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DIGITAL LIFESTYLE AND DIGITAL EDUCATION

ESTILO DE VIDA DIGITAL Y EDUCACIÓN DIGITAL

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ABSTRACT

The article deals with the problem of the impact of digital lifestyle on the functioning of the education system and the effectiveness of the education it provides. An analysis of four lifestyles in the history of Homo Sapiens and their correlation with the goals and systems of education is provided. The features of primitive (hunter-gatherer), agrarian-industrial, industrial, and digital lifestyles and their respective educational systems are identified. The author analyzes the consequences of the digital revolution and the reasons for the decline in the effectiveness of the traditional industrial classroom-lesson system in the conditions of the 21st century, identifying the main trends of digitalization and technologization of the pedagogical process. The possibilities and risks of the digitalization of education are analyzed.

Keywords:

Education, humanism, paradigm, culture, digital technology

RESUMEN

El artículo aborda el problema del impacto del estilo de vida digital en el funcionamiento del sistema educativo y la eficacia de la educación que brinda. Se proporciona un análisis de cuatro estilos de vida en la historia del Homo Sapiens y su correlación con los objetivos y sistemas de educación. Se identifican las características de los estilos de vida primitivo (cazador-recolector), agrario-industrial, industrial y digital y sus respectivos sistemas educativos. El autor analiza las consecuencias de la revolución digital y las razones de la disminución de la eficacia del sistema industrial tradicional de aula-lección en las condiciones del siglo XXI, identificando las principales tendencias de digitalización y tecnologización del proceso pedagógico. Se analizan las posibilidades y riesgos de la digitalización de la educación.

Palabras clave:

Educación, humanismo, paradigma, cultura, tecnología digital

INTRODUCTION

The goals of upbringing and education are connected with the goals of society, and the system, order, or way of life determines the educational system. Today, with the digital lifestyle layering on top of the former industrial one, Humans find themselves in a new life situation.

The digital lifestyle has been taking shape rapidly over the past 20 years and is changing the characteristics of work, rest, study, and creativity – the main Human activities. Economy, commerce, public services, and other spheres of activity are becoming digital. We are participants in a global transformation – the construction of digital society with new economic, social, and cultural relations.

One of the economic characteristics of the digital information lifestyle is mass employment in the service sector. In 2015, 6.4% of the population of Russia was employed in agriculture, 27.3% – in industry, and 66.3% – in services. In the USA, 2.1% of the population were employed in agriculture, 15.2% – in industry, and 82.5% – in services, while in China, the respective shares were 0.9%, 57.3%, and 39.8%.

The development of artificial intelligence (AI), virtual space (the Internet), and communication systems makes it possible to store, process, and transfer large volumes of information over long distances to an unlimited number of users, to remotely control various objects, and solve complex intellectual tasks. But, most importantly, we have entered the era of Human-Gadget-Human interaction. People spend more time behind the screens of various devices (and, therefore, in the virtual world) than in direct interaction with the real world and communicating with each other.

Here is some data at the beginning of 2021. The increase in the number of Internet users is 7.3% compared to 2020 with 4.66 billion people worldwide using the Internet. Social networks were used by 53.6% of the world's population in 2021. Overall, the average user now spends nearly 7 hours a day browsing the web from all kinds of devices (about 42% of our waking time), and 3 hours and 39 minutes each day from mobile devices. Watching TV takes 3 hours and 24 minutes a day.

These data are confirmed by a recent survey conducted by the analytical center NAFI (14% of Russians cannot overcome dependence on digital devices). The average amount of time Russians spend in front of electronic screens per day is 8 hours for 18-24 year-olds, 7 hours for 25-34 year-olds, 6 hours for 35-44 year-olds, 5 hours for 45-59 year-olds, and 3 hours for people at the age of 60 and older.

This is changing the whole architecture of communication, collaboration, and, of course, the established traditional educational system. Digital technologies are rapidly developing in the education system, welcomed on the one hand and rejected on the other. Society, including participants in the education system (teachers, students, parents, managers), is divided: some predict the death of the classroom-lesson system, old techniques, and textbooks, calling for the introduction of smart gadgets, interactive robotic teachers, VR immersion, and gamification, while the others are extremely skeptical of any innovations, speak against even smartphones during classes, and want to keep the classical (Soviet or even pre-revolutionary) education with a textbook, notebook, and a pen.

