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School in the Cultural Discourse of Real Virtuality

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Abstract

Objectives of the research: The purpose of the theoretical research is to understand the importance of school in the culture of real virtuality and to point out the challenges that this phenomenon poses to pedagogy, especially school pedagogy. The research question is as follows: Does understanding the nature of the relationship between contemporary media and the partners of school dialogue help us better understand the changing educational reality which relies heavily on modern technologies and enable more accurate planning of pedagogical interactions?

Research methods: The study used the desk research method, which involves compiling, analyzing and processing data from existing sources, and then formulating conclusions based on them regarding the problem under study. A meta-analysis of the concepts and categories comprising the title research problem was performed using interdisciplinary sources and selected international reports.

Brief description of the context of the issue: The article presents a discourse analysis of the place of school in the culture of virtual reality (VR). The basic features of this culture are described within the paradigm of informationism, in which modern digital technology enables the integration of all modes of communication. Attention is paid to the interactive nature of hypermedia and its specific logic of flow beyond time and historical context. The role

of the recipient of the message in the communication chain is highlighted as the one who ultimately gives it meaning in accordance with their own perception and experience of reality. The dialogical nature of communication in virtual space and polyphony leading to the creation of hypertexts that combine multiple narratives is emphasized.

Research findings: The results show the importance of the links between the school's implementation of basic educational and teaching functions and the tools offered by modern digital technologies. The special role of the teacher in the process of preparing students to discuss media messages and discover their polemical nature is revealed.

Conclusions and/or recommendations: The analysis made it possible to formulate the tasks facing contemporary schools in terms of preparing young people to consciously and actively engage in the multimedia system of communication according to its logic, language and methods of encoding meanings. The importance of a dialogical, open and creative attitude of the teacher in the process of forming empowered participants of communication in the culture of real virtuality is emphasized.

*Keywords***:** virtual reality, interactive communication, school, student, teacher

Introduction

The purpose of the article is to present the issue of the importance of school in the culture of real virtuality and to identify the challenges that this phenomenon poses to pedagogy, and school pedagogy in particular. The quest to understand the complexity of the functioning of the school in the interactive space of modern media dominated by the discourse of modern technology requires presenting the paradigm of informationism and the specifics of communication in the virtual space of flows. The role of the teacher in the hypermedia space is used to explain the school's place in the culture of real virtuality. Understanding the nature of the relationship between contemporary media and the partners of school dialogue helps us better understand the changing educational reality that relies on modern technologies and enables more accurate

planning of educational interactions. The study used the desk research method, which involves compiling, analyzing and processing data and information from existing sources, and then formulating conclusions based on them about the problem under study. A meta-analysis of the concepts and categories comprising the title research problem was performed using interdisciplinary sources and selected international reports. The analysis of the phenomenon of a school seeking its place in the narrative of real virtuality is of particular importance for the pedagogical understanding of the challenges facing education. Despite the enormous impact of technology on the everyday life of partners in educational dialogue, or perhaps because of it, the need to shape the meeting space at school, to develop a dialogical attitude and creative development was highlighted.

The role and place of education in the individualistic culture of real virtuality, which creates dominant global narratives nowadays, is fraught with ambivalence. Today, the school is dependent on many phenomena and processes that painfully affect it, although it neither causes nor influences them. Being torn between (often contradictory) societal expectations, the need to preserve traditions, develop a sense of national identity in students, while at the same time preparing them for life in a global information society in an unpredictable future, it must additionally cope with new problems caused by the pandemic and the war in Ukraine. School everyday life, which is always full of direct social interactions rooted in the axiological intersubjectivity of the participants, becomes even more complicated today, especially in the sphere of unintentional educational measures. Experiencing and reacting to the difficult political, economic and social situation in the world, combined with the personal idiosyncrasies of participants in educational dialogue, leads to a number of new social problems. Online communication, used on an unprecedented scale during the pandemic, the development of social networks, virtual communities and an interactive society, as well as the emergence of a symbolic multimedia environment, leading to the diversification of the mass audience of new media, make up the culture of real virtuality, in which the modern school must find itself.

