

Soft skills: the training of specialists for the digital economy

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Abstract—The digital economy as an activity directly related to the development of digital computer technology has a serious impact not only on the economic activities of enterprises and organizations, but also on the lives of ordinary people. Skills of working with information are increasingly in demand in modern life not only for specialists, but also for ordinary citizens. Analysis of the requirements for training HR specialists from the standpoint of professional standards and requirements of employers in the digitalization of the economy leads to the conclusion that for successful work in this situation one requires certain competencies, the formation of which is primarily associated with soft skills.

Keywords—*digital economy, digitalization, soft skills, hard skills, HR-specialist.*

I. INTRODUCTION

The end of the 20th century brought with it a widespread transition of humanity to a new stage of development, namely digital. Actively introduced information technologies found ways into the lives of almost every person on Earth, gradually changing their habitual way of life. Today, we talk not just about informatization as the use of various electronic devices to facilitate the receiving and transmission of information, but about the next stage - digitalization [1, p.327]. Convenience and speed of obtaining results no longer satisfy consumers of information technology, but this refers to addition of new functions to the traditional ones, namely analytical and prognostic [2, p.53].

Increasing the capabilities due to digitalization did not allow the users of computers and the Internet in the economic sphere to stay indifferent, but opened new opportunities for them.

The first concepts, as well as the definition of a modern digital economy appeared at the end of the last century. In 1995, the American computer scientist Nicholas Negroponte presented it in the form of a transition from the movement of atoms to the movements of bits. He said that material substances considered in the form of raw materials and products have their own disadvantages, namely: the physical weight of products, the need for resources for their production, the use of storage areas, logistic costs and problems associated with the transportation of goods [3, p.19]. The advantages of the digital economy as a “new” type of economy, in the opinion of computer science, could be the following: the absence of the physical weight of products replaced by information volume, lower resource costs for the production of electronic goods, several times

smaller area occupied by products (usually electronic media) as well as instant global movement of goods through the Internet.

The “Strategy for Development of Information Society for 2017-2030”, approved in Russia, includes the following definition of the digital economy: “The digital economy is an economic activity in which the production key factor is digital data. The processing of large volumes of which and using the results of analyzing which compared with traditional forms of management, significantly improve the efficiency of various types of production, technologies, equipment, storage, sales, and delivery of goods and services. ¹

Thus, digitalization is the conversion of information into digital form, which in most cases leads to cost reduction, the new opportunities, etc. And the digital economy is an activity directly related to the development of digital computer technology, which also includes the provision of online services, electronic payments, online trading, crowdfunding, etc. Usually, the main elements of the digital economy are e-commerce, Internet banking, electronic payments, Internet advertising, as well as Internet games.

Nowadays, there are five aggregated parameters, thanks to which the level of compliance with the requirements of digitalization as a world trend is assessed:

1. “Connection” the country to the results of digitalization of communication (Connectivity);
2. Use of Internet by citizens;
3. Integration of digital technologies by business;
4. Digital Public Services;
5. Human Capital/Digital skills.

The fifth parameter of the DESI Index describes the skills of working with information, not only for specialists, but also for ordinary citizens. This parameter measures the level of basic skills of the population in using the opportunities offered by the digital society. It assesses the work on the Internet, the use of digital technologies, as well as the level of advanced skills and their development. Analysis of this parameter in EU countries showed that in 2016, this parameter had the highest value in Denmark,

¹ - The Presidential Decree of 09.05.2017 No. 203 “On the Strategy for the development of the information society in the Russian Federation for 2017-2030”

Luxembourg, Finland, Sweden and the Netherlands, and the lowest was in Romania, Bulgaria, Greece and Italy [4, p.58].

A number of modern researchers of this issue say that the skills of the 21st century are much broader than just digital skills. In addition, unlike digital skills, the 21st century skills are not necessarily supported by information and communication technologies. At the same time, there are seven basic skills: technical, information management, communication, cooperation, creativity, critical thinking and problem solving [5, p.2192]. In addition to these, five more contextual skills are described: ethical awareness, cultural awareness, flexibility, autonomy, and lifelong learning [6, p.583].

Surely, certain competencies are necessary for successful work in a digital economy conditions. In speaking of competencies, we mean the behavioral characteristics that an employee must possess in order to successfully perform the prescribed functions [7, p.59]. The formation of the necessary competences is possible in the conditions of acquiring special knowledge of the digital economy and technologies, as well as the development of digital skills and abilities against the background of the modern attitude to this aspect of life.