To predict the opportunities and risks of the emerging system of digital education, let us turn to the analysis of the formation of educational systems at different historical stages of human life.

Literature review

Theoretical, as well as the source base of the study is formed by scientific works in the following areas: anthropological, historical, general philosophical research on the problem of the main stages in the development of mankind (Grinin & Grinin, 2015; Harari, 2016, 2018), works in the field of humanistic philosophy, psychology, and pedagogy (Fromm, 2005; Amonashvili, 2017; Sommer, 2019), philosophy of religion (Berdiaev, 2018), works on the problems of future development of Mankind, civilization, and education systems in the digital society of the 21st century (Robinson, 2013; Epstein, 2016; Kurpatov, 2018), and works devoted to teacher training (Shukshina, et al., 2018ab; Zhukova, et al., 2019; Parshina, et al., 2019). Analysis of the scientific literature allows us to draw the following conclusions.

Throughout its history, humankind passed several phases of historical development, which formed a certain way of life of Homo Sapiens. Four phases can be distinguished: the hunter-gatherer lifestyle (civilization), the agrarian and artisanal lifestyle, the industrial lifestyle, and the modern digital lifestyle.

The digital lifestyle has been evolving rapidly over the past 25 years. The development of gadgets, artificial intelligence, the virtual world, and new communication systems cannot but affect the education system. On the one hand, the industrial-humanistic (classroom-lesson) system becomes less effective in the new realities, on the other hand, the new reckless use of digital educational technologies can lead to a deterioration in the quality of education. Under these conditions, it is necessary to

analyze the former changes and lifestyles of Humans and the educational systems corresponding to them.

MATERIALS AND METHODS

The aim of the article is to analyze the impact of changes in the lifestyle of modern humans on the meanings, motives, and process of education, and the well-established classroom-lesson system.

To achieve this goal, the following tasks are set: to highlight the stages of formation and development of educational systems depending on the way of life of Homo Sapiens; to describe the changes in human lifestyles that have occurred over the past 20 years as a result of the digital revolution and their impact on educational processes and system, to develop recommendations for leveling “digital risks” and the use of “digital opportunities” in education.

The methods of theoretical research employed to solve the research objectives include analysis, synthesis, comparison, systematization of materials on the studied problem, and prognosis.

RESULTS AND DISCUSSION

Relying on the conducted theoretical analysis and pedagogical experience, we distinguish between 4 lifestyles recognized throughout the history of Homo Sapiens, which formed their corresponding educational systems: the hunter-gatherer lifestyle, the agrarian-industrial lifestyle, industrial lifestyle, and the contemporary digital lifestyle.

These lifestyles correspond to the systems of natural upbringing and education, the system of transmission of cultural tradition, the classroom-lesson (industrial-humanistic) system, and the digital information system (Table 1).

Table 1. Type of lifestyles and correspondence to the systems of natural upbringing and education.

Lifestyle	System of upbringing and education
1. Hunter-gatherer lifestyle	1. Natural upbringing and education.
2. Agrarian and artisanal lifestyle	2. The system of transmission of cultural tradition.
3. Industrial lifestyle	3. The classroom-lesson (industrial-humanistic) system
4. Digital lifestyle	4. Digital information system

Under lifestyle, we understand the type (form) of life of people in a particular territory (settlement, state) that is characteristic of the majority of the population, serves as a factor unifying and separating social groups, the type on which the greatest amount of time and energy is devoted, the one that acts as a basis for the formation of Human

identity, culture (economic, social, psychological, spiritual, etc.), life, social ties, norms of behavior, determines the characteristics of satisfaction of material and spiritual needs, the products of which represent the main value for the majority of the population.

In accordance with the adopted approach, we offer characteristics of lifestyles at different historical stages of human development.

1. Hunter-gatherer lifestyle – the type of human activity in which the main material value and unifying means in the interaction between people is the natural environment and the products of its production (life).

2. Agrarian and artisanal lifestyle – the type of human activity in which the main material value and unifying factor in the interaction between people is the land and products of agricultural production.

3. Industrial lifestyle – the type of human activity in which the main material value and unifying factor are industrial, commercial, and other non-agricultural means, as well as the products of production with their use.

4. Digital lifestyle – the type of human activity in which the main material value, mediator, and unifying factor in the interaction between people are electronic technical means and the products of production with their use (primarily, information in various forms, software, etc.).