The paradigm of informationism and virtual narrative

Modern information technology, which integrates all modes of communication, both typographic and multisensory, plays a decisive role in the culture of real virtuality. This way of organizing the communication system is based on the production and consumption of signs, which leads to levelling the differences between reality and its symbolic representation (Castells, 2010). Educational messages revolve in the space of a vast, timeless, ahistorical hypertext alongside political persuasion, economic rhetoric, information on the world of arts, and various types of entertainment, because multimedia encompasses the majority of diverse cultural expressions without dividing them into good and bad, or popular and high culture. The term "virtuality" originates from the Latin *virtualis*, or "efficacious" and *virtus*, or "potency", "virtue". "Virtual" is understood to mean "almost complete", "almost but not exactly or in every way", and "created by computer technology and appearing to exist but not existing in the physical world." It is used to describe something that can be done or seen with the use of computers or the Internet instead of going to a physical place or meeting people in person, etc. (*Cambridge Dictionary*, 2022). Thus, it means something that could exist; it uniquely combines potentiality with reality, i.e. with what really exists. This creates a special concept, a kind of antonym, combining two opposite qualities.

Virtual reality creates a unique communication system in which all messages have been absorbed by the medium, creating a multifaceted semantic context made up of a random mix of different meanings (Castells, 2010). Not all people cope well in this reality. Some have the knowledge and skills needed to make choices about the channel of communication, select and critically interpret messages, and consciously interact with the media. Others, however, lack the necessary competences and become absorbed by the media. This puts before education the extremely important task of preparing people of all ages to establish subjective relationships with hypermedia and cope with a virtual space that brings as many opportunities as threats to human development and social functioning. Pioneers of virtual reality have long emphasized its creative and philosophical

potential. Jaron Lanier, the father of VR technology, argued that the greatest value of virtual reality is that it has a cathartic effect. We become accustomed to various phenomena in our lives and in the world; we take them for granted. If we accustom our nervous system to the virtual world and then return to reality, we will have a chance to experience a rebirth in the microcosm. The most ordinary surface, a piece of wood or dust on the road then shines like a diamond (Lanier, 2018). How we are perceived in the virtual world due to the characteristics of our avatars (e.g. height, age, and appearance) can change how we think about ourselves, our decisions and our social relationships. The social functions of virtual reality seem to be the main reason why the power of immersive technologies will continue to grow (Brzezińska, 2020).

Hypermedia makes it possible for texts to be freely used and combined with various kinds of code, as well as created, processed and shared online (Gajda, 2003). Unlike mass media, in which information is centrally distributed, hypermedia is interactive, has multiple sources, with individuals acting as senders and receivers of information at any time. These individuals also create their own world of values and function within a certain axiological space of socially acceptable norms and standards, which they often violate, offering instead simulacra (copies without the original) and a game of appearances and evasions. Fewer and fewer people today come in contact with printed materials, and more and more people around the world are watching the same commercials and soap operas. In addition, media messages are difficult to reinterpret, as they elicit strong affective reactions in the audience. According to 2020 data, over half of the virtual reality market is based on games, 38% is used in the medical industry, 28% in education, and 24% in other areas of professional activity. At the same time, 91% of companies and organizations are using or planning to use virtual reality in their daily operations, such as employee training (PerkinsCoie, 2020). Virtual reality today offers many opportunities and is increasingly entering the mainstream of modern societies: it is no longer just a technological curiosity or entertainment, as it finds its place in various areas of human work, e.g. in science, education, medicine, etc.

