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Digital Transformations and Their Impact on the Economy, Public Relations and Quality of Life

Valentina Milenkova[1,2], Albena Nakova[1], and Emilia Chengelova[1]

[1]Institute of Philosophy and Sociology, Sofia, Bulgaria
[2]South-West University "Neofit Rilski", Blagoevgrad, Bulgaria

ABSTRACT

The basic goals of the paper are to show that the digital transformations enter all areas of the economy, social life, civil society, which also changes people's quality of life. The research work is theoretically based on a national empirical study that tracks the digital skills of employees in four widespread professions: teachers; researchers and university lecturers; technical staff; people employed in trade and services. The article examines the digital skills of employees, their attitude to the digitalization of various areas of the economy, as well as the strenths and challenges of digitalization. The main conclusion is that digital technologies contribute to improving the quality of life, as well as to a more economical and efficient use of available resources.

Keywords: Digitalization, Quality of life, Technologies, Profession, Qualification

INTRODUCTION

This paper traces the digital transformation occurring as a result of the application of computer information and communication technologies. Digital transformation is the digitization of the economy, complete change of the organization's structure, its relationships with the environment in which it operates, and the products and services it creates. Digitalization and related transformative processes lead to the creation of pervasive connectivity between people and institutions, diversification of activities, resources and data in the online space and parallel work in the digital and real worlds. This creates a huge potential for a large number of enterprises, banks, telecommunications companies, companies providing payment services; start-ups; retailers, as well as institutions in the fields of education, culture, healthcare, politics, etc. Today, even the smallest organization has the opportunity to function as a global one, carrying out cross-border activity in some form.

The present article is focused on researching the attitude towards digitization and the digital skills of people from four widespread professions in Bulgarian society. The digital skills of employees in organizations are different in level of proficiency. In this regard, the organization becomes an active entity for increasing digital competences by conducting training for employees and motivating them to be more active digitally. The main emphasis of the article is the binding of digital skills and digital transformation with the

quality of life of people in professional and personal terms. The aim is to show that entering into digital processes has great benefits for people, contributes to their professional development, as well as to the possibilities for more personal activities.

BASIC CONSIDERATIONS

The digital networks that connect everything and everyone span ever larger spaces, so companies, communities and individuals are challenged to rethink what it means to function globally connected. Digital networks are important for the development and promotion of business and communication both at work and in leisure. Therefore, their management is time-consuming and requires both technical and marketing knowledge. The possession of digital competences is of great importance for the quality performance of professional activities.

In this regard, digital competences are essential constituents of the modern personality in a world of digital presentation. It can be said that about 35.5% of the Bulgarian population has basic and above basic digital skills for 2023. NSI data for 2023 show that the share of men with basic and above basic digital skills is 34.8%, and the share of women is 36.2% (NSI, 2023). Digital competences depend to a large extent on people's age, profession, education. In general, the role of the Internet is great in the development of digital skills today. The mass distribution of high-speed and wide-format Internet opens up additional opportunities that allow the deployment of various processes of connectivity and professional activities. NSI data from 2018 to 2023 reveal a smooth trend towards increasing regular Internet consumption among Bulgarians.

The current analysis is focused on researching the digital competencies of the following professional communities: teachers; researchers and university lecturers; technical staff; people employed in trade and services. The choice of these professional communities is determined by their wide distribution, as well as by their importance to society as mediators for social relations and sustainability. Establishing the level of digital skills is in line with the European Digital Competence Framework DigComp 2.1: Information and data literacy; Communication and collaboration through digital technologies; Creation of digital content; Safety; Problem solving.

On this basis, the analysis also concentrates on identifying the need for trainings to increase digital skills as part of improving the digital training of employed persons. It is necessary to emphasize that increasing the digital competences of professionals is important, insofar as their digital skills are related to the nature of the activities performed, which require high awareness on the one hand and following the processes of digital transformation of their work from other side.

Our understanding is that digitization contributes to improving the conditions in which people work, study and spend their free time, which would ultimately lead to an improvement in the quality of life both at the individual and community level. This is related to the fact that a high level of employees' digital competences implies better opportunities for professional and career

development, higher incomes and achieving a better balance between work and free time, as well as work and family life.