The proposed division is combined with the distinguished principles of production, about which Grinin & Grinin (2015), writes in his book “From Hand Axes to Nanorobots. The World on the Way to the Era of Self-Managing Systems”: *“The whole historical process can be divided into four significant periods on the basis of the change of the largest stages of development of the world’s productive forces, which are referred to as the principles of production. The unfolding of a principle of production is a period of origin, development, and transformation of new forms, systems, and paradigms of economic organization, which oftentimes surpass the former ones in the most critical parameters (in capacities, scale, productivity, efficiency, range of products, etc.). We distinguish four principles of production: 1) hunter-gatherer; 2) agrarian-artisanal; 3) industrial-trade; 4) scientific-cybernetic. The transition to a new principle of production occurs through production revolutions”* (Grinin & Grinin, 2015). The author identifies three revolutions: agrarian, industrial, and cybernetic.

The same approach is found in Harari’s book “21 Lessons for the 21st Century”: *“In ancient times, the land was the most important asset, so politics was a struggle to control land. In the modern era, machines and factories became more important than land, so political struggles focused*

on controlling these vital means of production. If the ownership of the machines became concentrated in too few hands, society split into capitalists and proletarians. In the 21st century, data will eclipse both land and machinery as the most important asset, so politics will be a struggle to control data's flow. If data becomes concentrated in too few hands, humankind might split not into classes, but into different species". (Harari, 2018)

As a result of a revolutionary or evolutionary transition, there occurs a **change of lifestyle**. It is a time-drawn process of "layering" the formerly established way with a new one, as a result of which the bulk of the population begins to use most of its energy and time for the newly emerged activities. The transition to "digital activities" over the past 20 years clearly demonstrates this process. With this layering, society is undergoing a fundamental change in all basic ways of life, norms, rules, laws, values, habits (economic, social, spiritual), etc. The former way of life does not disappear, a certain (smaller) part of the population leads it, and its results and values become a basis (foundation) and a necessary means for developing a new way of life, providing it, among other things, with necessary resources.

Each way of life is characterized by its own system of upbringing and education, which helps realize the actual goals and tasks (survival in the wild, the transmission and subsequent accumulation of cultural tradition (from economic to intellectual), cognition of "Self" and realization of the inherent potential of a person), and forms, methods, and means of education which correspond to the time are used.

Let us consider the presented lifestyles and their respective systems of upbringing and education in more detail.

1. The hunter-gatherer lifestyle and "system" of natural education and upbringing

The appearance of a Human of the modern cultural type, as well as the first evidence of human culture on Earth, dated back to the period of 70-40 thousand years ago. As a result of the cognitive or human revolution, Homo Sapiens acquired reason and self-awareness, due to which the unity with the natural world was lost and Humans found themselves in a unique existential dichotomy and new conditions of existence: "Self-awareness, reason, and imagination have disrupted the 'harmony' which characterizes animal existence. Their emergence has made man into an anomaly, into the freak of the universe. He is part of nature, subject to her physical laws and unable to change them, yet he transcends the rest of nature..."

Reason, man's blessing, is also his curse; it forces him to cope everlastingly with the task of solving an insoluble dichotomy. Human existence is different in this respect from that of all other organisms; it is in a state of constant and unavoidable disequilibrium. Man's life cannot *"be lived by repeating the pattern of his species; he must live"*. (Fromm, 1992).

Living with reflection and independent cognition of the surrounding world and themselves, being "thrown out" of the natural world, a Human begins to create a second artificial world – the world of culture, consisting of material and spiritual objects. This world changes not only the external nature but also the essence of a Human, and cultural achievements (results of activity) "demand" care, preservation, and transmission to other generations. While in nature, this process occurs naturally, in the world of culture, a Human need to establish the process of passing on cultural heritage and cultural tradition from generation to generation. This way, education gradually emerged as a process of passing the baton of culture from generation to generation.

Thus, in primitive society, Humans faced two goals of upbringing and education. The first one is inherent to animals and "follows" Homo Sapiens throughout its evolution – it is learning for the sake of survival in the harsh world of nature and society. The second appears with the emergence of culture – it is the preservation and transmission of "cultural tradition", as well as the accretion of the accumulated experience of Mankind.

Hessen (1995), rightfully argues that *"one can speak of education in the true sense of the word only where there is culture. Primitive man has no education. In Monroe's accurate formulation, the so-called primitive education is nothing more than 'non-progressive adaptation to the environment'"*.