People of all ages, with different levels of education and technological experience, respond to the media in similar ways, regardless of personal and cultural differences (Berger and Luckman, 2010). Those who do not interact with the media consciously, but are absorbed by it, often equate virtual reality with real life. This applies not only to children or adolescents, but also to students, business people, and scientists who use computers for work. Human interaction with television and hypermedia is as natural and social as in real life. People project personality traits that match their own onto the computer. The media influence people's memory, change their attitudes to the world around them and their perception of what is natural, and often activate stereotypes, such as those related to gender or race. Frequently, people do not even realize how much they depend on the media (Reeves & Nass, 1996). Despite the passage of time and the emergence of many new technological developments, the relationship between people and the media described here is still true and will remain so regardless of the development of the media and artificial intelligence (AI).

With the development of hypermedia, our awareness of the dangers of (increasingly autonomous) functioning in virtual reality is growing. The goal of the media is to make us believe that they are, in fact, our world, our only reality. They seem to show less of the external world and more of themselves. At many stages of the communication chain, there is some manipulation of the content and form of the message, so as to make the viewer feel that he or she can become part of the media and have an impact on them. It is less and less important whether the media show the truth; instead, they are becoming the truth and value simply because they exist, not because of what they offer people. Mass media not only offer – or even push – a particular ideology, but have become an ideology themselves, with their own value system (Eco, 1998). They radically transform the fundamental dimensions of human life, i.e., space and time. In the new communication system, the narrative takes place beyond the cultural, historical and geographic context of meaning. It creates new functional networks, producing the space for placeless and timeless flows that can combine the past, present and future in a single message. In this way, the space of flows and timeless time are the foundations of a new culture (Castells, 2010).

Communication in the virtual space of flows

However, the new location of dialogical relations in the mediated space of virtual reality does not invalidate the basic meanings present in each message. The context of communication is determined by four basic paradigms: 1) clarity of expression: we must agree on the linguistic standard of expression; 2) truthfulness of the message: we must agree to accept the content as true; 3) attitude of credibility: we must accept the intentions expressed; 4) adequacy of the standards adopted: we must agree on the standards presented (Habermas, 1983). These assumptions create a dialogical space, allow us to agree on meanings and enable mutual understanding in the communication process. The interactive character of hypermedia results in a variety of communication channels and makes each participant in the virtual space both a sender and a receiver, which, obviously, complicates and obscures the process of communication. However, each recipient of a message always has some freedom, manifested in the right to interpret it freely. Each interpretation may differ from the others since it is made from someone's own axiological and cultural vantage point, and may deviate from what the sender of the message assumed. Recipients give different meanings to messages depending on the code they use, and thus, being at the end of the communication chain, have real power over the message in the media (Eco, 1998).

Highlighting the role of the recipient in the age of communication as part of the real culture of virtuality culture is extremely important for education, as it offers hope for increasing the agency of the individual. Irrespective of the source and channel of the message, each person can fill it with personal meaning, endow it with a purpose and interpret the messages in accordance with their own intersubjective axiological space. In the processes of lifelong learning and education, people should acquire knowledge on the importance of hypermedia in life and develop the skills of challenging media messages. Education should prepare individuals to interpret the content of messages according to their own phenomenological experience and understand them in a creative way,

not only critically, but also with a view to building new qualities in the process of self-actualization. The processes of education and upbringing in the culture of real virtuality must include sensitizing people to the importance of media in their daily lives. It is crucial for them to learn and understand the essence of the relationship they may have with the media and the intricacies of the media context of reality. This results in an awareness of the role that each individual plays in the complex communication chain, both as an addressee and sender of media messages. Wherever there is a sender and receiver of a message, there are two perspectives of the world, and true understanding requires creative contribution to what is sent and what is received (Andrukowicz, 2001).

Multimedia education makes it possible to engage all communication channels, and thus affects almost all human senses. This makes the teaching process more effective, as it increases the effectiveness of teaching, accelerates the pace of learning, saves time and enables more information to be assimilated (Bednarek, 2006). However, what constitutes an opportunity for education can also increase our susceptibility to various types of manipulation, both marketing and political.

