

An Analysis of Education Problems in the Post-pandemic Era of COVID-19

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Abstract: The Corona Virus Disease 2019 has caused an immeasurable impact and damage on most countries and regions in the world; and human beings have been entering the post-pandemic era to co-exist with the Corona Virus Disease 2019. During the process of fighting against the Corona Virus Disease 2019, most countries and regions have adopted such measures to shut down schools, but we still accumulate the relevant experiences of “suspending class and proceeding learning”, such as coordinating the epidemic prevention and control, online lecturing, international cooperation and so on. At the same time, it also shows the maladjustments between teachers and students on the online teaching based on artificial intelligence and the application of artificial intelligence in on-site teaching, all kinds of psychological and social problems caused by this. The root is the closeness and knowledge training mode of institutionalized school education system suitable for industrial society. In the post-pandemic era of COVID-19, we should build up an intelligent education ecological system based on intelligent technology and the socialized education ecosystem with the integration of online education and offline education and multiple interactions between school, society and family.

1. Introduction

Due to the new round of scientific and technological revolution represented by mobile communication, the Internet, big data and intelligent technology and the large-scaled quick development of the industrial revolution triggered by the scientific and technological revolution, the accelerating globalization process and its propagation, diffusion and scouring, the politics, economy, society, culture, education of the current world has been going through a new revolutionary change; and the world is undergoing the moment of uncertainty, the “profound changes unseen in a century”. The new political ecology, economic ecology, social ecology, cultural ecology and educational ecology are under generation and formation. The Corona Virus Disease 2019 (COVID-19) broke out at the end of 2019 has been spreading to all regions around the world at an unprecedented speed to be the first global pandemic in the past of more than 100 years, which causes serious injury and threat to our life. However, the impact of the pandemic has gone far beyond the field of health care, and the impact and destruction to economy, politics, culture, education and ideology could not be evaluated. Under such a special historical node, the epidemic disturbs not only the rhythm of

economic and social development and operation order but also the people's work, study and life rhythm. The multiple games between the technical factor of epidemic governance and social governance and the political factors, globalization and anti-globalization, populism and elitism, closure and opening up, decoupling and cooperation, authority and market, restriction and counteraction, technology and ethics and many other factors enables the characteristics of "volatile", "uncertain", "complex" and "ambiguous" more prominent since the 1990s [1-2]. In view of the education field, in the past efforts and exploration to fight against the Corona Virus Disease 2019, many countries and regions, including China, have accumulated a lot of experience; however, many unprecedented problems are also exposed during the process. For a long time to come, human beings must co-exist with the novel coronavirus. Restoring and rebuilding the education ecology in the post-pandemic era to maintain the vitality of the education system and promote the healthy and sustainable development of the society needs to reflect on the accumulated experience to fight against the Corona Virus Disease 2019; in addition, it should also begin from the realistic problems and sustainable development in the future to have a systemic and comprehensive consideration and planning.

2. Human Being Stepping Into the Post-Pandemic Era to Co-Exist with Novel Coronavirus

When people around the world were ready to embrace the happiness of the new year in 2020 happily, the Corona Virus Disease 2019 broke out and spread to the world rapidly. The disease killed all lives when it arrived, and it also caused unprecedented extreme panic. On March 11, 2020, the WHO officially announced that the Corona Virus Disease 2019 was "a new disease to widely spread among people within the world" and the world entered into the era of "global pandemic" [3]. Since the present time, as of 19:36 Central European time on February 21, 2022, the latest data on the WHO website showed that the number of confirmed cases worldwide had increased by 1597571 to 422188754 compared with the previous day; and the number of deaths increased by 9197 to 58766 [4]. What's more, the disease was still raging in many countries and regions in the world. The Corona Virus Disease 2019 has imposed a systemic, profound and long-lasting serious impact on the economic, political, cultural, social and family life when seriously threatening people's health and life safety, which makes severe public health and safety incidents. Education is one of the fields that has been seriously affected by the Corona Virus Disease 2019 [5]. According to the On the Launch of the Policy Brief on Education and COVID-19 issued by the United Nations in August, the Corona Virus Disease 2019 Pandemic has imposed the worst destruction ever on the education system, and it has affected more than 191 countries and regions around the world to shut down schools and educational institutions. 94% of the world's nearly 1.6 billion students are affected, and the proportion is up to 99% in the country with low and middle income [6]. On April 14, Stephen M. Kissler et al of the School of Public Health at Harvard University had issued the Prediction of SARS-Co V-2 Virus Spread in the Post-pandemic era in Science [7]. The strategies of all countries are to try to adopt the alienation measure to keep the infection rate at a lower level to prevent the medical system from collapsing. Hence, the new coronavirus would co-exist with human beings till August 1, 2025, regardless of whether the vaccine would be studied or not. The World Health Organization released the International Health Regulations (2005) and the emergency committee clarified in the fourth meeting on the Corona Virus Disease 2019 that the risk of Corona Virus Disease 2019 was still very high in the world, and the COVID-19 pandemic would be estimated to last for a long time. The committee raised several countermeasures for the Secretariat and States parties of WHO, including providing a specific and practical guideline to properly cope with the Corona Virus Diseases 2019 so as to reduce the risk of response fatigue under the background of social and economic pressure. These studies reveal an unpleasant fact from

