Therefore, the meaning of a developed digital culture for a modern enterprise is that everyone in the team listens to everyone and everyone, and everyone listens to everyone, which leads to the preparation of conditions for the development and implementation of AI technologies, as the most advanced digital technologies.

The effects that digitalization and the use of digital technologies give depend on thousands of small deeds of managers and personnel of enterprises that must be correctly and consistently performed, which requires appropriate information and cultural self-organization of enterprise personnel. This requires the integration of professional and cultural knowledge and skills, which requires the study and understanding of digital culture — a new direction in the theory and practice of digital transformation and the use of artificial intelligence systems.

For this reason, the global giants of the digital industry Google, Alibaba and others have long been using methods and algorithms to determine whether employees meet the specific requirements of the digital culture of modern "smart" companies (risk management, cooperation, the ability to act independently in flexible organizational structures based on horizontal connections and network coordination, decision-making based on intelligent data processing, personal participation in decision-making, etc.).

From the point of view of the development of society, digital culture can be considered as a humanitarian resource of digitalization, as an institution for achieving excellence in the creation and application of digital technologies in order to create a digital environment as comfortable as possible for interaction.

Digital culture is the understanding that digital transformation is primarily a social phenomenon that comes from new forms of communication and interaction between people through social networks, digital platforms and technologies. And, of course, for this, the digital environment must be "aesthetically charged", that is, it must be formed according to the laws of aesthetics and rationalization, minimizing the risks and threats of network communications. The main place of digital culture, as well as traditional culture, is the inner world of a person and the world of the community, for the maintenance of which constant self-improvement and the expenditure of human energy are needed, work on oneself and the formation of appropriate institutions to regulate behavior and interactions in the digital environment.

## VII. Digital culture is the most important factor in the success of digital transformation

A 2016 McKinsey study showed that over 30% of the barriers to successful digital transformation are due to cultural and behavioral issues in enterprise employees. The digital economy is an ultra-low cost economy. But subject to the necessary level of digital culture. Manufacturing has one of the highest human error rates of any industry. At the same time, up to 70% of these errors are the result of imperfect organizational culture [8].

The specificity of digital culture is determined by the digital economy, which involves network coordination of the interaction of business processes and intelligent data processing, and therefore requires certain knowledge, skills and value orientations. First of all, the readiness to work in conditions of weakly hierarchical flexible systems of independent decision-making and understanding the increasing complexity of digital ecosystems as they function and develop.

From the point of view of systems theory, complex historically developing organic wholes (systems, which are modern large enterprises) must contain special information and organizational structures within themselves that ensure the management of the system and its selfregulation. These structures are represented by links and codes, in accordance with which the organization of the system as a whole is reproduced and the features of its main reactions to the external environment are recreated.

In biological organisms, this role is played by genetic codes (DNA, RNA). In society, as an integral social organism, culture acts as an analogue of genetic codes. In digitized enterprises, it is organizational and digital culture.

Therefore, the success of digital transformation is, to a greater extent, the result of a control action that comes "from within" the system (from the cultural predisposition to changes in employees, and not just from the outside), by creating conditions for maximizing the use of the skills and enthusiasm of the personnel of enterprises (the energy of human culture ), which makes it possible to achieve synergistic effects from the interaction of employees (self-assembly and self-organization of individuals and communities) in the production of demanded goods and services.

For this reason, digital culture can be seen as an institution for achieving excellence in the creation and application of digital technologies in order to create a digital environment as comfortable as possible for interaction, self-assembly and self-organization of enterprises and individuals.

## VIII. Digital culture and AI technologies in education

From the point of view of teaching, it is important, in our opinion, to note that digital culture is still science X, that is, not fully defined and with a pronounced interdisciplinary character. This is a kind of philosophy for the development of the digital world, and for various specializations, training in digital culture should be 30 carried out approximately sequentially, starting from the culture of dialogue and academic writing and ending with the cultural aspects of creating and applying artificial intelligence systems. At the same time, this approach makes it possible to combine the efforts of all faculties in research and the preparation of practical methods for digital culture. And it will enrich students with an understanding of the complexity, diversity and inconsistency of the development of the digital world. There is a place for everyone, both physicists and lyricists.

The theoretical model of culture is a kind of coordinate system, a system of key concepts that reveal the essence of culture. For the theory of digital culture, it is important to understand the differences between material culture and digital culture. Digital culture is formed through terms, operations, standards.

Education is a system of production of human capital, which is one of the most complex subsystems of society. Various studies show that humans can learn new things from AI systems and communicate them to other humans in a way that could potentially impact broader human culture. Algorithms using AI technologies are having an increasing impact on human culture, which requires understanding how they interact with us or with each other. Since, algorithms and AI are not simple means of cultural transmission (such as books or the Internet) and can also play an active role in shaping the processes of cultural evolution on the Internet, where people and algorithms regularly interact.

The highest priority is to improve the quality of content, the culture of dialogue and academic writing. This is a fundamental problem, literally and figuratively. Everything else depends on the quality of the primary data. This is the raw material for neural networks and decision-making systems (what we "feed" the neural networks will be the output). What is needed: an ordered object world and an ethically charged digital environment and a definition of who and how the value base will be created.

The problem with the spread of AI on a broader basis is trust - trust in the data that enters the systems and the decisions made by those systems. In modern societies, the most important condition for the development of artificial intelligence technologies is digital culture. A significant and growing proportion of AI algorithms operate online, both as bots that interact with the user and as sorting and guiding algorithms that mediate network interactions.