In the framework of the present study, the concept of "digitalization" denotes the use of digital technologies and digital information to transform related processes, activities and operations in the organization. "Digital transformation" means a series of significant and coordinated changes in organizational culture, technologies, skills and competencies that enable the implementation of new work models and significantly change the strategic direction, activities and values of the organization. The study also traces the risks and prospects that digitization creates and that the economy and society face.

MATERIALS AND METHODS

The article presents a primary analysis of an original sociological study conducted by the authors within the framework of the project "Quality of Life and well-being in the context of professional communities and their activity", funded by the National Science Fund.

To conduct the survey, the model of stratified nested sampling was used, in which the observation units were selected in two stages. The sample size was calculated based on two criteria: professional community/i.e. type of economic activity and number of employed persons, representatives of this professional community. The selection model used is a proportional stratified selection model, with each of the professional communities being proportional to its relative weight in the general population according to the number of employed persons. The total calculated sample size is 503 people, distributed as follows: 114 teachers, 96 university professors, 123 technical staff and 170 employed in trade and services. The research method is a questionnaire and the research was conducted at the end of December 2023. The survey was conducted as representative for each of the four professional communities (teachers; researchers and university lecturers; technical staff; people employed in trade and services), which allows the results to be considered as generally valid and typical for these professional communities. When conducting the survey, all ethical norms were observed, which fully validate the results obtained.

RESULTS

Level of Proficiency of Digital Skills

The results of the conducted survey show that the respondents consider the possession of digital skills in each of the five areas of digital competence according to DigComp 2.1 as extremely important for conducting their professional activities. The results obtained show that the majority of all respondents (61%) have a basic level of digital competences in all five areas: Information and data literacy; Communication and collaboration through digital technologies; Creation of digital content, Safety; Problem solving. It can be said that it is professional activities that create prerequisites for the formation of digital skills. For teachers, university professors and researchers,

the formation of digital competences was greatly affected by the Covid pandemic, when all activities were carried out through various digital platforms and went online. Some of the people employed in trade and services prepare financial and other types of reports also in digital form; it is necessary for them to know different accounting programs and this determines their digital activity. 22.4% of the sample have digital skills below basic in the five domains; they perform individual digital activities mostly related to social networks and less to their professional duties. 6.5% of the sample has a proficiency level of digital skills. In summary, the results show that in all four investigated professional spheres, digitization has entered and has placed its demands on the employed persons. An important factor in digital competence is age, meaning that younger generations generally have better digital competence. The work performed and its requirements are also an important factor.

In general, the respondents express a positive position regarding the entry of digitalization into their professional activities and define the digital aspects of their work as key to the successful performance of their duties. Most of the respondents (56.0%) confirm that digitalization is very important for the performance of professional activities; those who think it is not important at all are only a tenth – 9.1%. Less than a third of respondents (30.4%) thought it was "neither important nor important", i.e. they don't attach much importance to it.

In this regard, is the belief of the surveyed persons regarding the possibility of carrying out some professional activities in an alternative way, without the use of digital technologies. Not a small part of the surveyed persons is categorical that such an opportunity exists (42.7%), while those who believe that it is impossible to carry out the organization's activities without using digital technologies are about half of the sample (48.2%). These answers clearly show that digitization will not happen all at once and that at this stage the various organizations and institutions in the country will not suddenly switch to a complete digitization of their activities. According to the results obtained, not all organizations have an authorized person to solve technical problems related to digital devices. In fact, in this regard, the opinions of the surveyed persons are divided – 50.5% claim that their institution has an authorized person, while 45.0% say that they do not have such a person, which practically means, that they and their colleagues have to fend for themselves when technical problems arise. And this in turn means that organizations rely on the digital competence of their employees. The results obtained show that there is still much to be desired in terms of maintaining the technological environment in which professional activities are carried out.

Improvement of Digital Competences

The conducted research found two important facts: 1) the number of institutions that organize special internal courses and trainings for digital skills of their employees is small; 2) the trainings take place over a period of 2 years. All this means that at this stage the training of employees to improve their digital skills in order to adequately work with the available digital technology

is not part of the current strategy for the development of organizations. This necessitates raising managers' awareness of the importance of periodic training to maintain a high level of digital skills in their employees.