dimensions: the Corona Virus Disease 2019 would be hard to be eliminated in a long time; meanwhile, it also means that sustainable disease prevention would boost the health of human beings. Both the politicians and the public mass face a difficult choice: doing a good job in the effective health protection and maintaining the effective social distance, even implementing such strict measures of “lockdown”, to prevent and cope with the harm of the novel coronavirus; however, the strict “lockdown” would not only suspend or cut the social economy and social life but also causes inconvenience, even survival crisis and other humanitarian disasters, for the real-life and sustainable development as a healthy society. Under the cruel reality that the Corona Virus Disease 2019 has not been solved, there is no doubt that we should face severe risk when having a resumption of work, production, business and school. Each selection needs to be paid at different costs. From the extreme fear and panic and confusion at the beginning of the epidemic to the shutdown of production, home quarantine and strict prevention of disease, from knowing nothing about the Corona Virus Disease 2019 to the scientific popularization of the disease and its prevention, from the forceful prevention of disease to the active prevention, from hoping for the early termination of the pandemic to the awareness of the toughness and the endlessness of the elimination of the disease, human beings have to step into and adjust the post-pandemic era of co-existence with the novel coronavirus; and the production, living and surviving method of human beings have to be changed accordingly. It could be predicted that wearing masks, keeping social distance and other necessary prevention solutions would be a “regular” status for our daily life within a certain period in the future. The unpredictable Corona Virus Disease 2019 would break out in certain regions, seasons and small scale. The epidemic areas would suffer from the “lockdown” again; having a forceful test and quarantine for the people from the epidemic areas with medium or high risk would be a necessary measure, so the ground and air traffic between different areas would be interrupted and personnel exchanges would be suspended. To prevent the interpersonal communication of the virus, some public sites, including schools, would restrict the flow of people or even close it. The on-site public activities, including education teaching, academic discussion and product transaction, would be carried out through a network platform. Human beings not only face a tough situation but also need to build up a healthy and bright future with sustainable development. Children are in a tough situation since it may impose an immeasurable profound impact on their physical and mental development, which would impose a profound impact on the healthy and sustainable development of society in the future.

3. The Exploration in Improving Education Since Fighting Against Corona Virus Disease 2019: Experience, Problems and Attribution

The UNESCO had raised the global initiative, “Features of Education: Learning to Become” in 2020, aiming at reflecting the education and reconsidering how knowledge and learning can shape the future of mankind and the earth. We could feel the uncertainty, complexity and vulnerability of the world, but the dramatic change caused by the globally pandemic disease within a few months is more sudden and unexpected than any expectation. Under the normalization of the epidemic, there should be conclusion and reflection on how education responds to the educational crisis caused by environmental change, what beneficial experiences and what problems are exposed in these countermeasures.

3.1. The basic experience to cope with the Corona Virus Disease 2019 in the field of education

In view of the spread of the Corona Virus Disease 2019, most countries in the world close the schools to restrain the spread of the epidemic. The school closure is an important measure of non-drug intervention to protect the public health and to cope with the transmission and spread of

