

DIGITAL TRANSFORMATION OF INTERNATIONAL CORPORATIONS: PROFESSIONAL QUALIFICATION DEVELOPMENT

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ABSTRACT

The article substantiates the need for professional training of university teachers in the process of digital transformation of enterprises, which will accelerate this process and increase its efficiency by forming new competencies for both employees and consumers of goods and services of enterprises. The paper describes digitalization, notes the elements of which it consists, and provides the factors of its development in the conditions of modern uncertainty caused, among other things, by the pandemic. It also notes the dynamics of the global development of digitalization and highlights the main trends and problems. Based on the analysis of the digitalization index, the reserves for the growth of the effectiveness of Russia's digital transformation associated with the increase in the digitalization of human capital are determined. The authors propose a model of digital transformation of the professional training of university teachers based on the factors of the external and internal environment, principles, necessary competencies, stages and results.

KEYWORDS

Digitalization, Digital Transformation, Human Development, Professional Competences, Professional Qualification Development, Quality of Education

REVIEW OF LITERATURE AND OBJECTIVES

The goal of the research is in developing a model of digital transformation of professional training of university teachers as a driver for increasing the efficiency of digital transformation of modern enterprises.

Digitalization is one of the elements of the formation of a global information society in which knowledge becomes the main engine of progress; this knowledge, in the form of so-called big data becomes the main commodity. Currently, the key is not the fact of owning any resource but the possession of information about this resource and the ability to use this information (Juliya & Demchuk, 2015).

Digitalization nowadays is unquestionably one of the most dynamic areas in the business world. The breakthrough developments in recent decades in digital technologies are astounding (Kostin, 2018a). Most attractive sectors of the global economy, and Russia in particular, which display a high degree of investment attractiveness based on the value-based management framework, are driven by digitalisation. The sphere of education and training of highly qualified personnel is one of the driving forces for sustainable economic development of any country. Hence, the investigation of digitalization effects in this area is crucial (Kostin, 2018b).

Digitalization is one of the forms of handling information. In line with the Decree of the Government of the Russian Federation, it is defined as follows: "Digitalization is the conversion of an analog form of information transmission to a digital one" (Consultant, 2017). So, digitalization can be defined as the process of change via comprehensive implementation of digital technologies that are capable of producing, developing, distributing and transmitting information.

Unlike other ways of innovation, digitalization relies on the simultaneous development of many technologies, including telecommunications networks (mobile or stationary), computer technologies (computers, laptops, wireless tablets), software engineering (operating systems, machine learning, artificial intelligence), and the consequences of their use (common platforms for application development,

electronic delivery of public services, e-commerce, social networks, as well as the availability of information on forums, blogs and portals) (Shinkaretskaya, 2019).

METHODOLOGY

THE DESIGN

The methods that were used in the research process include analysis, comparison and generalization of data, grouping and modelling. The structure of the digital economy, within which digitalization is carried out, is shown in Figure 1 (designed by authors).