As for who owns the initiative to include in courses to increase digital competence, here the opinions of the surveyed persons are equally distributed – 48.0% believe that it should be the initiative of the employees themselves and the same 48.0% believe that this should be a joint initiative of the management of the organization and the employees. What is significant in this case is that there is a complete absence of answers "it should be an institutional policy", which is another confirmation that, in general, organizing courses and trainings for employees to update and improve their digital skills with the goal of adequate work with the available digital technology is not part of the organization's policy at this stage. This opens up wide opportunities and scope for work in this direction with both managers and employees.

When asked what is most important for the level of digital skills possessed by employees in the organization, opinions are more evenly divided: half attach key importance to completed education and also half assign a key role to in-company training. These responses are indicative of the fact that respondents place the in-company training organised by the institution for its employees on the same level as the basic education they receive, in terms of the importance of maintaining a high level of digital skills among employees. In relation to this, here is how the representatives of the four professional sectors we studied see the opportunity to expand the contribution of intra-institutional training to achieve better digital skills of the employed: a) conducting frequent training courses for employees according to 43.4%; b) introducing a financial incentive for those who have completed training according to 45.6%. The proposed answers point to the importance of training courses and, in this sense, support the establishment of such a practice.

Digital Competence and the Attitude Towards It

What is the interest of the representatives of the studied professional communities to improve their digital competence? It turns out that 81.8% expressed such interest. 4.5% show no interest to this. 9.1% have no opinion on the matter. In fact, these answers are a testimony to the understanding of the benefits of improving digital competence, related first of all to the work process, but also to people's personal lives and their quality of life.

Among the advantages of having digital competences that are highlighted by the respondents are: protection of the environment and natural resources; applying artificial intelligence to basic professional activities and making work easier; increasing the efficiency of communication and interaction between people; improving work-life balance; improving work-leisure balance; less documentation; less stress and tension; limiting the number of random errors; improvement of the process of traceability of the performed activities; work safety; higher productivity with lower labor cost; increasing competitiveness; achieving higher customer satisfaction.

As for the risks posed by digitisation, in the opinion of the interviewees these mainly boil down to: the risk of underestimating the role of the human factor; the risk of major economic damage in case of error, which probably refers to fully robotic processes where the human is not present to intervene in time; cyber-attacks, malicious interference on the used digital devices; theft of personal data; copyright theft; creating dependence on specialists with certain qualifications; reducing the number of employed persons. In this regard, the challenges of globalization, which is associated with digitalization, are described as: "impossibility to completely replace the human factor in a number of processes"; "low degree of digital qualification of employed persons and lack of competent personnel"; "age and generational differences in digital skills"; "expensive equipment and the need for large investments, which are not always justified from the point of view of the possibility of using the full capacity of the equipment"; "lack of financial resources to implement digitization processes"; "it is difficult to digitise a large part of processes and activities". In this regard, about 1/3 of respondents (33.6%) believe that their professional sector is subject to a serious digital transformation within the next 5 years. Some of the respondents are of the opinion that this will not happen (20.9%). The highest proportion of people had no opinion on the matter (45.5%).

Also, the surveyed persons are divided in their opinions on whether it is possible within 5 years for part of the activities in their sector to be performed entirely by robots/robotic machines. Equal proportions of respondents - 31.8% each - gave positive and negative answers. However, the proportion of respondents who are undecided and have no opinion on the matter is the same, which actually increases the proportion of those who rather doubt that this will happen.

CONCLUSION

This article has shown different aspects of the topic of digital competences in several professional communities. From the analysis, it is noticed that digitization has actively entered the various economic, educational and research structures. The most important factor for the development of digital competences is the professional activity and its specificity. There is a generally positive attitude towards the digitisation of activities as well as the acquisition of digital skills. Despite the scepticism of some respondents about the overall digitisation of the sector in which they work, the fact that they confirm the need for digital skills in their professional activities clearly shows that the necessary preconditions are present for a wider penetration of digitisation in the four professional sectors surveyed.

At the same time, the results of the survey show that there is a serious lack of training in organisations in terms of improving the digital skills needed to carry out professional activities, which training should be targeted at employees in order to maintain an up-to-date level of their digital skills and knowledge of the regulations, norms and rules related to their implementation. They also show that there is a need to raise the awareness of institutional managers of the need for digital transformation and its wider adoption in the

work of the four sectors studied. There is also a need to build the skills of managers to recognise the opportunities that digitisation opens up and, at the same time, the risks it poses.

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