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DIGITALIZATION OF EDUCATION IN CHINA: PROBLEMS, OPPORTUNITIES (SOCIO-PHILOSOPHICAL ANALYSIS)

Formulation of the problem. Nowadays philosophers actively discuss and analyze the content and nature of high technologies and their influence on social development, because high technologies become the main determinant of essential changes in all spheres of social life, and, in particular, in education. From international experience, some countries, regions and organisations have established or are in the process of establishing a maturity model or framework for digitalisation in education as a way to consolidate the progress of digitalisation in education and promote the sustainability of practices.

Analysis of publications. For example, the European Commission's Directorate-General for Education and Culture has developed the European Reference Framework for Digital Education Organisations (DigCompOrg); the University of Zagreb's School of Organisation and Informatics, in collaboration with CARNet, has developed a Digital Maturity Framework for Schools for primary and secondary schools in Croatia, based on the reference to the European DigCompOrg framework; and industry organisations, represented by IDC, Microsoft, and Gartner and other industry organisations have also introduced frameworks or models for digital transformation in education.

Increasingly, we see the emergence of studies whose central theme is the digitalisation of education. In China, these issues have been discussed by Zhou Lu, Peng Gao, Li Xiaoyin, Wang Lixia, Xu Ruiping, Wu Xuanhong, Diao Shengfu and others. They argue that the development of biotechnology, artificial intelligence, and information technology has led to profound changes in human life and the future direction of civilization, and the ability of human beings to control technology and to serve productive life will be significantly enhanced [15; 17; 18; 20]. Research on the role of social

demand and the changing social status of people and the emergence of new forms is increasingly emerging. This is written by Yang Min, Zhang Chenggang and others. Ethical issues, the theme of the "new alienation of man" is increasingly coming into focus [14; 16]. Issues such as "digital poverty", "digital refugees" and new social divisions are being raised. On this point, we are able to find in the works of Li Mei, Chen Youhua, Lu Weihong and Yang Xinfu [7; 8].

Purpose of the article. Socio-philosophical analysis allows us to consider the development of education in different aspects. We will consider the nature of the digitalization of education in China, highlight the main problems of such an analysis. The emphasis will be placed on the nature of the collision of the old and new education systems, which will help to highlight the positive and negative aspects of the digitalization of education.

Novelty. The problem of conflict between the traditional education system and the new digital education system is demonstrated. On the basis of a socio-philosophical analysis, possible ways of "mitigating" this conflict are presented.

Main part: In China, with the rapid development of digital technology, computers, the Internet and big data, etc. have become important aids to teaching and learning today. Increasingly, they are influencing the status of traditional education, adjusting the traditional teacher-student interaction and changing the traditional model of education. In fact, there exists not only integration and promotion, but also conflict and contradiction between digital education and traditional education in China. China is currently in a phase of digital transformation and development in education, and its alternate integration of old and new education systems faces many challenges, one of which is the relationship between digital education and traditional education.

Digital education is a new way of education under the guidance of modern educational thought and theory, using modern educational technology, modern information technology, especially computer technology, to vigorously develop educational resources, scientifically allocate educational resources and optimize the educational process, with the important goal of cultivating and improving learners' information literacy. Digital education is a social process, a process in which people pursue or promote the use of digital resources and the application of digital technology in a system. Traditional education, on the other hand, mostly relies on traditional teaching tools and resources (books, blackboards, teachers' explanations, etc.) to promote and guide students' learning of knowledge. In the traditional education process, teachers impart knowledge to students by virtue of their unique teaching art, charisma and knowledge while students will also be influenced by the vivid demonstration of teachers, when receiving knowledge. Due to the limitations of textbooks and teachers, students receive limited knowledge from textbooks and teachers. In digital education, students can learn intuitively and visually through computers and the Internet, receiving a wider range of knowledge, but lacking a real and spiritual communication. The relationship between digital education and traditional education will be presented in the following three ways.

The main factors influencing the constructive interaction of traditional and digital education.