Agrarian and artisanal lifestyle and the systems of transmission of cultural tradition

The agrarian-artisanal way of life (started about 12,000 years ago as a result of the Neolithic Revolution) is a productive type of human activity in which land and agricultural products are the main material value and unifying factor in the interaction between people. The agrarian revolution, stretched over several millennia, allowed humans to move from the appropriation of food to production and accumulation and to establish relative control over natural processes. *"There appeared a real possibility of the emergence of sufficiently large hierarchical societies in which the diverse upper strata and specialized groups could no longer concern themselves with the extraction of food by their own labor. The limitations of nature were also*

surpassed in the field of transport, relations, and communications. Yet the role of the natural factor in production remained enormous, since the wealth of society, the number of the population, and the volume of the surplus product depended in a decisive way (with the same technological level in principle) on the generosity of nature, especially on the fertility of the soil". (Grinin & Grinin, 2015)

Agriculture was the main activity that led to a settled way of life. Cultivated food began to be procured and stored, and a family of several generations and a large number of relatives became the basic unit of society. For the most part, people were engaged in agricultural work, but there were also gatherers, hunters and warriors, priests, and the nobility. Gradually there appeared traders and craftsmen and, with the advent of writing, literate people who were used for state and social purposes. This gave rise to a limited division of labor, but overall, the processes of production and consumption were unified (the final division would occur in the industrial era). Humans became even more diligent in building the artificial world of culture, in accumulating, preserving, and transmitting its material and spiritual values, paying for it with the free time of their own life.

The transition to a new way of life and a productive economy permanently changed the nature of the relationship between man and nature. Homo sapiens actively transform the world around them (from cutting down trees to building cities), use the energy of fire, animals, wind, and water, and create countless artificial material and spiritual cultural objects. This cannot but require the development of its transmission system, i.e., education.

Not surprisingly, there was no mass public education system in the agrarian era. The main mass of the population (peasants, craftsmen, traders) passed on experience through the system of "family university". The family had to organize the upbringing of the younger generation and their professional training for life within their social or property status. Adults had to not only convey the experience of work (educational aspect) but also to introduce young people into the space of life, make them part of the society with its history, myths, legends, customs, rituals, etc. (upbringing aspect).

However, the preservation and development of cities (polises) and states required an established system of training literate people and warriors. That is why the main types of schools in ancient states were military and religious, schools of learning writing (edubba in the countries of Mesopotamia, chanceries or schools of scribes in Egypt, etc.), and schools for the nobility. Their purpose was to form an individual as a social unit, to adapt them to life for

the benefit of the state and society. This process became even more systemic and authoritarian with the advent of writing (7,000-5,000 years ago). Regardless of the content of the inscriptions (economic and mathematical calculations, riddles and legends, laws and codes, etc.) or the type of writing (Chinese inscriptions on tortoise shells, stone tablets from Mesopotamia, clay tablets from Sumer, Egyptian hieroglyphics, Cretan writing, etc.), it required enormous effort from both teachers and pupils to learn the art. Since children were perceived by adults only as a means to the task at hand, they were completely subordinated to the systematically organized learning process and were disempowered. Teachers were demanding and strict and punishment (including physical punishment) was the norm for that time.

In the period from 800 to 200 B.C., which Carl Jaspers called the "Axial Time," a new goal of education emerged, one that focused on the subject, on the individual's knowledge of themselves, their inner world, true self, and capabilities along with the questions about the structure of the external objective world. What is Personality along with external biological and social status, what role and task does education have in its formation?

These emerging humanistic questions were posed autonomously from religious knowledge during the Renaissance and Enlightenment in Western Europe when the secularization (separation) of scientific knowledge from religion led to the development of sciences and methods of rational cognition of the world and of Man himself. The acquired autonomy of the "Self", the inner world of culture, became the cause and the main driving force for the development of humanistic values and person-centered education.

The industrial lifestyle and the classroom-lesson (industrial-humanistic) system

"The industrial, or production, revolution, resulted in the concentration of the main volume of production in the industry and the use of machines and mechanisms for its purpose. The significance of this revolution lies not only in the replacement of manual labor by machine labor and of biological energy by water and steam, but also in the fact that, in a broad sense, it brought about the process of labor saving (concerning not only physical labor but also accounting, control, management, exchange, credit, information transfer)" (Grinin & Grinin, 2015)

In the 14th-15th centuries, technical innovations (waterwheel-driven mining hoist, horse-driven drilling machine, port slewing crane, cloth works, iron smelting, rolling and drawing of non-ferrous metals, various machine tools,

etc.) began to be actively used in Europe. At this time, seafaring, trade, and banking developed rapidly.

