The transformation of human capital during the transition to a digital environment

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Abstract. The presented study is aimed at studying the processes of transformation of human capital during the transition to a digital economic environment. In the work, foreign studies were analyzed, reflecting the willingness to transfer labor resources to other states, as well as the level of training and education of personnel, because of the analysis, it was revealed that Russia occupies a leading position among the world states indicators. The study found that the process of training specialists should go on continuously and within its implementation should take into account not only the requirements of the national economy, but also global industry trends in staff development and the transition of corporate structures to new technologies. At the end of the study, an organizational scheme for creating networked educational structures was proposed, which will provide training for personnel of organizations.

1. Introduction
The basic directions of the modern vector of development of Russian economy include the development of regulatory regulation, training, improving the education system, the formation of research competencies and technical backlogs, improving the information infrastructure and information security [1-3].

The indicated directions predetermine the study of society’s readiness to accept innovations and solve a complex of tasks related to the possibility of efficient use of human capital and the use of advanced information technologies. The problems of development and human capital management are paid close attention not only at the level of organizations, regions and the state as a whole, but also at the international level, in the activities of such organizations as the United Nations (UN), International Labor Organization (ILO) and others. The study of certain aspects of human development is carried out in the works of experts of the Organization for Economic Cooperation and Development (OECD) and the World Bank (WB). At the same time, the increase in human capital is considered from different angles: because of improving the quality of working life, environmental protection, life safety and other [4].
The theme of the transformation of human capital was raised in the works of R.I. Kapelyushnikova, Z.R. Khabibullina, A.P. Buevich, S.A. Varvus, S.A. and T.A. Volkov, E.V. Kurushina, I.V. Druzhinina and others. Such Russian researchers as D.K. Zakharov, V.M. Svistunov, E.A. Mitrofanova, A.D. Megevov, E.K. Zavyalova, S.V. Kosheleva, M.O. Latukha, A.L. Zhukov, A.A. Litvinyuk, E.V. Shubenkova, P.V. Zhuravlev in his works examined various aspects of human capital management in the context of new socio-economic relations, innovations and digitalization of society at various levels of the economic system [5-6].

It is completely obvious and repeatedly proven that the main resource of socio-economic development, a key factor and the main goal of the reproduction process in modern conditions of the formation of a new economy is a person, his knowledge, skills, and abilities to work [7-8]. According to forecasts, such universal competencies as: social (sociability, competent spoken and written speech, ability to speak in public, emotional intelligence, flexibility and acceptance of criticism) will be most demanded in the near future; intellectual (analytical mindset, the ability to see and solve a problem, good memory, learning ability, creativity); strong-willed (result-oriented, time management, tenacity, stress resistance, willingness to perform routine work); leadership (the ability to apply decisions, responsibility, the ability to form a team, mentoring, the ability to resolve conflicts) [9-11].

In this regard, the development of qualitatively and quantitatively new approaches for adapting human resources to the challenges of the economy and corporate structures is required.

2. Materials and methods

The aim of the work is to evaluate human capital during the period of economic transformation. The goal gave rise to the following tasks:

- assess the level of training and education in the Russian economy;
- create a network structure for training personnel of corporate organizations.

In the study, various scientific methods were used, which are based on the collection, analysis and systematization of information. The information base of the work was the open information of state statistical bodies, reports of enterprises and analytical agencies.

3. Results

In conditions of transformation of the national economy into new realities of development, specially trained personnel are required who can carry out the transition from one technological structure to another. One of the areas of training for the new economy may be the exchange of personnel with the economies of other states [12]. In this regard, it is advisable to build long-term partnerships with companies in those countries that are the most popular areas of work, which will interest more trained personnel and provide them with career opportunities in the future.

However, according to the BCG survey, only 46% of respondents would like to move to another country subject to better career opportunities, 53% of respondents have the opportunity to do this [13-14]. The most mobile specialties are marketing, advertising - 58% of respondents have the opportunity to move abroad, IT specialties - 54%, analytical areas - 53%, and management - 52%. In these areas, it is possible to apply a flexible approach to the management and organization of labor [15-16].

Such a large corporation as General Electric employs thousands of professionals, ranging from managers of all levels to technicians who help the company take a leading position in the market. A large number of hired workers at General Electric (located in the USA) are not US citizens, that’s why the company is affected by global processes and it is developing a policy to attract specialists from all over the world. For example, in 2001, 43% of General Electric employees were hired from the outside, and by 2017 this figure was 63% [17-18].

From 2009 to 2016, the number of employees in the United States employed outside the United States increased annually by more than 60%. General Electric also began to hire women in leadership
positions more often than before. In 2001, the number of women holding leadership positions was 20%, in 2017 - 59%.

However, international ratings reflecting the level of knowledge of Russian specialists show the leading positions of Russia in terms of the level of training and education for the national economy (figure 1) [19].

![Figure 1. Level of training and education for 2019.](image)

Russia's strength is the high population with a degree in a particular scientific field, as well as successes in higher education, despite the small expenses allocated for the development of this industry. In terms of the number of women with a Ph.D., Russia is in 3rd place in the world, 7th place is an indicator that reflects the number of graduates in the field of science, and 9th place in terms of success in higher education [19].

Thus, based on the above analysis, we can conclude that the main problem points that Russia faced in 2019 are the lack of international experience and interaction with international organizations in the field staff training. To solve these problems, it is advisable to change the approach in the management of human resources, which, in the age of digitalization, should be aimed at the transition to a new technological structure.

4. Discussion

Today, the current trend is the creation of network structures in the educational sphere with the aim of training personnel for the national economy and individual organizations. Network structures are created to improve the quality of learning indicators, that is, when one educational institution has the right to use the scientific and educational potential of another. Similar network organizations in the field of educational activity are being created both within the framework of the national economy and international economies, because of which, within the level of personnel training is increasing [20-21]. In the opinion of the authors of the study, it is advisable to create such networked educational structures within the framework of large national corporations that would ensure a continuous training process for their employees, as well as contribute to the development and implementation of new forms of advanced training taking into account the needs of the national economy, industry and corporate structures [22-24]. The implementation of such networked educational structures can be represented as the following organizational chart (figure 2).

Thus, the presented network structure of personnel training will ensure the development of specialists taking into account the needs of the national economy and the experience of foreign corporate structures and educational institutions.
Figure 2. The network structure for training personnel of corporate structures of the national economy.

5. Conclusion
The study is devoted to the transformation of human resources, taking into account the needs of the national economy. As part of the work, the level of training and education of personnel was analyzed, this in Russia, according to certain indicators, reaches the world’s leading indicators. It was revealed that competitive labor resources flow to other states, thereby increasing the labor potential of the area. To remain in demand in the labor market, workers must become professionals in other new areas, acquire skills that are valuable in the digital age, and increase their ability to learn. Consequently, an important step will be the creation of a training and personnel development system that would help the organization reach a new level and reduce managerial costs, as well as improve the market position. At the end of the study, the creation a network structure for training personnel for the national economy and individual organizations is proposed.

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