Firstly, digital education has a positive effect on the development of education. Digital education provides technical and instrumental support for the educational process, makes educational resources richer and more widely available, provides more diverse options for available resources, improves the traditional educational environment and teaching methods, and in turn promotes the emergence of more advanced educational concepts and teaching methods, and in the process reflects the value of digital education itself as modern technology.

Secondly, digital education breaks the traditional teacher-centred concept of teaching, forcing teachers to focus on "guiding" students to learn autonomously; this is a challenge to teachers' concept, which requires teachers to realize a fundamental transformation and self-renewal from world outlook to methodology. Compared to traditional education, digital education makes the teaching and learning environment less controllable and has the higher requirements for learners autonomy in the face of an intelligent, virtual digital learning environment. Digital education has a great influence on the traditional teacher-student relationship and student-student relationship, which are based on emotional ties. Teaching in the

digital age requires teachers to reposition their roles and teacher-student relationships. The lack of face-to-face communication leads to the gradual decrease of emotional communication, which leads to the relationship between teachers and students, students and students no longer as close as before, and the influence of teachers on students' emotions, attitudes and values in the teaching process gradually decreases [6, p. 2].

Thirdly, facing the impact of digital education, traditional education still has its unique charm. In the process of digital education, we can borrow more advantages from others' resources and learn from others' successful methods, but the digitization and informatization of education is only an intuitive reproduction of models or information. Machines and tools again advanced, after all, is only a copy, for educators education method and art, and the influence of the ideological charm is not fully passed. The traditional teaching mode, educators' thoughts, language, and even different educational measures adopted according to the characteristics of different educational objects and individuals are incomparable to digital education at present. Moreover, influenced by the age, psychological characteristics and learning level of the educated, digital education also needs reasonable guidance and organization of educators. The learning and psychological growth of the educated also need an organized, team-based collective to cultivate and exercise.

Digital education and traditional education are not opposites, they should be complementary and mutually reinforcing. To talk about digital education without traditional education will make education lose its vitality and charm; to talk about traditional education without digital education will lead to a situation where it is difficult to develop.

Prospects for the development of digital education.

The second most important problem is related to the opportunities for the development of digital education in China and the logic of its practical implementation. The in-depth development of economic globalization has promoted the transformation and reform of the economic system and economic structure, and the strategic game of major powers has intensified social transformation and profound changes in the education system. With the development and application of new generation digital technologies such as cloud computing, artificial intelligence and blockchain, digitally driven change and development has become a worldwide theme [9, p. 2]. The process of informatization, communication and digital transformation determines the life of modern individuals and society in the 21st century. Through digital transformation, we understand the process

of digitization, which simplifies the acquisition of information. Scientists interpret this concept as a way to convert any kind of information into digital form using digital technology. The terms digitalization or digital transformation are used to refer to changes related to the implementation of digital technology (equipping physical objects with electronic and digital sensors, devices, systems, and providing electronic communication between them), covering any area of life, designed to modernize and optimize them to form a cyber-physical space. Digitalization has fundamentally changed education.

At present, China has entered a period of comprehensive promotion of the digital transformation of education. The so-called digital transformation of education does not only refer to the stage when educational activities move from the physical world to the digital world, but also refers to the process of reconstructing teaching and learning through the characteristics of the digital world which means forming a new education ecology of data-empowered teaching and learning [21, p. 17]. In essence, the development of digital education in China has the dual significance of education mode and education concept. The technological improvement of educational environment provides conditions for the transformation of educational methods and changes people's educational ideas. In the digital education environment, what people feel is a fast-flowing, uncertain, huge and complex information space, where there are both the generation of ideas and the reorganization and integration of ideas. Marx believes that social form moves, changes and develops in accordance with its own unique laws. The lower social form must be replaced by the higher social form. The history of human society is the history of the constant change of social form. The development of digital education in China is inseparable from the development of its society. The concept of social openness and conforming to nature determines that its digital education also has similar characteristics.