From about the 18th century up to the middle of the 20th century, as a result of the development of sciences, industrial production, the emergence of machine industry, the urbanization process, and rapid socio-economic and economic growth, most people in developed countries (especially in Europe and the USA) moved away from the agrarian-artisanal lifestyle to the industrial. By this time, peasants moved en masse to cities to become wage laborers and craftsmen of various specialties.

In the agrarian family, all life, labor, recreation, traditions, and, of course, upbringing and education were tied to a single center of attraction – the land. Although life on the land was difficult, joint agrarian activity, for all its complexity, united people and made them interdependent. The family was based not simply on love but on collaborative activity, without which a community cannot exist. This made upbringing and education the natural processes of the existing way of life.

The urban family, in contrast to the agrarian, lost its existing common center of “cultural” attraction. As a result of industrialization, people have left the common joint family activity: parents went to factories, plants, and offices, and children – to the specially built mass schools and kindergartens. The single center of unification was destroyed, and family members became more independent of each other, which led to a marked increase in divorce rates (in recent years, there have been 6 to 7 divorces per 10 marriages) (Figure 1).

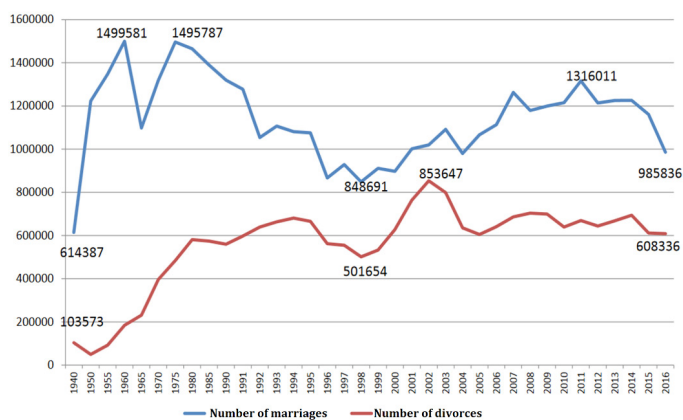


Figure 1. Marriages and divorce rates in the middle of the 20th century – beginning of the 20th century.

The new architecture of the industry, economy, and social life called for a new architecture of education. The class-lesson system was a natural response to the changed socio-economic conditions and needs, to the newly formed

way of life, and became the most effective way of organizing mass education. The transmission of cultural tradition was now organized massively and, in many ways, artificially. The increase of literacy was facilitated by the mass book printing that became widespread in Europe.

The industrial linear organization of production fully reflected on the organization of the educational process. *“Raw materials are transformed into goods as a result of passing through a specific sequence of technological stages, where testing serves as a kind of gateway in the transition from stage to stage. Mass education also presents a series of stages, from elementary to high school and further on to higher education. Pupils tend to pass through a series of student groups whose composition is conditioned solely by date of birth”* (Robinson & Aronica, 2016). The division into classes according to age and/or ability; a clear plan in the mastery, consolidation, and testing of the material; orientation on the studied subject; rational evaluation of the individual’s intellectual abilities; a focus on the average student; a time frame for study sessions and recreation, etc. – These and other features of the classroom-lesson system were established in accordance with the characteristics of the industrial age.

On the other hand, the advancing exact and natural sciences could not but enrich society and culture with the knowledge of Man and, in particular, of the child. This gave the classroom-lesson system a humanistic purpose, content, forms, methods, and means focused on the subject, the discovery of the potential of the Person, their creative self-realization. That is why this system may be called “industrial-humanistic”. It acutely manifests itself in the contradiction between the objective necessity of transmitting cultural tradition (which the industrial era demands) and Man’s free desire to know themselves. **The educational process can thus be viewed and constructed from these two paradigmatic positions – the traditional (social and technological) on the one hand and the humanistic on the other.**

The industrial system of mass education, imbued with humanistic ideals, was generally successful in accomplishing its tasks until the 21st century. The spirit of industrial education was imbued with humanistic ideals, the belief in human beings, in their rationality and individuality, and in the everlasting progress of the world. However, the new digital technologies are not only revolutionizing the organization of the educational process but, above all, changing its essence, its very spirit. Technology is both destroying the well-established educational traditions and leveling humanistic values.