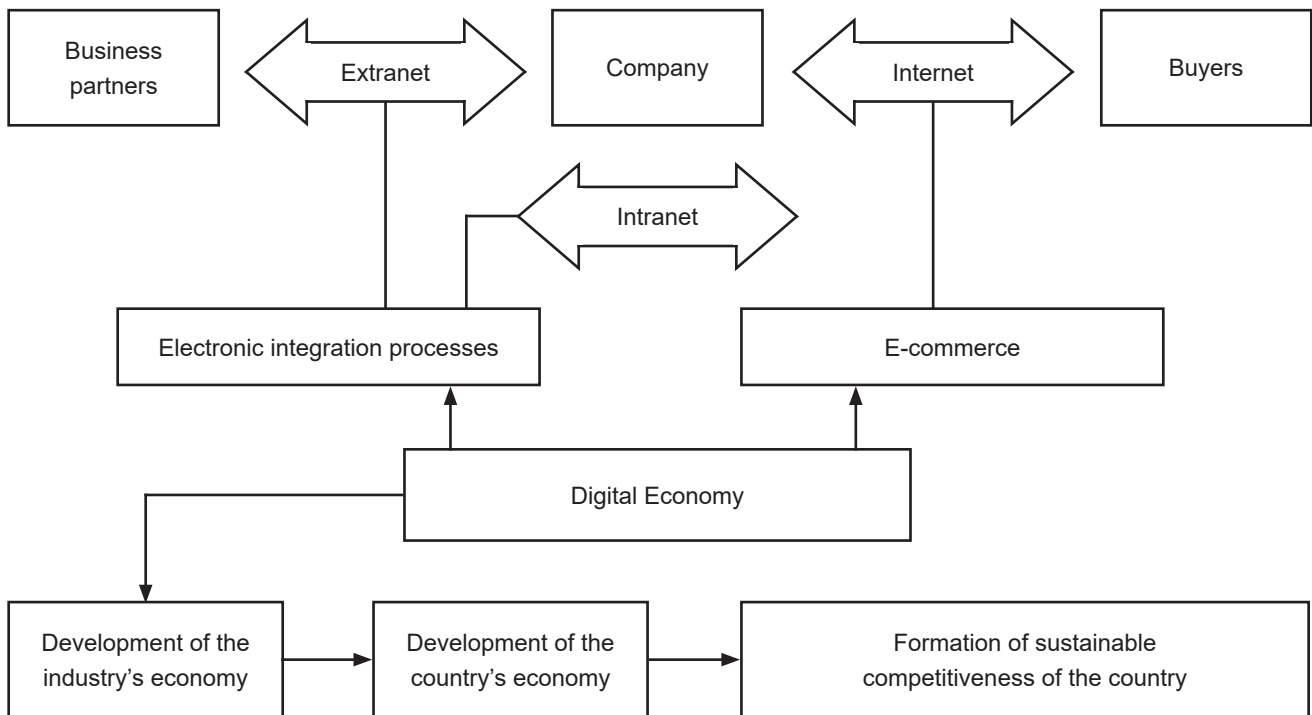


FIGURE 1. DIGITAL ECONOMY: THE STRUCTURE (DESIGNED BY AUTHORS).

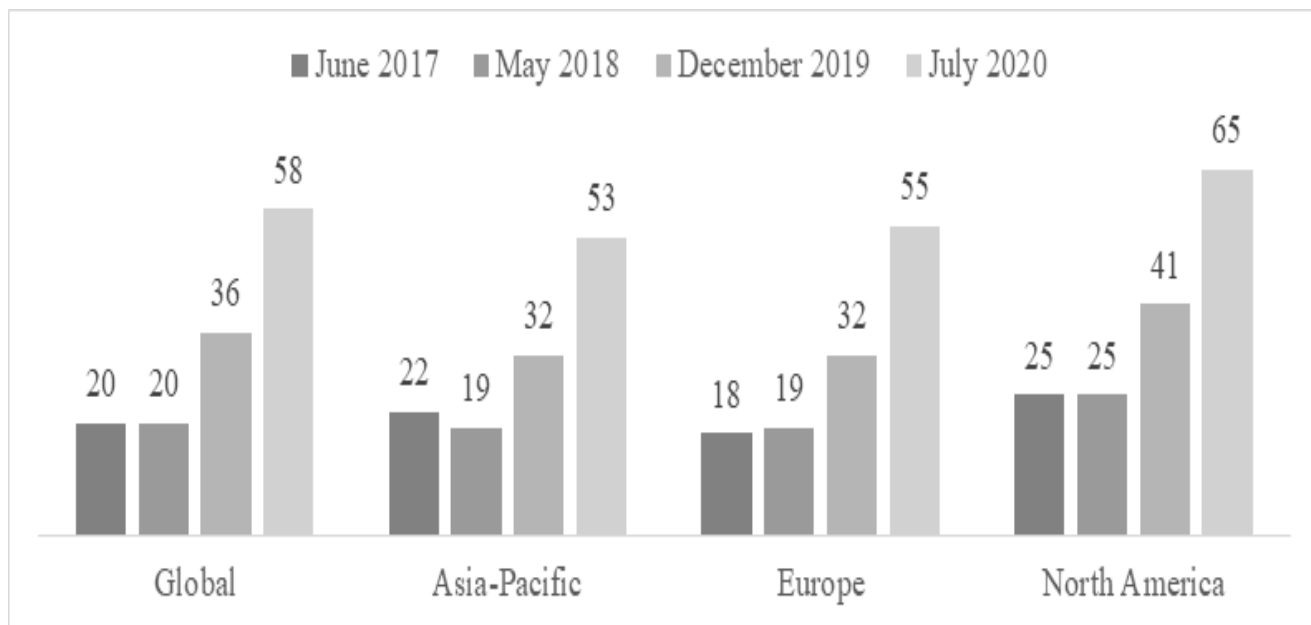
In the conditions of maintaining competitiveness and survival in the era of digital shifts, enterprises are aware of the need for changes and the use of modern technologies. The economy of the enterprise is being transformed under the influence of global processes of digitalization penetration into all spheres of economic activity. The digital economy evolution leads to changes in economic relations, i.e., the size of companies, the ways of making transactions, the level of relations between enterprises, and the main economic institutions change. In this regard, the key tasks of the enterprise's economy and business management, as well as other factors of reproduction at the enterprise, acquire a new meaning. This is facilitated by the level of information technologies, which, based on the capabilities of the Internet, create a platform for business entities to sell goods, expand marketing activities, collect data, select and compare counterparties, and conduct financial transactions.

