Online Education during COVID-19 Pandemic, A Comparison between China and America

Bing Li[1],[†], Rantong Zhong[2],[a],[*],[†]

[1]Beijing luhe international academy, tongzhou street, Beijing, China
[2]Faculty of Humanities and Social Sciences, The University of Queensland, St Lucia QLD 4072, Australia.
a. rantong.zhong@uqconnect.edu.au
*corresponding author
[†]Those authors contributed equally.

Abstract: This paper reviews the problems and development of the Chinese education system during the COVID-19. Also, it reviews the problems of American educational system in detail. The analysis of the "changes" and "unchanges" in education both in China and the United States in COVID-19 period is one of the important ways to understand the current direction of international education and potential development trends. This paper also compares American education system and Chinese education system during the pandemic, with analysing both the same points-online study modes-and difference-future development points. Chinese government has imposed strict measures to contain the spread of the Covid-19 pandemic.

Keywords: Chinese education system, American education system, problems, comparison

1. Introduction

The global situation in the education sector has grown increasingly difficult since the onset of the COVID-19 pandemic, and educational exchange activities have been significantly impacted in many different nations. The current state of the educational systems in China and the US, in light of the epidemic is characteristic of global educational exchanges. This paper have chosen this subject because it is one of the key ways to understand the current direction of international education and potential development trends. The analysis of the "changes" and "unchanges" in education in China and the United States in COVID-19 is one of the important ways to do this. This paper reviews these problems and trends in the main body part. The COVID-19 outbreak, which began in late 2019, rapidly evolved into a national emergency in China. In response to the outbreak, the Chinese government initiated a series of emergency management mechanisms including social distancing—for example, the lockdown of cities and shutting down schools [1-4].

2. Problems of the Chinese Education System

2.1. Poor Information Infrastructure in Rural and Remote Areas

Owing to the inadequacy of infrastructure construction, it is facing challenges to develop online education in remote and rural areas, where the online study is not available to most students as most of them don't have a laptop or cellphone. The platform's normal service capacity is substantially exceeded by large-scale concurrent access. Some issues, such as sluggish, often lost connections which have a negative impact on the learning process. Online instruction may be difficult in rural regions due to patchy internet access and erratic network connections. Some children attend schools in isolated rural locations with erratic signal strength or challenging financial circumstances at home. They struggle with issues including a lack of electronic gadgets, subpar performance, and a meager wifi network at home, which prevents electronic devices from carrying the necessary instructional software, a lack of mobile phone traffic, and improper attendance in class.

2.2. Unequal Distribution of Duality Educational Resources and Uneven Deployment of Talented Teachers

As long as China's educational disparity persists, isolated rural areas will serve as a "pain point" for online education to get through the critical phase of Covid-19. Educational resources of high quality are hardly accessible to children are not enough qualified instructors and few high-quality educational resources available in rural regions. The cross-section of disciplines also demonstrates the unequal distribution of teacher resources. Some schools only taught the core topics throughout the outbreak, while others neglected or undertaught disciplines like music, art, and physical education.

2.3. Problems in Traditional Teaching Models to an Online Education Environment

Some teachers lack the expertise to fully incorporate information technology into the curriculum and instruction due to their lack of familiarity with online learning. During the extraordinary period of epidemic prevention and control, online education seems to make up for the lack of classroom teaching. Online education meets the needs of students and achieves high quality resource sharing.

 As a result, teachers give less attention to developing the learning environment, creating learning aids, and planning and executing instructional activities and instead concentrate more on the "teaching" itself. Teachers frequently mimic classroom instruction strategies and focus on teaching. Due to the physical separation of instructors and students involved in online learning activities against the background of the Covid-19, the educational process, including timely assessment and feedback together with teaching-student interaction, is scarcely controllable to teachers. It was challenging for teachers to support pupils who lacked motivation while still monitoring and ensuring the efficacy of student learning. What's more, several institutions have begun utilizing online instruction. Some teachers reject online learning or find it uncomfortable. Teachers and students find it challenging to engage and communicate with one another when learning online. Despite the fact that "Internet+" technology has made it possible for online education to be personalized, during the widespread outbreak, this was not the case. Students had a negative perception of their online learning experience, teachers continued to function as the primary subject, and students were less actively or passively participated in learning exchanges. First, there was little sense of engagement between teachers and students; second, teachers did not provide interactive activities. Students did not actively engage in exchanges, and teachers did not urge them to do so. Students and learning cont. It is necessary to enhance teachers' capacity to utilize information technology to facilitate their online education. For the purpose of performing online teaching supported by IT without barriers, teachers need the skills to operate the available online teaching software. They also lack efficient online teaching practices to

maintain classroom discipline. There is a lack of knowledge among students about accessing internet resources for self-directed learning and problem solving.