The existing practice of training allows us to state that the acquisition of the necessary competencies is mainly due to information technologies, without affecting such an important aspect as soft skills.

Traditionally it is believed that the human success depends on the knowledge, skills and abilities in a particular professional activity. But the truth of life indicates the opposite. The results of a study conducted at Harvard University and Stanford Research Institute state that hard skills contribute to the professional success of an employee only 15%, while soft skills determine the remaining 85%. The management of most companies is committed to hiring, retaining and promoting workers with a high level of development of soft skills. Of course, this does not mean that the employee does not need specific technical and professional knowledge related to this field of activity (hard skills). Hard skills should be necessary presented, but for the successful solution of various tasks that faces an employee during fulfilling the goals set by the company, they are not enough. Consequently, they are not enough for successful career development.

The results of another study of the Stanford Research Institute together with the Carnegie Mellon Foundation among the CEOs of the Fortune 500 companies showed that their long-term and stable work success is determined by soft skills for 75% and by hard skills for only 25% [8, p.176].

Thus, the constant changes that modern specialists and managers have to face, force them to shift their attention from hard skills to soft skills, i.e. from professional, highly specialized skills and abilities, mainly related to technical aspects of activities, to skills not related to a specific type of activity or profession.

Key competencies which are context-independent, applicable and effective in different institutional settings, professions and tasks are close in content to soft skills. Most often they include basic competences, namely literacy,

ability to count, general education; methodological competences - problem solving, IT skills, communication skills and competence judgment, such as critical thinking [9, p.16].

Soft skills have a greater influence on career development in modern society. It is possible to bring to automatism certain limited actions (hard skills) within the framework of a specialist's activity, but only the ability to react flexibly to changes, constantly improve their methods and ways of working, the ability to interact with colleagues and partners, etc. will help become the head of the unit or organization as a whole.

The aim of this study is to assess the adequacy of training specialists in educational institutions to the requirements of employers in the conditions of digitalization of the economy and trends in the development of production and administrative processes on the example of HR-specialists, as well as identifying possible areas for reducing the existing gap.

II. METHODS

The research methods include the following:

1. Work with primary sources, including the scientific literature and regulatory framework, which allowed us to assess the status of the stated problems.
2. Statistical observation, including a survey, expert interviews in order to identify current trends in the labor market and current requirements from employers.
3. Logical analysis and generalization for the formation of a holistic picture, reasonable conclusions on the results of the performed work and identification of possible directions of development.

III. RESULTS

The training of specialists in educational institutions for the training program "personnel management" is currently carried out in accordance with the federal educational standard, which is based, in turn, on the professional standard "Human Resources Specialist"².

The analysis of these regulatory documents allows us to conclude that the requirements of the professional standard are based on generalized labor functions, which are traditionally prescribed to specialists of personnel departments in organizations. First of all, these are activities related to the provision of personnel, the assessment and certification of the company's personnel, its development, organization of work and pay, organization of corporate social policy, as well as issues of operational and strategic personnel management. An integral part of the work of personnel officers is the documentary support of work with personnel. Within the framework of the generalized labor functions listed above, the levels of complexity from 5 to 7 are listed, while the levels 5-6 do not impose requirements on work experience, the level 7 introduces a restriction - not less than 5 years. Any other required characteristics are missing. By analyzing labor actions within the framework of

² The Professional Standard "Specialist on Personnel Management" No. 559, approved by the Decree of the Ministry of Labor and Social Protection of the Russian Federation of October 6, 2015 No. 69/n

labor functions, it is possible to note their orientation towards analysis, information and consultation, placement and search for information concerning the immediate aspects of the work of personnel specialists. When describing the necessary skills, the authors of the standard mention the collection, analysis and structuring of information, the ability to use search engines, work with information systems and databases, the ability to consult and apply various technologies of personnel management.

So, the developers of this standard recognize the importance and the need to possess certain competencies in the framework of digitalization of management processes, but priority in the requirements and training is therefore given to hard-skills, professional knowledge and skills that can be used to perform processes exclusively in this area of labor activity. Of course, hard-skills have a number of advantages, for example, their formation is less expensive, is carried out fairly quickly based on traditional teaching methods, the level of these skills is easy to check and evaluate, they are universal regardless of the place of work effort.