To increase the competitiveness of companies, business focuses on customers (customization of service), all possible touchpoints and channels on the way to the buyer are determined (omnichannel logistics), the possibility of flexible pricing, and as a result, business processes are automated and simplified. Working with large amounts of data is of particular importance in enterprise management. As a consequence, the range of modern information tools for operational business management is expanding; management technologies are becoming digital (Kulinich, 2019).

THE SAMPLE

Factors influencing the growth of the digital economy include:

1. New buyers on the Internet. The average global share of customer digital interactions has grown by almost 300%: being at level 20% in June 2017 to almost 60% in July 2020. In July 2020, an increase of 21% was achieved compared to the period immediately before the start of the pandemic at the end of 2019. North America proved to be the leading region, where digital engagement went up from 25% to 65% (timeframe: June 2017 to July 2020). Overall, the global digital solution implementation was clearly facilitated by the COVID-19 pandemic. The corresponding data on digital customer interactions is presented in Figure 2.



(Source: Original)

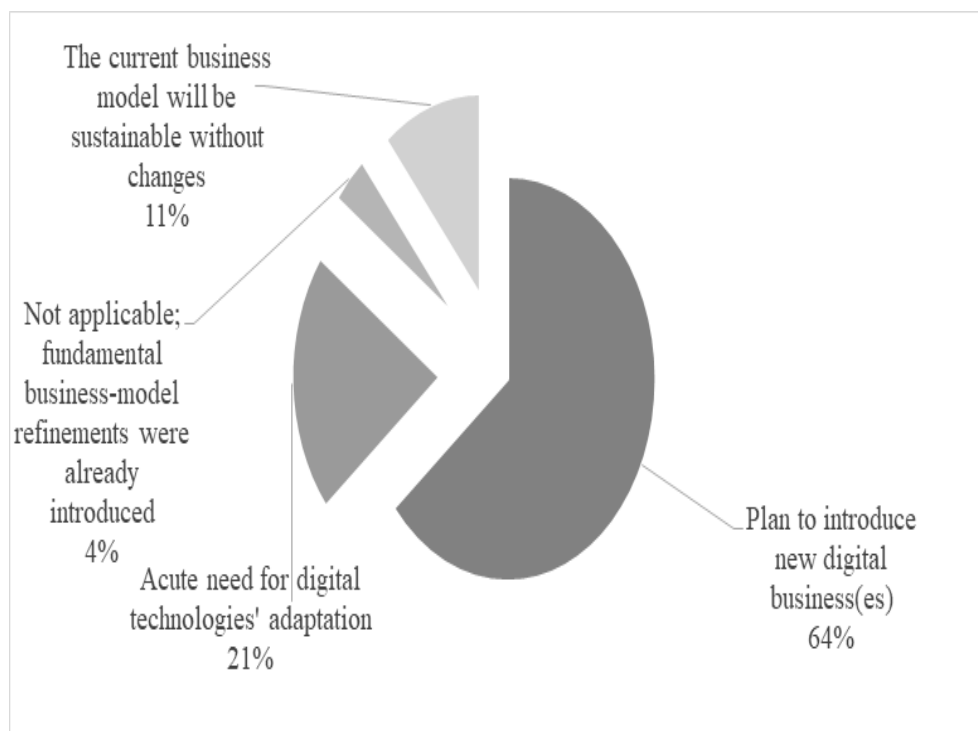
FIGURE 2. AVERAGE PERCENTAGE OF DIGITAL CUSTOMER INTERACTIONS PRIOR AND IN THE COURSE OF THE PANDEMIC OF COVID-19 BY REGION, % (STATISTA, 2022a).

2. Home isolation. Consumers who had to cut down on shopping trips made more online purchases in three months than usual, spending more and more money. The increased demand during the three months of 2020 has created a strong base, proportionally reducing the growth rate in 2021.
3. Increased frequency of purchases in the months following the lockdown. Even after the isolation ends, consumers will mostly choose online shopping rather than visiting crowded stores and shopping malls. It is possible to reduce this growth factor by a constant (albeit insignificant) tendency to increase the frequency of online purchases for most buyers (Leadstartup, 2022) of offline purchases by experienced buyers.
4. The transition of some employees to remote work. According to experts, due to the crisis caused by the pandemic, and the revision of the office management policy of many companies, a significant part of the company's staff will switch to remote work (including new employees who will become remote workers). Remote workers will partially move from the largest cities, which will give additional growth in online trading (the usual assortment will become unavailable).
5. FMCG online sales Growth (example: Bierley, 2002) as a result of the accelerated growth of supply and demand (the latter is more important) during the period of lockdown and after it. Significant

investments and rapid development of new players, including food products, have been made in the online FMCG market.