Digital technology in education

Pedagogical analyses of the importance of media in education emphasize a) the processes of social change resulting from the impact of media on people and society, b) the dangers of new media shaping public opinion; c) education using media with particular emphasis on remote education and creative and collaborative activities; and d) educational methodology that highlights teachers' skills in using new media (Siemieniecki, 2021). The discussion about the need for media education has been going on for many years around the world, as well as in Poland. It has already gone beyond the early stage of fascination with new technologies, which were perceived as a panacea for various shortcomings in education, and it no longer perceives new media mainly as a source of threat (Federowicz, Ratajski, 2015).

Information and communications technologies (ICT) have been used in education for 100 years, beginning with the popularization of radio in the 1920s. However, it is the use of digital technology over the last 40 years that has the greatest potential to transform education. An education technology industry has emerged, which in turn has focused on the development and distribution of educational content, learning management systems, language applications, augmented and virtual reality, personalized learning and testing. Breakthroughs in artificial intelligence (AI) methods have increased the effectiveness of educational technology tools, leading to speculation that technology may even replace human interaction in education. Over the last 20 years, students, teachers and institutions have made extensive use of digital technology tools. The 2018 Program for International Student Assessment (PISA) survey shows that 65% of 15-year-old students in OECD countries attended schools whose principals agreed that teachers had the technical and pedagogical skills to integrate digital devices into teaching, and 54% attended schools where an effective online learning support platform was available. By 2022, about 50% of junior high schools worldwide had access to the Internet for pedagogical purposes (UNESCO, 2023).

Artificial intelligence, as one of the most important trends shaping contemporary reality, creates new requirements for preparing people for the increasingly rapid changes in the world of everyday life and taking intensive efforts in the field of education. In the process of education, it is necessary to make people aware of the opportunities and threats posed by the development of artificial intelligence. Data processing, machine learning and the networking of devices and people require new competencies that will enable individuals and society to respond efficiently and effectively to the challenges of artificial intelligence. This is especially true since most artificial intelligence solutions are being developed for the commercial benefit of those who use them. Artificial intelligence should help optimize pricing methods, routing in logistics networks, energy management, etc. (Fazlagić, 2022). Its application in the education system, in learning processes that require creative effort and proficiency of learners, conscious investigation and search for solutions,

internalization of values and deep ethical insight into the world of ideas, may bring negative consequences for the development of individuals and society in the future. Therefore, it is important to properly use artificial intelligence as a tool supporting the learning process, assisting teachers in carrying out administrative tasks, and as an instrument in managing the education system at various levels.

Digital technology has changed education, but not transformed it. Digital technology tools have been widely adopted by students, teachers and institutions. The number of students taking massive open online courses in 2021 reached at least 220 million. The educational app Duolingo had 20 million daily active Internet users in 2023, and Wikipedia had 244 million page views per day in 2021. Globally, the percentage of Internet users increased from 16% in 2005 to 66% in 2022. The undoubted advantage of using digital technology in education is that it limits the time that teachers and students spend on less important tasks, time that could be used for other, more educationally relevant activities. However, digital technology is evolving too quickly to allow for a meaningful assessment of its importance in education.

Findings that apply in some contexts may not always prove replicable in others. The use of digital technology has brought many changes to education and learning. The set of core skills that young people should learn at school has expanded to include a wide range of new skills that will help them navigate the digital world. Higher education has the highest rate of digital technology adoption, with online management platforms replacing some campuses. The use of data analytics in education management has increased. Technology has made a wide range of informal learning opportunities available. However, in many parts of the world, education systems remain relatively intact. Even in some of the most technologically advanced countries, computers and devices are not used in schools on a massive scale. Digital technology is lowering the cost of access to education for some disadvantaged groups, but access to the internet and devices remains highly unequal. Digital technology encourages engagement and facilitates collaboration and networking, but personalized approaches to education limit students'

opportunities for real-world learning and negatively impact their well-being and privacy (UNESCO, 2023).