In September 2020, UNESCO, the International Telecommunication Union and the United Nations Children's Fund jointly issued the "Digital Transformation of Education: School Connectivity, Student Empowerment", focusing on the digital connectivity of education. In the same year, the EU released the Digital Education Action Plan (2021–2027), which identified two strategic priorities for the future at the EU level: "promoting the development of a high-performance digital education ecosystem" and "improving digital skills and capabilities for digital transformation". In August 2021, the Ministry of Education of China approved Shanghai as a pilot area for digital transformation of education.

Marxist epistemology holds that practice is the activity of subjectivity to objectivity, and it is a purposeful activity based on cognition to transform the objective world. French scholar Pierre Bourdieu established a practical theory under the influence of Marxism. Bourdieu believes that practice is logical. He puts forward the concept of "practical logic" in the book "Sense of Practice". He regards practice as a link between subjectivity and objectivity. This link will achieve a coordination between subjectivity and objectivity. Practical logic is a deep-seated generative principle hidden in practical activities. These generative principles integrate ideas, perceptions and behaviors in practical activities, making practical activities possible. Inspired by Bourdieu's social practice theory, Professor Shi Zhongying discusses the logic of educational practice, and believes that "practical logic" is composed of habits, intentions, time and field, and is some "practical schema" formed by long-term accumulation of culture. The practical schema of educational digital transformation is the integration and application of technology and education. The practice of educational digital transformation is mainly to explore and deal with the internal relations of educational practice activities, so the practice of educational digital transformation is the application of digital technology to educational development. We can regard the practical logic of digital transformation of education as a behavioral choice dominated by value intention [1, p. 18].

Education is a future-oriented cause, so the philosophy of educational technology is futuristic orientation. Therefore, the digital transformation of technology-enabled education must be idealism and pragmatism, or pragmatism and idealism. Problem driving is based on pragmatism, and concept leading is rooted in idealism. Therefore, "problem driving + concept leading" is the basic principle of digital transformation of education [5, p. 125].

"Intellectualization" is the core element of social development and will become the dominant way of human survival and practice in the future society [5, P. 123]. In July 2017, the State Council of China issued the Development Plan for the New Generation of Artificial Intelligence, which defined the development goals of the new generation of artificial intelligence, proposed to cultivate high-level artificial intelligence innovation talents and teams, increase the introduction of high-end artificial intelligence talents, and build artificial intelligence disciplines. It can be seen that "education digitalization" has risen to a national strategic height in China, and the transformation of education digitalization is a new requirement for education in building a new ecology of intelligent society. Since the 21st century China has made remarkable achievements in the development of education. The way of education development is undergoing a fundamental

transformation, from the past extension development of quantity growth, scale expansion and space expansion to the connotation development of structural optimization, quality improvement and strength enhancement. The Proposal of the Central Committee of the Communist Party of China on Formulating the Fourteenth Five Year Plan for National Economic and Social Development and the Vision for the Year 2035, adopted at the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China, clarifies the policy orientation and key requirements for “building a high-quality education system” [10]. In 2020 the outbreak of a large-scale epidemic forced the digitization of most public services around the world, and the teaching activities of most countries, organizations and regions in the world were transferred online. Although online education provides a solution for the education system in the face of the impact of the epidemic, the large-scale epidemic has also exposed the vulnerability of the education system, forcing the transformation and development of education and further catalyzing the demand for digital construction of the education system.

Problems facing digital education in China and suggestions for solving them.

1. *Digital divide and proposals for its solution.* Digital education in China, like digital education in the world, faces the problem of the digital divide. In the process of promoting the development of digital education, China has invested heavily in technological advances, and it is now the norm to organise teaching and learning through media, information technology and digitalisation, which has become an important form of digital education. Although the vast majority of areas are covered by the relevant hardware and networks, there is still an imbalance in the allocation of resources. This inevitably leads to differences between the resources possessed by people in different regions due to the unbalanced allocation of information resources. For example, differences in the educational environment between urban and rural areas, and differences in the educational environment between developed and less developed areas. Such differences will lead to social differentiation and even to new forms of socialization. Differences in the use of digital means to acquire knowledge among the people concerned are also caused by the age and educational background of the teachers in the process of technology application [11, p. 11].