6. The decline in purchasing power and consumer activity is a negative factor in reducing consumption. According to experts, this affects only the premium consumption of the middle class. Conventional consumption is growing due to the cannibalization of offline sales (Buzhinskaya & Tsaruk, 2021).

Examining the presented factors influencing the activities of modern enterprises, it can be noted that approximately 90% of the enterprises plan to introduce changes to their business processes or report on having done to ensure sustainable economic growth in 2023 and further. Almost 2/3 of respondents acknowledge the need to create new digital businesses, and about 1/5 of the respondents plan to adopt digital technologies into their current business processes. Only 11% consider their business model economically sustainable (Figure 3).

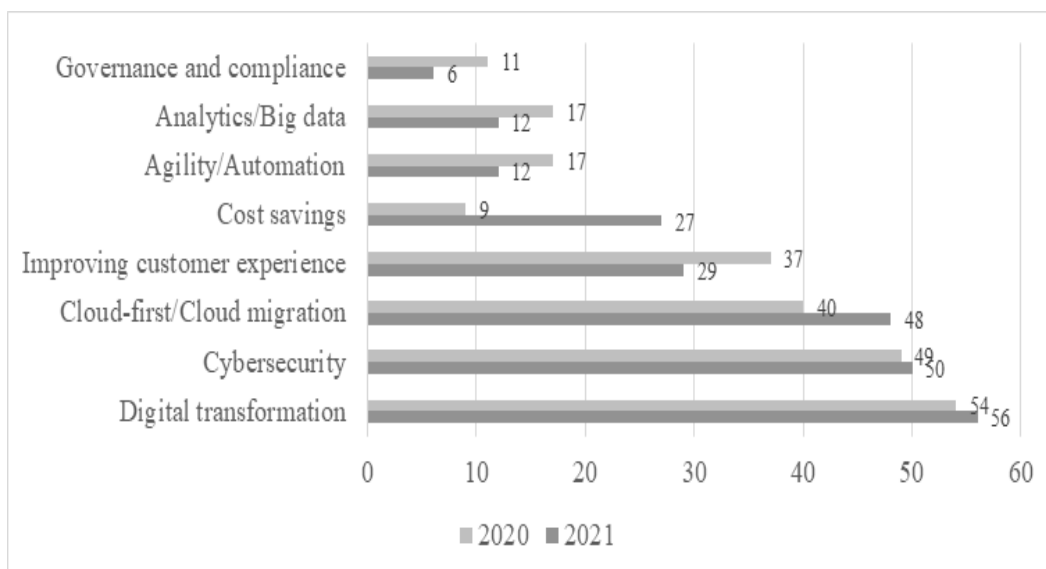


(Source: Original)

FIGURE 3. THE STRUCTURE OF RESPONDENTS' ANSWERS TO THE QUESTION REGARDING THE CHANGES THEY SHOULD IMPLEMENT TO ENSURE SUSTAINABLE ECONOMIC GROWTH IN 2023, % (STATISTA, 2022b).

Figure 4 shows the main priority areas of modern companies highlighted in the field of digital development. According to the data presented, one of the key priorities for international companies is digital transformation. Other priorities include cyber security as well as strategic migration to the cloud.

In this context, digital transformation means the integration of digital technologies to provide greater consumer value, i.e., traditional processes are being digitalized, which, in turn, contributes to higher level of efficiency. Concrete examples of the aforementioned are platforms like Microsoft Teams or Zoom. The products, which these platforms offer, are subscription-based and prove to be very cost-effective.