New technologies have become an inseparable element of the reality of contemporary youth, who spend time, get news, seek entertainment, contact their loved ones and make new friends in cyberspace. New technologies serve them as a means of exchanging information due to the mobility and speed of data transfer. However, there is still a lack of effective education about the risks associated with new technologies. The scale of the threat is vast and is constantly growing. In the opinion of students, the most common method of communication among young people is social networking sites, indicated by 100% of respondents, followed by phones and instant messengers such as Facebook, Messenger, Gadu-Gadu, Skype, etc. mentioned by 95% of respondents. Students use instant messaging at every possible moment. Research has shown that young people are mostly unaware of the dangers of using communication technologies. Nearly half of those surveyed are unaware of the risks, and those who can name them most often point to fraud, theft of private photos and extortion. However, young people have greater knowledge about the negative aspects of building relationships through communication technologies (Jagodzińska, Mucha, 2019).

The role of the teacher in the space of hypermedia

The ability to challenge media messages is a basic emancipatory competence that should be developed at school. It implies not only a critical attitude and deconstruction of the content of media messages, with special consideration of who uses them and why they were sent, but also the reinterpretation and creative construction of new meanings and senses, leading to the enrichment of one's own experience. One of the most important aspects of the change occurring in education in an interactive environment is the stress on dialogical forms of co-creating the space of learning, teaching and education, the transmission and assimilation of patterns, norms and values of the culture of real virtuality. In addition,

the circle of partners to the dialog is widening. A third "partner" appears between the teacher and the student: the medium, universal, diverse, so flexible that it absorbs the entirety of human experience in a single multimedia text. This fits in with the perception of education as a lifelong process of supporting a person in their development, allowing them to realize their creative potential so as to better understand the world they live in and participate in creating it for the sake of the "common good".

"The contemporary school has not kept up with the rapid development of modern information technologies. In this area it has become an unattractive place for everyone: students, teachers and parents. Current solutions are proving ineffective, while the pace of media development is so fast that the school, no matter how it tries, falls behind" (Pęczkowski, 2015, p. 45). Today, after two years of remote learning during the pandemic, we know that the use of hypermedia in education does not solve many social problems but actually creates new ones. Advanced technologies, modern media and related devices are not equally accessible to everyone. This deepens the already existing social inequalities and contributes to new divisions into those who "interact" with new media and those who become "absorbed" by them. Therefore, education in the culture of real virtuality should allow as many people as possible to become those interacting, that is, to consciously, purposefully engage in polysemic cultural discourse and creatively participate in the network of interactive electronic communication within selected communities.

This requires teachers to engage in professional and non-professional tasks oriented at providing knowledge about the new media and developing media skills and communication competencies, including the ability to question media messages and to display an active, creative attitude to the process of constructing the world of everyday life. First, however, teachers themselves must be trained to do this, since the effectiveness of their educational activities depends on their professional attitude, their continuous learning along with their professional activity, and their reflective attitude toward their own pedagogical practice. This places special demands on teacher training institutions, universities, colleges and professional development centers.

Unfortunately, the practice of academic pedagogical training of future teachers does not inspire much optimism about the likelihood of the new generation of young teachers making a significant educational change. Action research carried out using the group discussion technique between November 2021 and January 2022 among sixty fourth-year students of preschool and early school education at the faculty of education of one university showed that when discussing how to improve education, students mostly highlight the need to equip schools with computers and to be able to use the Internet during classes. They also point to friendly relationships between students and teachers, but make no mention of issues connected with preparing students to consciously interact with the media, debate interactive messages or the importance of the role of the sender and receiver of messages. As if equipping a school with more computers with Internet access automatically makes it a place of modern, higher quality education. This is the case although as part of their university education, students take many courses designed to sensitize them to the importance of critical analysis of media discourse, and, in addition, they also participate in this discourse, alternately playing the role of sender and receiver of messages in the interactive communication space. It appears that the knowledge gained from scientific literature, learning about various theories and the findings of many studies, not to mention the meta-knowledge of their own learning process, does not have an influence on the practice of students' daily lives and the perception of their professional role.