But soft-skills, as a complex of non-specialized, super-professional skills, responsible for the formation and development of personal effectiveness, does not exist. But it is these skills that are responsible for successful participation in the work process, high interest and productivity. Having a cross-cutting nature, they are not tied to a specific subject area. The presence of soft-skills is difficult to track and verify, but they are necessary in most situations that a specialist encounters in the workplace.

Documents confirming the level and profile of education now play an important role in deciding whether or not to hire an employee in an organization, but increasingly often the employer pays attention to the socio-psychological characteristics of the personnel.

The presence of soft-skills allows employees to increase their own productivity, provides career development opportunities, while maintaining competitiveness and relevance in the labor market.

The question is what kind of soft-skills are in demand in the labor market.

The overwhelming majority of employers in their vacancy announcement make primarily emphasis on communication skills. These are the skills that are necessary for all, without exception, to establish and maintain effective contacts and achieve stated goals at the end of the interaction. The skills of effective (creative) thinking and self-management are listed too. They allow a person to find original solutions, while controlling various resources, including the emotional ones.

Almost every vacancy announcement includes a requirement for information (computer, technical) literacy. In modern organizations, almost all workplaces are equipped with computers or other software tools for receiving, organizing, processing and transmitting information.

Another skill that is increasingly often found in the wishes of employers is project management. Despite the fact that project management is an independent area of professional activity, the company management is

committed to the widespread dissemination of this management approach among its staff.

Team building, effective teamwork skills, conflict competence have been considered valuable characteristics for several decades.

Emotional intelligence is gaining popularity in the list of desired characteristics. Despite the fact that the concept of “emotional intelligence” was introduced in 1990 by John Mayer and Peter Salovey [10, p.203], many researchers still try to figure out what it is.

So Reuven Bar-On, the author of the abbreviation “EQ”, believes that emotional intelligence is “a set of non-cognitive abilities, competencies and skills that affect a person ability to cope with the challenges and pressures of the external environment”. The model itself consists of 15 abilities, among which self-respect, independence, flexibility, stress resistance, self-actualization, optimism, etc. are [11, p.11]. Daniel Goleman describes “the ability to be aware of one’s emotions and the emotions of others in order to motivate oneself and others and to manage emotions well with oneself and interacting with others” [12, p. 192].

Summing up a small review of ideas about emotional intelligence, it can be stated that this phenomenon is the ability to recognize one’s emotions and the emotions of other people, as well as the ability to control emotions and, on this basis, effectively interact with others.

Gone are the days when the ability to work within a clearly regulated function with reference to the system of labor division was appreciated in the employees. The current situation in society and the economy requires the presence of completely different skills.

A study of the labor market, in particular, the parameters announced during the vacancies, as well as expert interviews with the heads of personnel departments of companies and organizations of the Novgorod region, revealed the main requirements imposed by employers to applicants regardless of professional affiliation (in order of priority):

- Responsibility - 35%;
- Interpersonal skills - 18%;
- Benevolence - 11%;
- Stress resistance - 10%;
- Commitment - 8%;
- Active life position - 7%;
- Ambitiousness - 5%;
- Accuracy - 5%;
- Diligence - 5%;
- Focus on customer - 4%.

These requirements do not affect the professional skills and abilities associated with the technical side of the activity. They are primarily focused on the personal qualities and skills necessary for effective interaction with others. That is, we are talking about soft skills, which largely

depend on the character of a person, his psychological characteristics and social experience.

As for work experience in a particular field of activity, the situation is as follows: 53% of employers need work experience from one to three years; 23% are ready to take workers without experience; 21% put restrictions from 3 to 6 years and 3% prefer a serious experience of more than 6 years. At the same time, there is a trend showing that employers in large cities are increasingly willing to hire people with no experience, for example, Kazan - 31%, St. Petersburg - 26%, Novosibirsk - 23%; Moscow - 22%. In Veliky Novgorod and the Novgorod region the share of such employers is significantly lower - from 14 to 17%.

Another important aspect that should be noted is the personal qualities and characteristics of HR specialists. We are talking about a certain set of personality traits and individual mindset that regulate the attitude of a person and a specialist to the surrounding reality, people, situations. Speaking of HR-specialists, this issue becomes particularly relevant. If this specialist does not respect, dislikes colleagues and employees of the company, then he is unlikely to be able to effectively manage motivation, etc. Thus, the attitude of the specialist to his surroundings and his value attitudes are primary in relation to the skills being acquired.