2.4. The Necessity of Constructing Adequate IT Infrastructure to Develop Nationwide Online Education and Ensure Educational Equity

Against the background of the Covid-2019, China's online education has witnessed a large-scale growth, with the number of online educational institutions as well as schools and teaching faculties engaged in online education. But in remote rural regions, there is a severe lack of IT infrastructure, which has led to the unfairness of online education based on IT. For this reason, it is urgent to help remote rural regions construct a complete online educational system with the required information infrastructure, including the network and mobile phones well equipped so that the fairness of the starting point of education can be ensured and that every child has access to all resources of online education. With Covid-19 still hanging over the nation, online education is being, and the personnel involved in it are all exerting their abilities to make students of various kinds attracted to their online learning activities for better quality. But regretfully, problems and deficiencies still exist with online teaching faculties' capacities because they are not well adapted to the online teaching required skills to their course teaching manners with information technology. With students' varied learning manners considered, along with their cognitive features into account, online teaching faculties are supposed to update their teaching modes. Policy clear requirements, local education departments and schools should adjust measures to local conditions for organizing teachers to carry out online teaching, clear teaching contents, course arrangement, teaching organization form, grasp the right amount of teaching contents.

Furthermore, their capability online course teaching activities is also supposed to get enhanced so that students are willing to engage themselves in their online lessons. Additionally, online teaching faculties should also possess the capability of making accurate as well as personalized assessments of students. In a word, the advantages of "Internet +" as well as "artificial intelligence +" should be put into full play for the best results of online education. Large-scale socialized collaboration in online education when the Covid-19 is still lingering around is a strategy in the emergency period. Nevertheless, without a complete system to regulate the collaboration of institutions and online teaching personnel, numerous issues have emerged with online education. The typical ones consist distribution, online educational institutions' vicious competitions as well as network insecurity. Thereby, a healthy and informational educational environment has to be established right away. Offering educational resources and services in a coordinated manner through the socialization of create a platform enormous enough for "Internet +Education. Governance mechanisms also need reforming by laying down stipulations to regulate socialized collaborative online education.

2.5. The Necessity of Constructing a Favorable Informational Education Environment and Enhancing Educational Governance Capacity by Way of Social Collaboration in Educational Resources

The implementation of large-scale socialized collaboration in online education when the Covid-19 is still lingering around is a strategy in an emergency. Nevertheless, without a complete system to regulate the collaboration of institutions and online teaching personnel, numerous issues have emerged with online education. The typical ones labour distribution, online educational institutions' vicious as well as network insecurity. Thereby, a healthy and informational, educational environment has to be established right away. Offering educational resources and services in a coordinated manner through the socialization of create a platform enormous enough for which refers to conducting online

education through the Internet. Governance mechanisms also need reforming by laying down stipulations to regulate socialized collaborative online education.

In pandemic, China's online education is witnessing remarkable growth. Nevertheless, the unfavorable situation of inadequate infrastructure for information-based online education in distant rural areas was exposed also quite serious. Hence, it is urgent to help remote rural regions construct a complete online educational system with the required IT infrastructure including the network and mobile phones well equipped, which not only ensures that the starting point of education supported by information technology is fair but also guarantees that every child can use digital educational resources to achieve educational equality.

3. The Necessity of Teaching

3.1. The Necessity of Lifting Teaching Faculties' Capabilities to Reach Online Education of High Quality

With Covid-19 still hanging over nation, teaching faculties involved in online education are all exerting their abilities to make students of various characteristics attracted to their online learning activities for better quality. But regretfully, problems and deficiencies still exist with online teaching faculties' capacities. Firstly, online teaching faculties are supposed to lift their teaching capabilities so that they can integrate technology and class teaching. Secondly, teachers should innovate online teaching models that are in line with the online educational situation and in accordance with students' varied learning manners and distinct cognitive features. Additionally, online teaching faculties should also lift their capability of making accurate as well as personalized assessments of students. The advantages of "Internet +" as well as "artificial intelligence +" should be put into full play by teaching faculties for the best results of online education with new perspectives and methods.