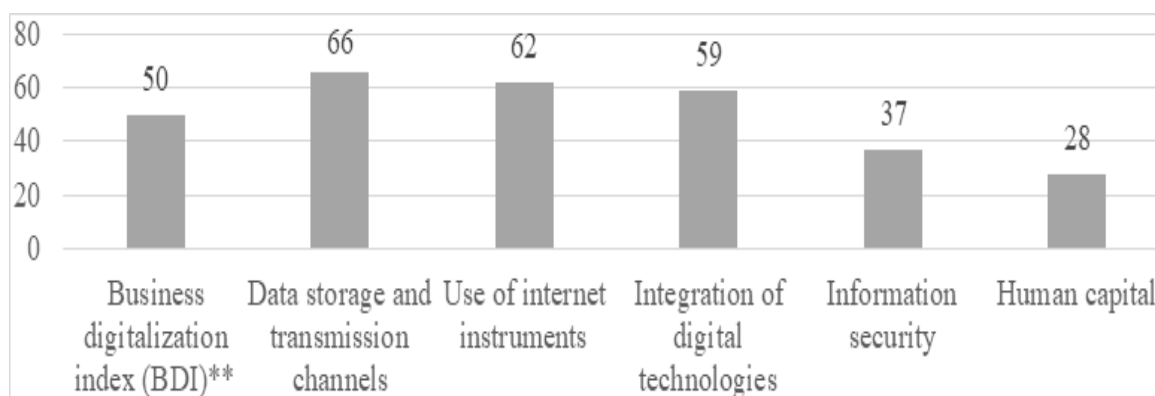


(Source: Original)

FIGURE 4. PRIORITY DIRECTIONS OF DIGITAL DEVELOPMENT OF MODERN ENTERPRISES, 2020-2021, % (STATISTA, 2022c).

THE TOOLS FOR DATA COLLECTIONS

Using the example of the level of digitalization of enterprises in Russia, we will analyze the reserves for activating digital transformation, which will allow modern enterprises to be more competitive in the face of global uncertainty (Figure 5).



(Source: Original)

FIGURE 5. THE DIGITALIZATION LEVEL OF RUSSIAN COMPANIES, SEPTEMBER 2020, BY INDICATORS, % (FROM 0 TO 100) (STATISTA, 2020).

The aggregate Business Digitalization Index (BDI) for Russian Federation was measured at the level of 50 points. Among the indicators that make up the index, the highest score was recorded for the use of data storage and transmission channels. Based on the identified level of digitalization of enterprises in Russia, the problems of low level of digitalization of human capital are clearly identified, which occupies 28%, which is the most insignificant indicator from those shown in the figure. That is the element

that we will consider as a priority in the context of the need to form new competitive advantages of Russia in the context of digitalization.

Summarizing the evolutionary analysis of the formation of the concept of “human capital”, Z.R. Khabibullina says that in modern conditions there are several separate and contradictory scientific approaches, each of which fills human capital with its own components, distinctive properties. Some researchers proceed from the fact that they interpret human capital as a certain stock of competencies, abilities and skills. Others suggest referring only to such a set of qualifications that was obtained by the subject of labor through formal training channels. Still others reveal the content of human capital through investments as certain targeted investments that guarantee the development and reproduction of productive abilities. A number of scientists include so-called non-economic indicators (social, ideological, spiritual characteristics, etc.) in human capital. There are also researchers who call into question the circulation in the structure of capitalist production of the creative abilities of employees in the form of human capital (Khabibullina, 2021).

According to Bondarenko and Urazova (2021), human capital is innate and acquired abilities that are formed in a person as a result of self-development, accumulated experience, as well as professional knowledge, skills, abilities, motivation and health throughout life, provide income to its bearer and society as a whole.

THE TOOLS FOR DATA ANALYSIS

We propose to expand this concept and define it within the framework of digital transformation as a set of knowledge, skills and experience formed through interaction in a digital environment and using digital technologies and tools, which increases the degree of digital involvement and actualizes information, which is a key source of human capital in the conditions of modern total digitalization. Figure 6 shows the components of human capital, taking into account the proposed definition.

Based on the conducted research, it is noted that the formation of human capital skills takes place within the framework of an established education system. On the basis of this, it can be concluded that there is a paradigm shift in the development of the educational system: Instructors and students use more and more digital services in educational processes.

The positioning of each instructor in the modern educational system is changing dramatically. New realities demand new strategies for the development of education and require understanding the prospects for further stages of achieving the maximum level of professional skills of a teacher in his work, in gaining a decent status in the social environment (Zeer, Lomovtseva & Tretyakova, 2020). Figure 7 presents relevant data on retraining modern employees.

According to the WEF report, the surveyed CEOs from 20 countries believe that in 2022 more than half of all employees will need retraining or advanced training courses. At the same time, 41% of employers intend to focus on training high-performing employees, and 33% indicated that they will give priority to employees most affected by the technological breakthrough.

The majority of employers surveyed expect the skills needed for most jobs to change significantly in 2022. Employees who have skills that are in demand to adapt to new technologies can expect higher

wages. And workers without such skills will notice that the value of their work is decreasing (Kommer-sant, 2019).