epidemic diseases, including closing dormitories, suspending the on-site classroom teaching, class shutdown, dismissal or evacuation of faculties and students. The sudden outbreak of the Corona Virus Disease 2019 has triggered the global education crisis and forced governments, schools and teachers of all countries to take the initiative to intensify educational reform. It is found by the OECD survey that, besides forcefully closing the national or regional schools, many countries also undertake some emergency policies and measures of education to cope with the Corona Virus Disease 2019, such as releasing the information on virus epidemic prevention, planning the online education to ensure the continuity of education and teaching, enhancing the training for headmasters, teachers, parents and volunteers, so as to change the ecology of education, teaching and organization management from the root. As a subset of distance education, online learning always focuses on providing an educational experience with more flexible time and space than school education with different types of technology. During the prevention and control of the epidemic, the closed schools in many countries have been switched to online courses so as to accelerate the process of educational informatization and modernization. Jean-Michel Blanquer, the minister of national education of France, states that we must ensure the “ceaseless teaching” during the shutdown of class with the objective of no students falling behind in the special period. China is the first country to implement the “suspending classroom and proceeding teaching, suspending class and proceeding learning” to cope with the Corona Virus Disease 2019, which provides valuable experience for fighting against the epidemic in the field of global education. The Ministry of Education makes arrangements of the work for the “suspending class and proceeding learning” during the extension period of primary and secondary schools with the cooperation of the Ministry of Industry and Information Technology based on formulating the working scheme of the “suspending class and proceeding learning” during the extension period of primary and secondary schools from the national perspective. Fighting against Corona Virus Disease 2019 with online education in different forms brings a profound shock and impact on school education; and the mass of teachers are presented to the frontier of intelligent technology application to prepare and record the lessons with intelligent technology. During the repeat lecturing practices with all kinds of network platforms, the wish and level of teachers to improve the teaching with intelligent technology has been greatly improved. At the same time, such large-scaled online education practice provides unprecedented experimental opportunities for schools to implement intelligent education; and it would build up a coordination mechanism between government, enterprises and schools in the perspectives of integrating educational resources, live broadcasting and recording of courses, network and information technology guarantee, student organization management and mental health education. During the epidemic, only the education resource export of the government could not satisfy such a tremendous education supply, so the government departments need to coordinate with local governments, universities, primary and secondary schools and enterprises to ensure the smooth running of the network infrastructure. In May 2020, UNESCO released the Flexible Teaching Guide during Campus Closure: How to Ensure High-Quality Higher Education with an emphasis on flexible teaching, which means the practice and important value of learner-centered teaching strategy during the epidemic. Along with the recovery in some regions, a series of Framework of Reopening School and others have been released to provide information for the decision-making process of reopening schools; and it also provides 9 public action propositions for global education in the post-pandemic era. It is suggested that all countries update and rebuild education based on adhering to the core principles and holding on to the existing advantages; and it also calls for enhancing global solidarity and narrowing the gap of education in the world. Similarly, the OECD calls on leaders of the education sector of all countries to enhance the international cooperation and adopt positive coping strategies, trying to maximally relieve the shock of the epidemic on the education system and reduce the negative impact on the students’ learning; and it

provides professional support for teachers and encourages teachers to go out of the comfort zone and spare no effort to keep shouldering the responsibility of teaching and cultivation. To reach the objectives mentioned above, the OECD formulates a survey framework and releases some reports one by one, including the Response of Education on the Novel Coronavirus: Hugging the Digital Learning and Online Coordination, How Does the Epidemic Affect Students with Special Educational Needs, so as to lead all countries to formulate the education emergency policy to cope with the Corona Virus Disease 2019. It also suggests relevant suggestions on satisfying the demand of special students and how to create a new model of education and turn “danger” into “opportunity”.

3.2. The attribution analysis of education coping with the problems triggered by the Corona Virus Disease 2019

In February 2020, WHO, UNICEF and the Lancet Commission jointly released the major report, A future for the world’s children, which analyzes the threats faced by children: climate change and related crises such as poverty, migration and malnutrition; commercial marketing of hazardous substances; and from unsafe roads and dilapidated buildings to inadequate education and social protection. Many threats aggravated by the pandemic of COVID-19 have threatened the improvement of children’s welling. In addition, the epidemic has been triggering the global economic crisis and the children would be the main victims. During the epidemic, the governments of all countries have reopened schools through multiple approaches to achieve the “suspending class and proceeding learning” during the epidemic. At the same time, the collision of online education and the existing teaching mode would arouse many problems of unbalanced education. In the end, what it all boils down to is the domestic educational informatization level and the interactive impact of society and education.

4. Outlook for post-COVID-19 reconstruction

In the future time of the post-pandemic era, we expect that we could dispel the haze of the Corona Virus Disease 2019 as soon as possible through unity, cooperation and joint efforts with the help of science and intelligence, so as to win the decisive victory of the disease of the world so that we could go back to the normal family life, school life and social life as soon as possible. Education is the business to face the future, so we would strive to create a safe, intelligent and sustainable education ecology for children and the young generation to facilitate healthy growth for the current healthy life and sustainable development in the future.

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