Digital technology as a tool is the result of human practice and is distinctly practical and contemporary. On the one hand, it promotes social and human development, but on the other hand it also brings with it the increasingly prominent negative effect of the digital divide. The essence of the digital divide is the gap between the rich and the poor caused by the different degrees of possession and application of information and network technologies between different countries,

regions, industries, enterprises and people along with the process of global digitalisation. Digital technology has both increased the economic wealth of society as a whole and aggravated the economic gap between the rich and the poor; it has both enabled the sharing of cultural and educational resources and brought about the division of culture and education; it has both promoted the harmonious development of society and caused the destruction of social interaction relations. While we enjoy the real benefits brought to us by digital technology, we must also see the digital crisis hidden behind the rapid development of digital technology. Digital technology is created, mastered, controlled and used by man, and is an intermediary in the interaction between man and nature. Digital technology is as unified in nature as man, and is governed by the same natural laws, and it has to serve human purposes and meet the needs of society, while at the same time being subject to social constraints and integration. We must take a firm and objective stance and see clearly and thoroughly that digital technology is both an opportunity and a challenge, and that its benefits must be fully grasped while its disadvantages must be avoided by taking appropriate measures.

2. *The contradiction between the use of media technologies in the educational process and human health and recommendations for overcoming them.* Media technology used in the education process can pose a threat to human health in two ways. One is at the physical level, for example, during the new crown epidemic students in many countries and regions are using online methods to study and spend long periods of time in front of electronic equipment screens, which has a certain impact on students eyesight. Another kind of threat is the psychological level, for example, some information in the online learning environment can distract learners attention, the online learning environment can reduce the frequency of direct contact and face-to-face communication between learners and learners, learners and teachers, poor emotional communication and dependence on digital resources and electronic media for learning, etc. All these can have an impact on learners' psychological health.

Although the technological revolution has become a new engine for educational development, the “logic of technology” sometimes deviates from the original intention, deviates from the predetermined trajectory, breaks free from people's control, and even leads to overt or covert anti-subjective effects [13, p. 122]. The long-term dependence of educational practice on the domination of intelligent technology will lead to behavioural alienation and cognitive degradation of the educational subject. The relationship between the educational subject and the teaching technology is often one of domination and domination, with the teaching technology influencing both the aims pursued by the educational subject and, in turn, the

students and those who use it, with consequences that run counter to the aims of the technology [5, p. 121]. In the vision of technological instrumentalism, the teaching media is an inanimate tool or means of transmitting knowledge, with “effectiveness and efficiency” at its core. The traditional technological efficacy with “effectiveness and efficiency” as the core is a metaphor for a “preformed” view of teaching and learning that only values the efficiency of knowledge transfer [19, p. 20]. The instrumentalist view of education is shackled to the traditional thinking of “knowledge-based”, which separates the goals and values of education. Under such a value orientation, education inevitably produces uniform, machine-like people and deviates from the original purpose of educating people. For example, when artificial intelligence intervenes in the field of education, the hotbed of efficient and convenient technology slowly causes educational subjects to lose their initiative and judgement, breeding inert thinking and conforming to the convenience provided by data algorithms, only to be consumed by the counterproductive effects of intelligent technology.

Therefore, we need to do a better job of integrating and symbioticising technology and people in the education process. For example, in the application of artificial intelligence in education, people should give full play to the mediating role of technology, embedding certain values into teaching technology to guide the learning behaviour of learners, forming a two-way promotion and synergistic development of the “human-technology” relationship. In this way, the teacher’s role as designer and leader of teaching activities not only determines when and how technology enters the classroom, but also guides students learning by designing scripts for the use of technology. The effective solution to avoiding the negative effects of technology is not to abandon the use of technology, but to form a coherent unity between people and technology, so that the two are no longer in opposition or repression. Artificial intelligence and human intelligence should complement each other and form a community of action to maximise the benefits of education and form a balanced and ethically self-contained educational activity [12, p. 37].