Surveys of early childhood education students have shown the remarkable persistence of the traditional image of school based on the passive role of the student reacting to external stimuli, which refers the behaviorist model. Thus, prospective teachers, young people about to graduate from university, who should bring to schools refreshing ideas about new theories and the zeal for transforming the existing educational practice, are interested only in maintaining the status quo. Everyday life and common-sense knowledge are at the center of students' know-how, although scientific language and colloquial language belong to completely separate systems of knowledge systems. Students are unable

to incorporate scientific facts into their cognitive resources, they do not use scientific language to describe pedagogical practice, and after several years of university education they continue to use common-sense constructs to interpret educational reality (Zbróg, 2019).

One of the important consequences of including most forms of cultural expression into an integrated communication system based on electronic production, distribution and exchange of signals is the weakening of the symbolic power of traditional senders, i.e., teachers, so acutely felt in school today. Teachers experience a peculiar ambiguity: on the one hand, they are obliged to transmit to students historically rooted values, patterns, authorities and norms of the national cultural heritage, which is essential for the preservation of the nation's identity; on the other hand, they should introduce students to the space of interactive virtual culture, teach them the ability to navigate freely and consciously through the vast, diverse, ahistorical space of meanings and symbols that make up the great hypertext of global culture. Another problem results from the difference in generational experience, as children who are now beginning their school careers were born and raised in a cultural space of "technopoly" (Postman, 1992), permeated with the logic and narrative of interactive media. The environment of digital socialization is natural to them: they are extremely skillful in using hypermedia and quickly learn to use new technological gadgets, but they are by no means able to consciously interact with them. On the contrary, they are often absorbed by the media, lured by yet another digital gadget. However, such technological proficiency is not enough to become an empowered, knowledgeable and proficient partner to communication in the network of interactive media. For teachers, especially the more experienced ones, raised in a different cultural context created by mass media, interactive virtual reality will always be something unnatural, secondary and perhaps even odd.

The adoption of digital technology has undoubtedly brought many changes to education and learning, but digital technology should not replace, but complement face-to-face interaction with teachers. The use of digital technology varies depending on the community and its socioeconomic status, the willingness and training of teachers, the level

of education and the income of the country. Except in the most techno-logically advanced countries, computers and devices are not used in classrooms on a large scale. Moreover, the evidence on their impact is inconsistent. The short- and long-term costs of using digital technology appear to be significantly underestimated. The most disadvantaged are usually denied the opportunity to benefit from them. The focus should be on learning outcomes, not digital inputs. Technology has made a wide range of informal learning opportunities available. However, it is unclear to what extent technology has changed education. The changes resulting from the use of digital technology are gradual, uneven and greater in some contexts than in others (UNESCO, 2023).

Meanwhile, the enormous popularity of social media among in-creasingly young children and adolescents raises many opportunities for educational and pro-developmental interactions, although it also carries serious risks. The attractiveness of this type of communication obliges teachers and educators to use it in formal and informal education. Re-mote work and learning, meetings with friends via video instant mes-saging, virtual tours of museums, webinars and the possibility of taking care of many things remotely in offices and various institutions are forc-ing a wider inclusion of social media into the daily processes of educa-tion at school. Although distance learning during the pandemic exposed numerous inadequacies and problems associated with the functioning of schools in the real virtual space, it also showed trends and prospects of development of modern societies. More and more areas of human activity are moving into the realm of virtual and augmented reality (AR), that is, enriched with new elements that are "overlaid" in real time on the real world with the help of a computer. Properly used, social media can be a valuable tool for education and communication between teachers, stu-dents and their parents, a place for the exchange of experiences between teachers, as well as a source of personal development for all partners of school dialogue (Borkowska, Witkowska, 2017).