According to research, in 2020, up to 20% of companies' profits were generated thanks to artificial intelligence. At the same time, there were a number of obstacles to the successful use of AI, due to the influence of digital culture:

1) The quality of the preparation of primary data for systems for developing and making decisions, including with the use of AI technologies.

2) Insufficient consideration of the peculiarities of thinking and values of AI developers, which affects the ethical attitudes of artificial intelligence (understanding the humanitarian context of applications with AI).

3) The lack of a strategy in the organization of labor for the collection and filtering of primary data and their processing on various platforms

The main reason for the new possibilities of artificial intelligence is the integration of its applications with modern digital technology, Internet technologies and big data.

The emergence of text generators based on AI technologies has opened a new era in global digitalization, creating both additional opportunities in data processing and analysis, and producing new risks and threats, primarily in the education system. The use of AI has led to the fact that human thinking has actually become combined: both the brain and the computer are involved in thinking, and it is required to optimize their interaction. The main risks are that there is a psychological danger of increasing dependence on a computer and a decrease in the level of mastery of knowledge due to a change in the technology of transferring knowledge: previously it was a teacher or an expert community who are in dialogue with the student. The use of AI reduces the learning format to a monologue.

It is important to note that learning is a process that results in the ability to recognize signs of new information according to a certain algorithm and then develop decision rules for developing managerial decisions and actions. Thinking models have a different format and require a different level of attention (the ability to identify signs of new information and give priority to one or another sign [9].

The inevitable emergence of ChatGPT is an objectively necessary response to the critically increased volumes and dynamics of data updates in the digital environment. At the same time, this is the next stage in the development of systems for systematizing and concentrating data on the way of their transformation into information and knowledge (books, libraries, catalogs, websites, search engines, etc.), that is, the formalization of knowledge to turn it into a resource for analysis and management decisions. . As one of the first Soviet cybernetics N. G. Zaitsev — data is not yet a resource, but a sign of a resource, and in order to turn data into a resource, an appropriate level of researcher training is required to recognize in these data what is necessary for development and interaction.

It can be assumed that the subsequent development of intelligent systems such as GPT will be carried out in the direction of greater specialization of content generators (texts, images, sounds) in areas of knowledge and an 31 increase in the level of their functionality in relation to specific types of activities. That is, it will be a process similar to the cataloging of various sources in specific thematic areas. This is an objective process, since information is a quantitative measure of order in a certain system. If there is no order, then entropy increases, which leads to degradation (aging) of the system.

At the same time, with the growing use of GPT-type generators for preparing information blocks, the problem of trust in information generated by AI arises. Especially in those cases when the content and configuration of the information block corresponds to traditional ideas and therefore is not subject to subsequent verification. As a result, the level of trust in information products obtained with the help of AI technologies is reduced. Moreover, the growth in the volume of products generated by chatbots will lead, in the shortest possible time, to the formation of a second-hand data layer in the global network, that is, containing only the data on which the chatbot was trained.

With regard to the economy and education, a decrease in the credibility of data from the Internet leads to the degradation of information and digital systems. Efforts to form a digital culture of users are aimed at preventing the negative trend of reducing trust in data on the network. At the same time, it is not, first of all, about changing the way people think, but starting with changing the way people behave and what they do.

The scope and integration of digital systems into the economy and society as a whole is so large-scale that it requires special attention and an integrated approach to raising the level of digital culture at all levels [10].

Digital culture can be viewed as an institution forachieving excellence in the creation and application of digital technologies in order to create a digital environment as comfortable as possible for interaction, self-assembly and self-organization of enterprises and individuals within a holistic digital ecosystem [11].

## IX. Conclusions

Shaping a digital culture in the economy and society is a full-time job. Culture is a resource that cannot be acquired for any amount of money. Culture can only be developed through interaction. This is a blessing transmitted in the form of knowledge, traditions, norms, customs, rules. The sensitivity of employees of enterprises and the population to digital culture should be developed. The challenge of spreading AI on a broader basis is trust in the data that enters the systems and the decisions made by those systems. In modern societies, the most important condition for the development of artificial intelligence technologies is digital culture.

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## Фактор цифровой культуры в применении искусственного интеллекта в экономике и образовании


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Цель статьи состоит в привлечении внимания молодых исследователей исследований по проблемам цифровой культуры как одного из наиболее важных факторов успешного освоения и внедрения технологий искусственного интеллекта в интегрированных цифровых экосистемах. Показано, что вследствие самонастройки интеллектуальных систем происходит замещение механизмов экономического и административного принуждения механизмами самоконтроля и саморегуляции персонала и всей производственной системы, что обуславливает актуальность разработки приложений с применением ИИ как составной части единой цифровой экосистемы и предъявляет новые требования к системе образования. Отмечена значимость фактора цифровой культуры в формирования цифровой среды комфортной для жизнедеятельности и взаимодействия, что обусловливает эффективность синергетических процессов самосборки и самоорганизации сложных динамических систем, каковыми являются современное общество и экономика в условиях глобальной цифровизации. Анализируется роль цифровой культуры как науки об отношении людей между собой в цифровой среде и самой среды с окружающим миром и как института для достижения совершенства в создании и применении цифровых технологий и технологий искусственного интеллекта.



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