Conclusion. In the process of digital development of society and digital transformation of education, there is a logical inevitability to the emergence a number of problems: the problem of the digital divide, digital poverty, digital refugees or the conflict between people and technology and so. One of the main problems is the problem of conflict, integration and coordinated development of the old and new education systems. China’s approach is to launch a digital readiness initiative (i. e. to prepare for the full launch of the digital transformation journey in education in order to meet the basic conditions for transformational change) and

a digital transformation pilot (to mobilise the initiative and resources of schools in pilot areas under the leadership of the government to promote digital transformation in education and accumulate experience). Adequate preparation will then be carried out with sufficient experience gained to reduce the risk of conflict between the traditional education system and the new digital education system.

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Summary

Sun Wei, Dolska O. Digitalization of Education in China: problems, opportunities (Socio-Philosophical analysis). – Article.

Nowadays philosophers actively discuss and analyze the content and nature of high technologies and their influence on social development, because high technologies become the main determinant of essential changes in all spheres of social life, and, in particular, in education. Recent events in the world show how the process of digitalization in education has become global. From international experience, some countries, regions and organisations have established or are in the process of establishing a maturity model or framework for digitalisation in education as a way to consolidate the progress of digitalisation in education and promote the sustainability of practises.

The article discusses the process of digitalization of education in modern China. This is reflected in all

components of the educational process. The authors offer its socio-philosophical analysis in order to identify and analyze the central problem of this process in the conditions of modern Chinese society – the problem of conflict, integration and coordinated development of the old and new education systems. The article also highlights and describes issues such as the digital divide, digital poverty, digital refugees, the problem of conflict between people and technology, etc.

The authors review digital readiness initiatives (i.e., in preparation for the full launch of the digital transformation path in education in order to fulfill the basic conditions for transformational change). It also emphasizes the need for a socio-philosophical analysis of pilot projects to address issues of mobilizing the initiative and resources of universities and schools under the leadership of the state to promote the digital transformation of education in order to solve the problems described above.

Key words: education, development of education in China, high technologies in education, digitalization of education, traditional education system and digital education system.

Анотація

Сунь Вей, Дольська О. О. Цифровізація освіти в Китаї: проблеми, можливості (соціально-філософський аналіз). – Стаття.

Сьогодні філософи активно обговорюють та аналізують зміст і природу високих технологій та їх вплив на суспільний розвиток, адже високі технології стають основною детермінантою суттєвих змін у всіх сферах суспільного життя, і, зокрема, в освіті. Виходячи з міжнародного досвіду, деякі країни, регіони та організації створили або перебувають у процесі створення моделі зрілості чи основи для цифровізації в освіті як способу консолідації прогресу цифровізації в освіті та сприяння сталості практик.

У статті розглядається процес цифровізації освіти у Китаї. Останні події у світі показують, наскільки процес цифровізації в освіті набув глобальних масштабів. Це відбивається усім складових навчального процесу. Автори пропонують його соціально-філософський аналіз, щоб виділити та проаналізувати центральну проблему цього процесу в умовах сучасного китайського суспільства – проблему конфлікту, інтеграції та узгодженого розвитку старої та нової систем освіти. У статті також наголошується та описуються такі проблеми, як цифрова нерівність, цифрова бідність, цифрові біженці, проблема конфлікту між людьми та технологіями тощо.

Автори розглядають ініціативи щодо забезпечення готовності до цифрових технологій (тобто у підготовці до повного запуску шляху цифрової трансформації в освіті, щоб виконати основні умови для трансформаційних змін). Наголошується також на необхідності соціально-філософського аналізу пілотних проєктів для вирішення питань щодо мобілізації ініціативи та ресурсів університетів та шкіл під керівництвом держави щодо просування цифрової трансформації освіти з метою вирішення описаних вище проблем.

Ключові слова: освіта, розвиток освіти в Китаї, високі технології в освіті, цифровізація освіти, система традиційної освіти та система цифрової освіти.