Two different worlds of cultural socialization meet at school, and the possibility of their mutual understanding and mutual learning depends on many complex factors and processes. Undoubtedly, of key importance

here is that the teacher adopts a dialog-oriented, open-minded and creative attitude to support students at all stages of their educational journey in the process of getting to know themselves and the world, learning to critically approach social phenomena, to question cultural messages, and consciously interact with the media. The significance of this task is also evidenced by the events of recent months, the tragedy of people experiencing the atrocities of war, which should never have happened in the middle of Europe in the 21st century. Western societies have placed great hopes in education for peace, perceiving opportunities to maintain world peace in the theory and practice of this approach. Again, political interests, lust for power and hate speech have made a cruel mockery of the humanistic ideals of making the world more ethical and safer through education (Cudowska, 2003; Cudowska, Kunikowski, 2007). Therefore, it is all the more imperative today to make greater educational effort to achieve a common, non-egoistic good in a social space immersed in a culture of real virtuality.

Conclusion

Education and technological innovation are inextricably linked. New ideas lead to digital transformation, which in turn helps us improve education systems. Education and technology together can lead to holistic quality improvement at the system level and to greater equity. The conscious and purposeful use of technology to achieve educational goals is becoming a key skill for 21st century education leaders. As a basic educational institution, schools should play a decisive part in preparing young people to function in a multimedia, multilateral and highly diverse communication system.

Conscious and agential participation in this system requires people to adapt to its logic, language, ways of encoding and decoding. Is the departure from traditional writing instruction to the use of computers for this purpose at the earliest stage of schooling a sign of such adaptation? In several U.S. states, learning to write by hand is already optional and

can be replaced by learning to type fast. Similar regulations are being introduced in Finland. This may be justified by the fact that children are entrenched in the digital culture of real virtuality, which is a natural environment for them, but it also involves specific developmental risks, because when typing on a keyboard, the human brain is much less active than when writing by hand. Computers prevent creative thinking, interpersonal interaction or the ability to concentrate, as confirmed by a growing number of studies.

The material basis of the culture of real virtuality in which we live is the space of flows and timeless time. However, the school – rooted in the meritocratic educational doctrine of individualistic Western culture – still functions in accordance with the logic of place and time, beyond the space of flows, in which information and the global network count the most. Changing the logic of school functioning is extremely difficult, as it requires changing the social mentality and educational policy. Because of decades of neglect, the expenditure for education in Poland should be increased substantially, and for many years to come. It is necessary to replace the economically-driven, free-market rhetoric with humanistically and axiologically motivated activities in education, thus treating it as a value in itself. Of course, these are not the only conditions needed to bring Polish schools into the space of flows of the culture of real virtuality, but they are certainly fundamental and of prime importance, vital for further changes, such as proper pedagogical preparation of teachers, adequate for the new conditions of the information society. According to experts, the optimal model of school corresponding to the new type of culture and society is the school as a learning organization and a self-organizing system, improving in daily life through the creative work of all actors of the educational scene (CERI, 2001). And yet, there are many indications that previous bureaucratic and market tendencies, as well as political entanglement, are becoming even stronger in education. Therefore, it is necessary to build a new school culture that will empower all partners in the educational dialogue, allow for a real meeting of the student and the teacher, their mutual learning and support on the way to achieving personal freedom and developing their own potential for the common good.

While technology promises easier access to education, the reality is that digital divides still exist. In poorer countries and among some of the world's most marginalized groups, its use in education remains limited. During the Covid-19 pandemic, nearly a third of students did not have effective access to distance learning. Only 40% of elementary schools worldwide currently have access to the Internet. Even if connectivity were widespread, from a pedagogical point of view, it is still necessary to consider the real value of digital technology in terms of effective learning, especially given the risks associated with it. It is also paradoxical that despite the desire to make education a global common good, the role of commercial and private interests in education is constantly growing, with all the uncertainties that this entails, and so far only one in seven countries legally guarantees the privacy of educational data. The welfare of students must always take precedence over all other considerations, especially commercial ones, and technology must be seen as a means, not an end. It is necessary to ensure the fair and safe development of educational technology, which requires an appropriate normative framework and the establishment of standards for privacy, data access, non-discrimination and screen time. There is a need for public action and international cooperation, to promote access to communications and open educational resources, and to train teachers in these new and constantly changing issues (UNESCO, 2023).

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