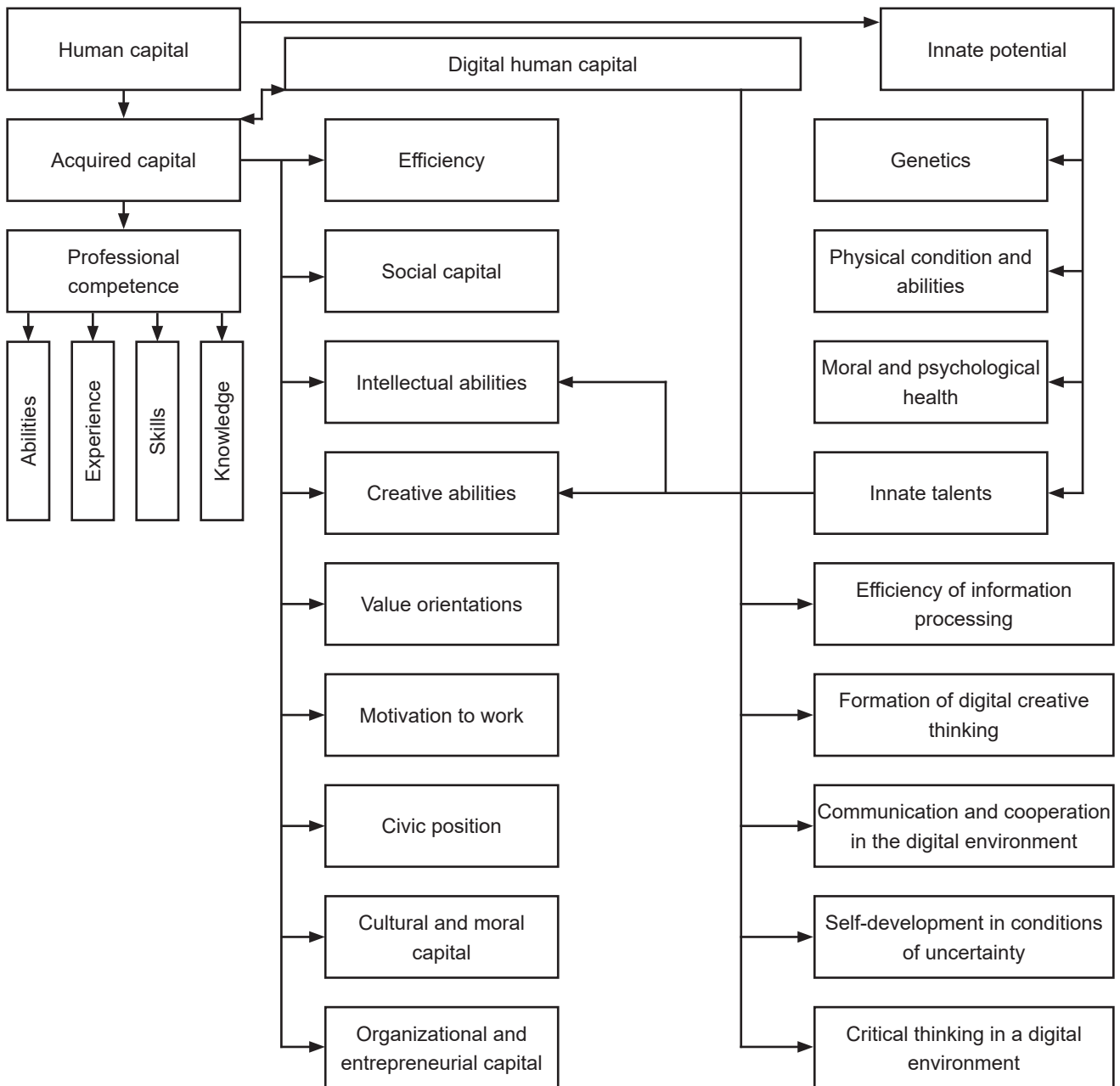
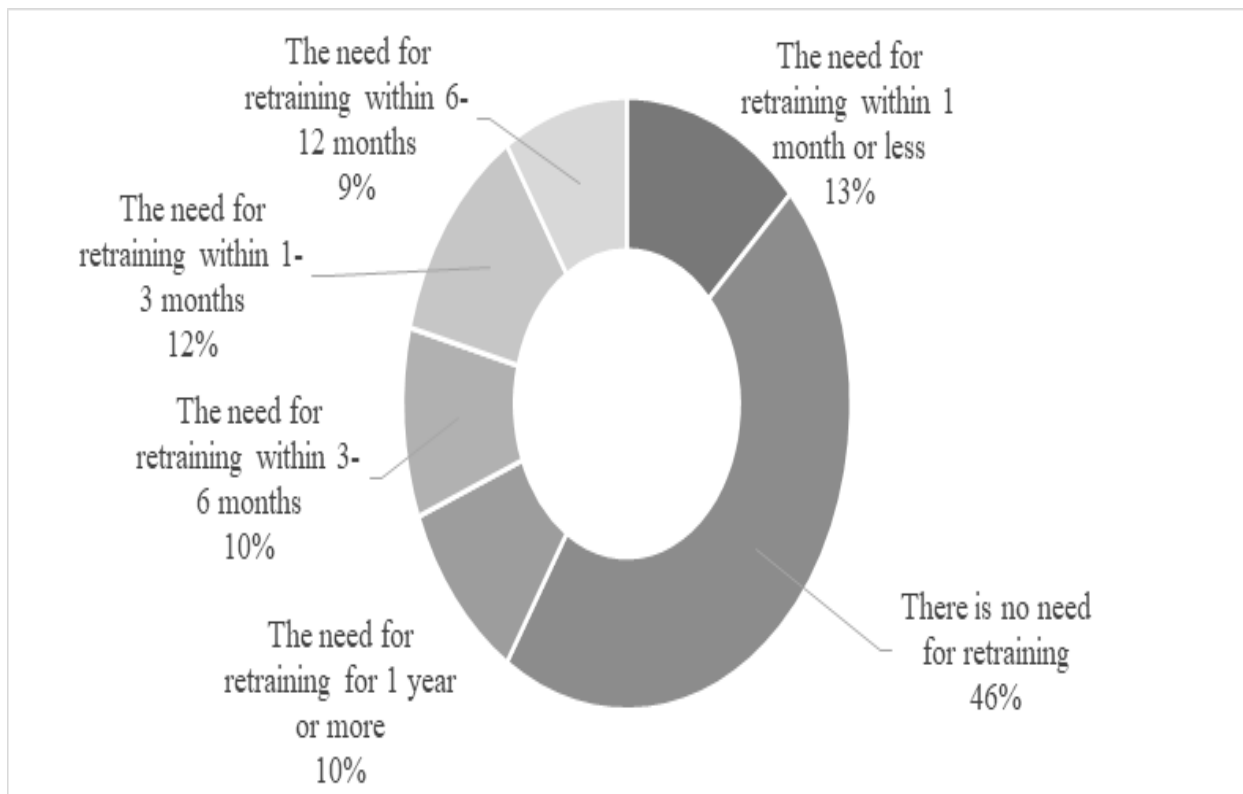