3.2. Achieving the Collaboration of Educational Resources Needs Educational Informatization and Enhanced Educational Capacity

Because of Covid-19, large-scale social cooperation of online education is an emergency measure. Hence, a education environment is in urgent need of being constructed. The informational education pattern of Internet serve as a tool for spreading high-class educational resources and services nationwide. At the same time, relevant departments should also pay attention to reforming the educational system，setting regulations for the collaboration of educational resources and services, and guiding people to participate in online education.

4. The Impact of Online Education

4.1 The Impact on Psychological Issues of Online Education

The ability to adjust to the environment is the main factor contributing to psychological issues. Firstly, China implements closed and semi-closed management modes for campus epidemic prevention and control [5]. As colleges and universities resume classes and students return to school, some experience culture shock, oppression, and increased surveillance in the previous campus setting. As a result, they are less able to adjust psychologically, which impacts their academic performance and daily life at school. Second, university students were cut off from the outside world during the epidemic because they spent less time leaving campus [5]. Students stayed in school for a long time. Students' social lives are becoming more isolated due to the closed-off university environment. They developed various physical and psychological maladjustments to the outside environment outside of the campus due to the reduction in daily social activities such as shopping and social practice. Sudden

changes in the student learning environment, educational quality, and other factors provide students with unique problems with their mental health. Students' stress and poor mental health are also impacted by the lack of options for internships, on-campus employment, and other jobs.

4.2 The Impact of Online Education's Declining Teaching Quality

The disadvantages of online courses have led to a significant reduction in the quality of teaching for students. Online learning has progressively begun to take off as a new educational resource in recent years. Because of the new crown epidemic, all of China's leading colleges have started implementing online learning for their pupils during Covid-19. This study found that over 60% (62.75%) of respondents felt that online learning was not as effective as face-to-face teaching. A higher proportion of students unfamiliar with online learning platforms said that online learning was not as effective as face-to-face teaching [6]. This demonstrates that pupils are not adjusting to the new teaching method well and that online learning is less effective than offline learning. Students appear to have difficulty studying because the circumstance is not up to the previous effect.

At the same time, the majority believed that the online classes were quiet and lacked the same atmosphere as the offline classes. There is comparatively little interaction and practice, and most pupils are not as engaged as they would be in a classroom setting. Moreover, beyond addressing current requirements, the challenges with online education have presented a chance to redesign the educational system, increase remote learning, and rethink education itself. Taking full advantage of this chance makes online education more inventive, resilient, and open. In the US, Massive declines in student academic performance have been caused by online courses [7]. The research shows that because of online courses, teachers and students are required to use websites they have never used before. As a result, teachers must become proficient with learning tools, monitor student usage, and guarantee that both students and teachers have access to devices that can support their online courses. Students must learn to use the new platforms and devices and adapt to the new online class style. Besides, American traditional classes are a basic representation of practical learning education. The amount of practical education done nowadays has significantly decreased due to online schooling. In this approach, rich, hands-on courses are transformed into dry, theoretical lectures, which hinders students' ability to interact practically with the material. According to statistics, Nearly 60% (59.68%) of respondents expressed concern about the "stability of the internet connection," just over half (49.55%) said there was no "classroom interaction," and nearly forty percent (46.33%) expressed concern about the "lack of communication and interaction with the teacher after class." Due to a lack of "after-class communication and involvement with teachers," (46.33%) was the cause [7].

5. Wealth-based Differences in Online Education

Online education exacerbates educational inequity in terms of outcomes, and the capacity to deploy learning facilities has widened the discrepancy in educational quality between rich and poor area [8]. They are furthering the separation between affluent and poor neighborhoods even more quickly. While many people believe that rural children's prospects will no longer be impacted by their location and access to educational resources due to the online learning, this trend hastens the wealth gap between the rich and the poor. Online education is a classic example of the Knowledge Gap. The divide between social classes will expand as more and more knowledge is made available by online education and is accessed more quickly by people with greater socioeconomic standing. There is reportedly a significant economic divide between eastern, central, and western China [9]. Some rural schools in the most underdeveloped regions of western China reportedly lacked the necessary hardware and network infrastructure to offer online instruction during COVID-19. In the US, hundreds of public schools in the United States have reportedly closed permanently due to covid 19.