Digital lifestyle and the new information and digital education system

At present, the industrial-humanistic system and paradigm of education are changing under the pressure of the new conditions of the digital lifestyle and the corresponding technologies. Should it be replaced, as in previous revolutions, by a new system, such as the digital information system?

In his book "From Hand Axes to Nanorobots. The World on the Way to the Era of Self-Managing Systems", Grinin & Grinin (2015), names the last revolution the cybernetic since cybernetics is the science of information and its transformations in the process of managing various complex systems: "The cybernetic revolution, at the initial phase of which there appeared powerful information technologies, new materials and types of energy began to be used, automation spread, and the final phase of which will be marked by a transition to the widespread use of self-managing systems". It is an undeniable fact that, as a result, we are approaching a new digital lifestyle, which is markedly different from the former industrial way of life.

In the digital lifestyle, electronic technical means and the products of production with their use (primarily information in various forms, programs, algorithms, etc.) become the main material value, mediator, and unifying factor in the interaction between people. This brings radical changes to the former way of life.

Let us briefly note some of these changes.

1. "Human-screen-human" interaction. Humans spend more time with the virtual world of the Internet, transmitted through a gadget screen, than with the surrounding reality. This means that the digital world ("Brave New World" by O. Huxley) is becoming (in fact, has already become) the most powerful tool for the formation of Personality.

2. "Information noise": The changes in information transmission and reception that started in the 20th century (transceivers, radio, television) reached their peak at the beginning of the 21st century with the advent of the Internet. Today, unlike in previous eras, we live with enormous information flows. Access to mass information is now easy and inexpensive. Big data is transmitted to the public masses unbelievably fast and over great distances. Humans are faced with the need to disconnect from the streams of incoming information in order to perform certain creative tasks on their own.

3. Segmentation of life. The industrial age was characterized by the division of labor (manufactural production); in the digital age, this segmentation has reflected on the sphere of entertainment and, naturally, information.

Individuals' "free" choice of these segments saves them from large amounts of data, but on the other hand, it limits, narrows down people's outlooks and opportunities for activity.

4. Mass pseudo-creativity. *"Creation and destruction, love and hate, are not two independent instincts; they are responses to the same need for overcoming, and the will to destroy arises when the desire for creation cannot be satisfied"* (Fromm, 2011). In addition to Erich Fromm's argument, there is another way to resolve this existential problem – pseudo-creation. Unlike creativity, the latter gives a false sense of creation at a time when objectively Man creates nothing. The digital age, with its computer games, soap operas, and political talk shows, is proof of this assertion.

5. Algorithmization and automation of life through AI.

Today it is possible to receive, transmit, store, process large amounts of data (streams), as well as to solve various tasks with the help of AI from day planning, calorie counting, translation into another language, heartbeat scanning, etc. to processing the flows of people in megacities and data on the results of the Unified State Exam from all across the country. This automates many processes in life, making them mobile, and a Human organizes their own activities to take advantage of these new technologies. Algorithms do things for us, and we adjust to the algorithms.

6. The crisis of traditional centralization and the emergence of new technological centralization and digital control.

On the one hand, the new digital age reinforces the horizontal connections between the actors of social life. However, it also weakens the vertical top-down influence. For example, in the industrial era, information from a single source was sent to the masses through radio and television in an organized way. Today, any active user of social media platforms can become such a source, which means that the transmission of information from a single source is no longer a possibility. Such decentralization processes are taking place in many fields, for example, in crowdfunding platforms, payment systems, mining, commerce, media, etc. This makes life more democratic, autonomous, and self-organized. On the other hand, digital technologies now make it possible to control any given user, collect relevant information, and use it to increase the influence on the centralized organization of society.

7. The crisis of the "progress paradigm": Ultrafast changes, new knowledge about the nature of a Human, and the socio-economic and political crises of mankind, manifested primarily in the two world wars of the 20th century, in the collapse of the Soviet Union, and in contemporary

local conflicts, could not but lead to disappointment with the idea of Man's eternal progress, and, consequently, to the crisis of humanity's ideals and values that we are witnessing today.

8. Mobility, the high pace of life, and the difficulty of predicting the future. The creation of mobile digital devices has given Humans the ability to be constantly included in the information field of virtual space. This makes it possible to constantly stay in touch, to perform several tasks at once, to blur the boundaries between work and rest, and to perform tasks from anywhere in the world. Constant online connection and the ability to quickly exchange data have majorly raised the number of tasks to be solved, and thereby accelerated the rhythm of work and life in general.