FIGURE 6. THE STRUCTURE OF THE ELEMENTS OF HUMAN CAPITAL AND DIGITAL HUMAN CAPITAL (COMPILED BY THE AUTHORS BASED ON KADYURBEKOVA 2012, CONSULTANT 2017, CONSULTANT 2019).

FINDINGS, DISCUSSIONS AND CONCLUSIONS

Examining human capital and the subjects that form it, the importance of the teaching environment in general and teachers, in particular, is noted. The modern instructor did not always stand up to competition with the constantly updated digital environment when it comes to being a knowledge source. Accordingly, high-quality information will be acquired from open Internet sources. This means that where a computer can replace a teacher – it will do. In this regard, the role of teachers, who must master all



(Source: Original)

FIGURE 7. EXPECTED NEED FOR RETRAINING OF MODERN EMPLOYEES, 2018–2020, % (THE FUTURE OF JOBS REPORT, 2018).

possible techniques, methods, and means of e-learning in order to be in demand in the information educational space, is changing significantly.

University instructors have to discover themselves from new sides in order to stimulate interest and provide for diversity in the ever-changing digital environment. However, not all teachers are interested in using various components of the electronic information and educational environment for the educational process organization. Only with the constant interaction of “environment-teacher” we can talk about the implementation of the key capabilities of the university educational environment for effective cognitive potential development, as well as teaching and learning.

The training of the leading personnel of the university in accordance with the current trends in socio-economic developments in the Russian Federation - the launch and establishment of educational environment transformation based on digital technology - will be the basis on which the process of professional training will take place in accordance with the current educational needs of modern youth. Hence, the vital process for any modern university is the transformation of the educational environment in accordance with advanced technologies, the introduction of new forms of interaction between teachers and trainees, and increasing the digital competence of the leading personnel. Designing a structural and functional model aimed at the development of online courses, from the point of view of the authors, will raise the current level of digital literacy of the leading personnel of the university, and therefore increase the level of digital maturity of the educational organization overall. The main advantage of the proposed model is that it is easy to implement from a practical point of view and it has consistency, integrity and completeness for any level of training of adult learners from a scientific and theoretical point of view.

In view of the above, we have developed a model for improving the professional qualifications of university teachers based on the principles and tools of digitalization of human capital (Figure 8).