They could not afford and pay for the coverage of the brand-new education model and the large number of online classroom equipment required, and even more so, because countless staff members have been laid off. The underlying reasons are tens of thousands more students whose education has had to be disrupted. Stalled academic progress means more effort to make up for what they missed when they return to school, which is not easy. Similarly, there are students whose studies are interrupted because their families lose their jobs or go bankrupt due to the epidemic, and they cannot continue to afford school fees. The gap between rich and poor in education often directly affects the gap between rich and poor in the community [10].

6. Conclusion

In conclusion, it is summarized that COVID-19 has fueled the expansion of online learning. Whether in China or the US, online education impacts traditional education and encourages innovation in learning, teaching, school administration, and other areas. The system's perfection, the challenges of technological use, and the restrictions imposed by a single educational model were all brought to light simultaneously as they showed the current issues with online education. These flaws have had a variety of detrimental repercussions on pupils, including increased physical and mental health issues, along with a decline in academic performance. Moreover, the implementation of extensive online education has shown that it is impossible to address the issue of equitable distribution of teaching resources. The disparity between wealthy and impoverished communities in online education heightens educational inequality and distinction.

Nevertheless, in this unique period when there is such a massive demand for online education, it is precisely because these issues have been brought to light that worldwide online education is fast improving and encouraging further development. Covid-19 will expose all the flaws in present online education rather than just serving as a platform for the growth of the online learning industry. Both online learning's benefits and the value of traditional education cannot be denied. Only by combining the benefits, fixing the drawbacks, and reforming the educational system in two ways. Take advantage of the scientific and technological age by clearly articulating the benefits of information communication.

References

[1] Qiuhan, L., Afzaal, M., Alaudan, R., & Younas, M. (2020). COVID 19 pandemic and online education in Hong Kong: An exploratory study. International Journal on Emerging Technologies, 11(5), 411-418.

[2] McAleer, M. (2020). Prevention is better than the cure: Risk management of COVID-19. Journal of Risk and Financial Management, 13(3), 46.

[3] Cen, X., Sun, D., Rong, M., Fekete, G., Baker, J. S., Song, Y., & Gu, Y. (2020). The online education mode and reopening plans for Chinese schools during the COVID-19 pandemic: a mini review. Frontiers in Public Health, 8, 566316.

[4] Xue, E., Li, J., Li, T., & Shang, W. (2021). China's education response to COVID-19: A perspective of policy analysis. Educational Philosophy and Theory, 53(9), 881-893.

[5] Lee, J., Solomon, M., Stead, T. et al. Impact of COVID-19 on the mental health of US college students. BMC Psychol 9, 95 (2021). https://doi.org/10.1186/s40359-021-00598-3

[6] LU study reveals over 60% of Hong Kong university students have found online learning not as effective as face-to-face teaching during COVID-19 pandemic. Ln.edu.hk. (2022). Retrieved 19 September 2022, from https://ln.edu.hk/research-and-impact/research-press-conferences/lu-study-reveals-over-60-of-hong-kong-university-students-have-found-online-learning-not-as-effective-as-face-to-face-teaching-during-covid-19-pandemic.

[7] Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal Of Educational Technology Systems, 49(1), 5-22. https://doi.org/10.1177/0047239520934018

[8] Kantamneni, N. (2020). The impact of the COVID-19 pandemic on marginalized populations in the United States: A research agenda. Journal Of Vocational Behavior, 119, 103439. https://doi.org/10.1016/j.jvb.2020.103439

[9]   Chen T, Peng L, Jing B, Wu C, Yang J, Cong G. The Impact of the COVID-19 Pandemic on User Experience with Online Education Platforms in China. Sustainability. 2020; 12(18):7329. https://doi.org/10.3390/su12187329

[10]   [10] Zhao B, Xi X (2022) Economic effects of conversion from county (or county-level city) to. municipal district in China. PLoS ONE 17(9): e0272267. https://doi.org/10.1371/journal.pone.0272267