Such monumental changes in the way of Human life cannot but restructure the architecture of the 21st-century education system. On the one hand, the industrial-humanistic (classroom-lesson) system is losing its effectiveness in the new realities; on the other hand, the new reckless use of digital educational technologies can lead to tragic consequences, which are already observed today: *"It is the new media and the interactive educational programs created with them that are the main causes of the decline in the quality of education. If schoolchildren and students stop reading books and listening to authors' lectures, the collapse of education is inevitable. Textbooks turn into comics, and lectures into presentations"*. (Dudnik & Markov, 2020)

Today the classroom-lesson system is being rapidly digitalized and virtualized on all sides of the pedagogical process organization: administrative, educational, and upbringing.

On the administrative side, digitalization has resulted in rapid and automated management, communication, and, consequently, control. Online learning systems with step-by-step tasks and tests, monitoring (e.g., the Unified State Exam), online scoring (electronic grade book), attendance checks (magnetic card control at the school entrance), etc. The fast exchange of information (documents, orders, assignments, etc.) in messenger chats makes it possible to manage and direct the teaching process around the clock. Technologization and digitalization have led to a focus primarily on the external evaluative control of processes and results.

On the side of education (the introduction of a Human into the world of Mankind's culture, their culturing), digitalization shows itself in the "abolition" of the traditions of the industrial-humanistic (classroom-lesson) system. In the former system, the Teacher was the indisputable authority,

an important, if not the sole, bearer of the knowledge the student needed for their future life. The teacher was not just a transmitter of knowledge; they were a facilitator of personal, lively, and meaningful communication, a shaper of meanings and motives, a thinker and understander, an emotional and spiritual mentor, a nurturer, and an inculcator of socio-cultural values. Although the class-lesson system relies more on the verbal teaching methods, many teachers successfully incorporated problem-exploratory and developmental methods (including those based on reference cues) and collaborative creative activity into their work.

Today, digital technology is destroying both this educational tradition and the personal connections between participants in the pedagogical process. The Internet has replaced the teacher, students are "Googling" for a multitude of questions, and educational communication is all just forwarding materials and links to resources. There is no need not only for a teacher, but also for students' communication with one another, the social and educational ties of the real world are broken, and virtual communication takes their place. As a result, motives for learning change, and the traditional scheme of a combined lesson ceases to work effectively.

The change manifests itself in the fact that the Human, having gained access to a colossal and inexhaustible volume of information, ceases to be the creator of their own inner world of knowledge, ideas, concepts, and systems. Yet creativity, in the broad sense of the word, is a vocation of Man, and the humanistic goal of education is to lead a Human to this goal. Today, digital educational technologies can both help develop creativity and diminish it, replacing it with pseudo-creativity, with dead technical mechanical answers to creative educational questions.

From the point of upbringing, information technology also demolishes traditional approaches and humanistic values. Upbringing has become a much more challenging task with the advent of the Internet with its entertaining and often non-developing content. It is difficult to motivate children, to get them interested, to enthuse them, to take them "offline," to creatively ignite and lead them, to be an authority for them. Without a doubt, the Internet should become an assistant to teachers, class teachers, and principals, which is why in the last 2-3 years educational institutions began to actively "promote" themselves on social media. Nonetheless, even there the content is so vast and varied (and sometimes ugly) that the task of value-based upbringing will only grow more challenging. Today, the traditional forms of education need to be "updated", skilfully combining the virtual and real worlds. It is important for teachers not only to keep "in touch" with

students through social media and messengers, not only to use the Internet as an assistant in communication but to apply these means to solve humanistic pedagogical problems and issues.

In this context, it is vital to make good use of the new digital opportunities and to mitigate the risks of the digitalization of education.

1. High pace of learning, on the one hand, allows performing multidirectional tasks quickly, but on the other hand, does not give the student the opportunity to immerse themselves in the problem, as there may not be enough time for this.

2. Boundless communication, quick access to content, and prompt data processing. The absence of boundaries leads to the disappearance of transcendent goals. Thus, the ability to communicate and obtain any kind of content often leads to aimless wandering on the web and the mechanical processing of data to perform certain tasks.