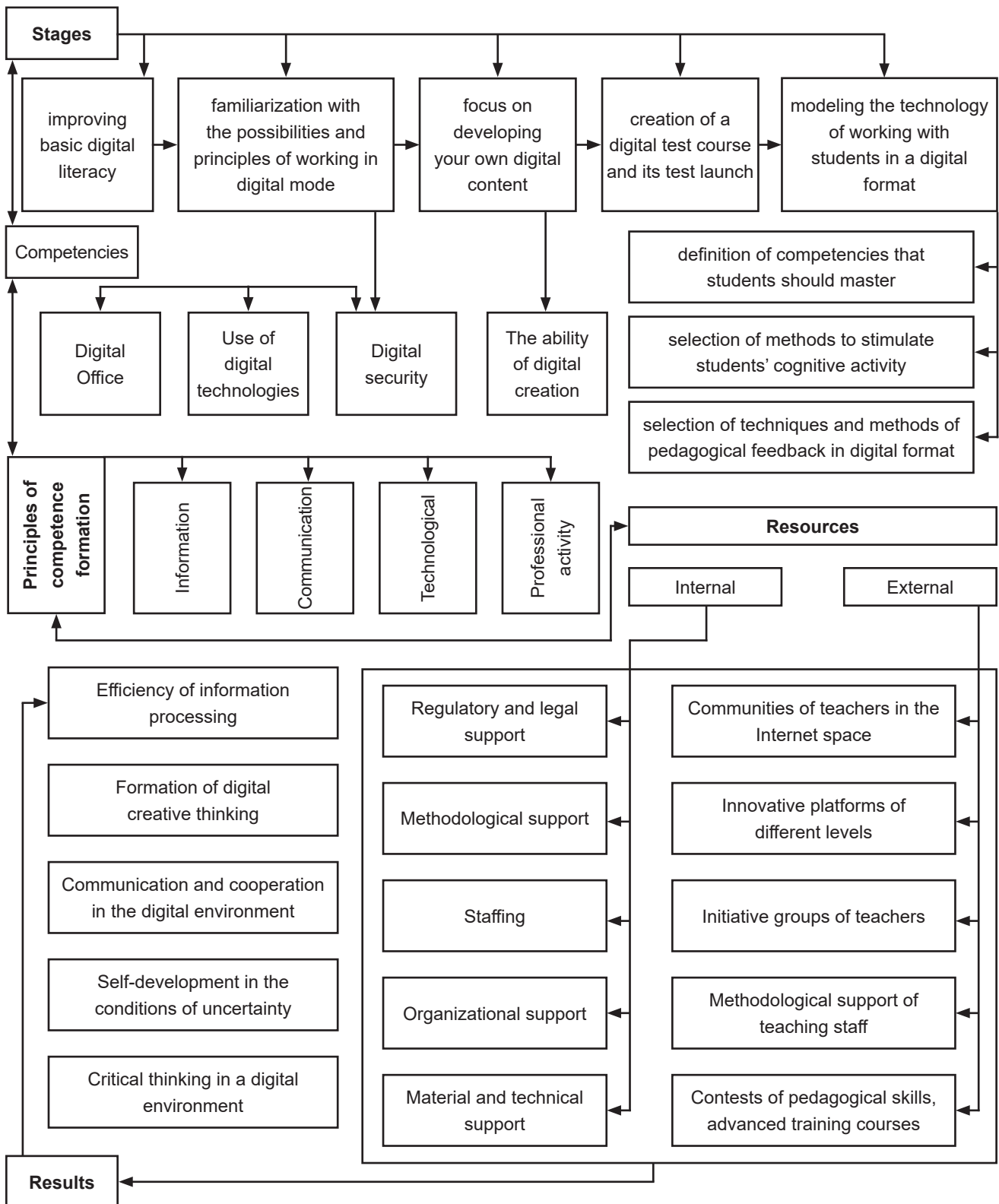


FIGURE 8. A ODEL OF PROFESSIONAL DEVELOPMENT OF UNIVERSITY TEACHERS BASED ON THE PRINCIPLES AND TOOLS OF DIGITALIZATION OF HUMAN CAPITAL (COMPILED BY THE AUTHORS ON THE BASIS OF: KOVCHUR, 2020; RYLEEVA & STEFANIK, 2021)

Based on the above model, the high role of both external and internal factors in improving the professional qualifications of university teachers is noted, which is actualized in the process of the pandemic, which leads to the forced transfer of university activities to the digital environment. On the basis of the conducted research, it is noted that the success of the modern transformation of enterprises will become more successful and easier in the case of an effective digital transformation of human capital, in particular the activities of university teachers. This is due to the importance of education in the process of transformation, both for university graduates as specialists in the field of digital transformation, and for university graduates and teachers as consumers of goods and services of enterprises that have already embarked on the path of transformation.

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