Current trends in the field of personnel management, namely: smart-recruiting, HR-marketing, training and HR-analytics, force employers to reconsider their requirements for these specialists.

So, active automation of administrative processes in conjunction with the standardization of basic operations allows one to successfully replace the work of personnel services not only by information technologies, but even by robotics ("robot Vera"). Thanks to this approach, personnel are got rid of routine, monotonous tasks. The development of various applications for job seekers and employees, such as chat bots, whose task is to obtain standardized information, is becoming increasingly popular. Thus, an employee of the HR department saves his time and energy by transferring this standard, algorithmized stage of interviewing bots in a fairly convenient form of question-answer interaction. Most of the bots in HR today are occupied with issues of recruiting and pre-screening (initial testing of applicants), but there is experience in using this technology when working with employees: conducting surveys, informational adaptation phase, etc. At first glance, it seems that the capabilities of bots are limited only to technical aspects. In fact, a lot depends on the correct settings of the bot, which require certain digital skills from an HR specialist. And above all, these are communication skills. Pledged option of presenting information should orient a person to constructive communication and obtain the necessary result. Along with this, an HR specialist must have a basic knowledge of programming, understand the rules of the bot API and the entire information system of the organization.

It is worth to say a few words about HR analytics, which is becoming mainstream. If in 2015 only 19% of companies were engaged in this area on a regular basis, then in 2018 this amount is 29%. The amount of companies that

turned to this instrument "from time to time" are 19% and 35%, respectively³.

The relevance of this area is connected with the need to use a huge amount of various data, not only related to personnel, in order to make conclusions about the entire company on the basis of in-depth analysis. HR analytics has two main objectives: the provision of insights (previously unknown information), and the definition of key data. To solve these problems, it is not enough to possess only core competencies; something more is needed.

In this context, we can recall the opinion of Henry Mintzberg, professor of management at McGill University in Montreal: "The education offered by an MBA is a waste of a lot of time. Traditional MBA programs teach unsuitable people with inappropriate methods and with inappropriate results. Most of the lessons focus on analysis techniques, rather than focusing on the application of knowledge in actual practice. Disciplines such as finance, accounting, and marketing take a disproportionately long time at the expense of critical soft skills - leadership, teamwork, communication, innovative thinking, namely the skills that distinguish the best from the worst management in the world. And the consequences of such an approach are threatening - the market is full of graduated young leaders who have no real leadership qualities. Such a system is undoubtedly dysfunctional"[13, p.248].

IV. CONCLUSION

Thus, in the course of the study it was found that the current situation with the training of HR-specialists does not meet the requirements and demands of employers, taking into account current trends in digitalization, and should be revised.

A modern employer in the person of an HR specialist wants to see not so much an employee with highly specialized knowledge, skills and abilities in the field of personnel management (hard skills), but a person with a certain set of "personal qualities".

When forming educational programs of higher education, it is necessary to achieve a reasonable balance between general (universal) competences and general professional and professional ones. It is the formation and development of universal competencies, i.e. soft-skills will allow graduates to successfully find a job and develop their careers. Moreover, development tools for soft-skills can be successfully applied in the development of professional skills. Taking into account the fact that soft skills are acquired thanks to personal experience, through trial and error, the number of credit units envisaged for practice should be increased, and in the framework of practical exercises, personal and background trainings, master classes, networking and direct communication should be actively used. Not the last role in the development of "soft skills" should be assigned to self-study.

The impact of the digital economy on the labor market is reflected not only in changes in the requirements for employees at the stage of joining the organization, but also in the process of releasing workers, reducing the amount of royalties to those who do not meet current trends.

³ Online-questioning

The forecasts from the Boston consulting group regarding the future development of the labor market are far from bright. The BCG specialists believe that in the next 10-20 years, as a result of the digital revolution, 50% of the professions in the world will disappear [14, p.65]. Thus, the formation and development of soft-skills in the learning process will enable graduates to be not only competitive in the labor market in the employment process, but also to easily adapt to its changes. It is the need to reorient and integrate into other areas of activity in accordance with modern realities that set the vector of education and development of youth for the world of the 21st century, which should be carried out with an emphasis on increasing susceptibility to any changes and progress [15, p.739].

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