3. Virtualization of learning and simulation of reality, game-based learning methods. Technical means of teaching, and especially digital technologies, are designed to make learning more visual and captivating. Therefore, they use the methods of emotionally stimulating “clip” presentation of material (presentations, minute-long videos on the social media platform “Tik-Tok”), gamified forms of learning, etc. Not opposing these forms and means of learning, let us note that the ultimate goal of the games is learning and further transition to learning and creative activities. For this very reason, these methods should not become an end in themselves but lead to the resolution of serious creative tasks. As demonstrated above, virtual reality and means of communication give a lot of room for pseudo-creativity.

4. Substitution of internal meanings with external attributes and destruction of the integral body of knowledge is a consequence of emotionally-influenced “clip” learning. The latter must be applied as a means but must be overpowered by new educational tasks and the will of the teacher and the student to solve them.

5. The loss of interpersonal connections. During the pandemic, parents, teachers, and schoolchildren began to actively oppose distance learning. The reason is clear. Schools and additional education (sports sections, art studios, etc.) remain a place of direct personal communication between children. The Internet is increasingly disrupting personal communication, and the school needs to not only preserve it but also fill it with pedagogical tasks.

6. Algorithmization of humanitarian education. The development of AI (artificial intelligence) brings automation of many management and control processes, including education. On the one hand, this is a great opportunity to obtain all the data about the state of the system and its participants in a certain period of time and to quickly manage the processes. On the other hand, we run the risk of absolutizing the use of data, thereby distorting the ideas of objectivity, equality, and fairness. Behind the subjectivity of a five-point mark for an oral answer or a student pulling up in a physical education class, there is always the humanity of the teacher. This means that a weak (by nature) student and a strong (but lazy) student can get different marks for the same number of pull-ups on the bar. And that is the true essence of fairness.

7. Changing values, estrangement from the learning process. As we have already noted, in today's digital lifestyle, there is a noticeable change in the motives for learning. This leads to the disintegration of the former system of values (now there is no single source of its formation, there are many and they contradict each other), and results in the alienation of the subject from the very pedagogical process. The latter is manifested in the replacement of full-fledged personal interaction between a teacher and a student, a student and learning material (immersion), a teacher and a parent, etc. by the superficial resolution of situational tasks that quickly replace one another. In this case, the meanings of education are not formed, and without them, the very process of purposeful cultural development (education) of a person becomes alienated

CONCLUSIONS

The state and society, parents and teachers, and, of course, students all strive for a more effective, efficient education. For this purpose, all possible innovative means, digital technologies, etc. are used. However, they often do not meet the most important requirement – saving time and energy costs while achieving greater results. Participants in the pedagogical process say that they spend more effort and time, but the result, at best, remains the same. The reason for this is the incorrect use of digital technologies without reference to the unchanging patterns and needs of Humans. These include the following.

The need for creativity. If learning and work do not produce creative results in the broad sense of the word, they become meaningless. This means that even with high-tech “stuffing”, students are very difficult to motivate. The main motive is interest, which flows into the products of their own activities.

The need for self-improvement. A Human is a being who lives simultaneously in the world of reality and the world of ideals, dreams, and fantasies, in the world of being and the world of due. We feel our own “unsettledness” and wish for the ideal. In studies, this manifests itself in a volitional desire to achieve a high result (clearly seen in sports), to become faster, higher, stronger, smarter.

The need for a group (social status and protection). Humans are supersocial beings. We want to be accepted by the group, to be approved and protected by it, we expect it to provide conditions and opportunities to realize our own potential. That is why children choose the groups where they feel (sometimes falsely) their own importance. This means that they will learn better in a community of peers that values learning and knowledge rather than just behind a computer screen. It is also true that it will be very difficult for a teacher to organize learning in a classroom where knowledge is not a value.

The need for interaction and mutual learning. Humans want to not just be part of a group but have a need to interact with each other, share information, and teach what they know themselves. Digitalization and distance learning should not discard this need. In the traditional classroom, for example, the well-known technique of having some students explain to others how to solve a problem is very common. Even if this process is set up remotely (with children teaching each other in a virtual space), it must be admitted that this interaction is inferior to the real one.

The need to explore oneself and one's capabilities, for self-improvement. If the above-mentioned needs of a Human are met, they reach the main goal of upbringing and education – they find themselves. On this path to oneself, the main guides are teachers and mentors not by profession but by essence. These are parents, teachers, adults, and children. From the perspective of humanistic pedagogy, “to find oneself,” “to realize one's potential for the benefit of people” is the most important goal and outcome of education.

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