods of regulation and control of new economic relations, as well as the formation of new models of economic, social and political organization of society. Based on the above, we will present the necessary elements of a competitive digital economy in picture 1.



Pic. 1. Elements of a competitive digital economy.



Knowledge of information technologies and even the basic models of their application is not enough for the effective activity of a citizen and a competent specialist in the digital economy system, in the XXI century. Critical and creative thinking,

initiative and responsibility, adaptability, innovation, entrepreneurship, and emotional intelligence are also required [19, 20].

You can conditionally group these competencies into 3 blocks (Pic.2).



Pic. 2. Competencies required in the digital economy

The digital economy provides, in particular, for improving the quality of life, reducing human costs of life support, optimizing educational routes for citizens with disabilities, and using their human potential as a positive element of the digital economy.

Currently, the labor market is being intensively transformed with the development of the digital economy. Scientific and technological changes in recent years pose a big and difficult task for modern professionals-the constant development of their own professional competencies, even after receiving a diploma of higher or special education. It is too early to say that automation of production, analytics and other services leads to the replacement of people by machines – now, only 5% of modern labor positions are subject to automation. At the peak of relevance is the question of human interaction skills with complex computer systems. If engineers will not be a revelation all the rising demand for skills in the use of "smart" systems, the humanists feel digital transformation in full: not considered as

competitive an economist, not skilled in an analysis of large data sets, or attorney, not using digital Arsenal "legal tech". Thus, the labor market creates a demand for a new generation of specialists who use digital systems as the main tool of everyday work.

Every year changes occur faster and less time is required for the penetration of new technologies. It is important to understand that the labor market is extremely interested in preserving not jobs, but in preserving specialists who will take up new jobs created by digitalization.

The activation of the digital economy implies the creation of new directions in the system of higher educational institutions in the future.

First, the formation of new professions directly depends on the importance of certain innovative technologies for the market. For example, there is an obvious demand for engineers and programmers who create and maintain real-time data analysis systems, the industrial Internet, and other technologies of the fourth industrial revolution. In the social sphere, it is obvious to rely on big data



analysts who can serve the needs of economists, financiers, marketers and managers.

It is obvious that in the digital economy all modern competencies revolve around the skills of working with information. This means that any new way of extracting, transmitting, processing, and interpreting information will generate new professions that are in high demand on the labor market.

Secondly, such changes do not only concern professionals directly involved in the innovative and high-tech process. Therefore, there is a request for lawyers in the field of digital intellectual property, consultants on digital document management. Among economists, financiers, sociologists and political scientists, there are specialists working with big data and advanced analytics.

The penetration of traditional information technology competencies into all areas of professional activity results in new trends. Therefore, the term "*digital humanities*" is gaining popularity now, meaning the use of complex digital technologies in the humanities (historians, philologists, and sculptors).

Let us look at some of the main trends in education that are dictated by the digital economy.

Education systems face a serious challenge in training people who have the skills to take up worthy positions in the modern labor market. Leading universities operate in a competitive environment, and therefore act ahead of the curve. Thus, humanities universities enter into a network partnership with technical universities, allowing them to educate a new generation of "humanitarians" with "*hard skills*" and teach with "*soft skills*", which were previously difficult to imagine. At the same time, education is particularly transferred to online – the rapid development of open online courses and cloud-based educational platforms have attracted universities to the digital space.

Most likely, in the near future we will face the "duplication" of universities – the presence of the usual "physical" university and its "digital counterpart" in the online space, which can both work together and offer their own educational programs.

Of course, in order to keep up with digitalization, a set of new competencies and skills is required. It becomes relevant that the employee has the skills and knowledge required for both an engineer and an economist. This is important in order not only to understand the essence of the production process and how it is simplified thanks to technology, but also to be able to manage this process and to know how to assess the effect of digitalization [21, 22].

How well are national higher education institutions adapted to the current challenges of the digital economy?

In the educational sphere, digitalization involves the following interrelated directions: the formation of the image of the graduate, educational standards, programs, evaluation systems, educational content, methods and methods of educational activity at all levels of education and throughout the entire structure of the educational process [23].

Frankly, education can never keep up with the latest trends. And the very essence of higher education is not to "pump up" students with strictly technical, applied skills, but to form fundamental professional qualities, which in turn are very slowly undergoing changes. At the same time, the market requires the release of "ready-made" specialists who can join in the workflow immediately after graduation [13, 24].

Given this dual and complex nature, HEI should look for new ways to implement educational programs.

Each of the modern universities tries to be a mirror of the industry for which it trains personnel. Moreover, if there is a clear trend towards digitalization in the industry, this cannot but affect the approach to training. Today, a number of universities are creating working groups to improve the digital literacy of students and teachers. Some universities go further and develop educational master's programs, participate in the creation of online courses and manuals [25, 26].

First of all, university leaders should understand that digitalization of the educational process is not another fashion trend, but a real technological revolution, like the creation of a steam engine or telephone communication. Trend pioneers will win the most, followers will be able to survive in a competitive race, and agnostics will find themselves on the sidelines of progress and outside the market.

For a modern specialist, the most important thing is not a specific set of skills, but the ability to understand and anticipate trends in their professional activities. We live in the era of *lifelong learning*, and every practical skill can be mastered by a person at any time of life, sometimes even without breaking away from production. However, only HEU can provide something that will remain beyond the limits of computer capabilities for a long time, and perhaps always – a creative approach to any modern challenge, whether it is a managerial decision-making or a subtle diplomatic game [27].



CONCLUSION

Thus, the study showed that the total digitalization and introduction of information and communication technologies is a natural and legitimate process, the digitalization of the economy is a global process that does not depend on the economic, political, social and other difficulties of each country. Its influence requires certain changes in any country. The success of digitalization of the economy of Uzbekistan will depend entirely on the availability of qualified specialists and a radical change in the mentality of society. At the same time, it will be necessary to adapt the sphere of higher professional education to the requirements of the digital economy.

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