



Impacts of the Spanish Flu and COVID-19 on Higher Education

Tong Zhu

School of Education & Social Transformation, University of California Los Angeles, Los Angeles, California, 90024, United State

tzhu0206@g.ucla.edu

Abstract. The Spanish Flu and COVID-19 pandemics caused both positive and negative impacts on higher education. They caused the closure of higher education campuses and difficulties in several aspects like the difficulty of learning, financial difficulty, and so on. However, higher education's response brought positive impacts, such as the development of remote teaching and learning, and better future adaptability. The objective of this paper is to present the backgrounds of the Spanish Flu and COVID-19 pandemics and analyze how institutions reacted to them. It also investigates the influence of the Spanish Flu and COVID-19 on higher education and make comparisons between impacts on higher education. At last, it offers suggestions on how higher education institutions can more efficiently on facing future emergency situations like pandemics. Although the pandemic brought challenges, higher education is innovating and adapting from the pandemic to establish a more flexible and adaptable system to ensure students' and staff's safety.

Keywords: Spanish Flu, COVID-19, Pandemic, Higher education

1 Introduction

The world has witnessed several pandemics, including the Spanish Flu and COVID-19. The outbreak of the influenza virus in 1918 caused a pandemic of unprecedented proportions, which remains one of the most catastrophic events in modern history with its exact origins still unknown. The concurrent occurrence with World War One provided an ideal environment for the virus to proliferate globally thanks to frequent international trade and shipping activities. According to a report found in *The Influenzaemic of 1918*, the Spanish Flu pandemic claimed a mortality rate that was significantly higher than that of the Black Death over four years, affecting almost one-third of the world's population in just one year^[1].

In contrast, COVID-19 was initially identified in Wuhan, China, yet its source remains unclear^[2]. There are reports suggesting that it may have originated from bats or exposure from certain biological facilities. It is similar to the SARS virus that surfaced in China in 2002 and resulted in roughly 800 fatalities. This generated panic in China, prompting the government to enforce quarantine regulations such as the closure of

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schools and businesses. Once declared a global pandemic, all nations were gripped with fear. Unfortunately, to date, COVID-19 has caused the deaths of almost 6.81 million people ^[3].

Both pandemics had severe impacts on various sectors, including higher education. The Spanish Flu led to a technological start in the education field. Similarly, The traditional teaching and learning methods of higher education institutions experienced a transformation because of impacts of COVID-19. Higher education records indicate that the recent Coronavirus pandemic and the infamous Spanish Flu outbreak of 1918 had significant impacts on higher education institutions. This paper seeks to introduce the background of these two pandemics and examine how institutions responded to them. It will also explore the impact of the Spanish Flu and COVID-19 on higher education, how higher education institutions can better solve emergency events like pandemics, and compare and contrast their impacts on higher education.

2 The Spanish Flu

2.1 Response of Higher Education Institutions to the 1918 Flu

During the onset of the 1918 Flu outbreak, higher education institutions had varying responses. While some slowly closed down public places like churches, theaters, and lecture halls, others immediately ceased school activities until the epidemic ended. In the article by Thomas and Foster, the authors document the different measures taken by these institutions ^[4]. Several institutions, such as the State College of Washington in Pullman, had the impression of being separated from the urban hubs and promptly shut down their educational establishments., while others like the University of Illinois did not respond promptly enough and kept their doors open for the entire pandemic duration - from 1918 to 1920. The university's principal instead chose to increase hospital capacity and notify the families of infected students. Other institutions such as Yale and the University of Michigan chose to delay activities and meetings as a precautionary measure to minimize risks to students and educators. Michigan State imposed restrictions on public places within the state as well as on travelers from other states. Even graduation ceremonies and orientation events were canceled. Unfortunately, the University of North Carolina was not exempt from the devastating effects of the Spanish Flu outbreak. Despite President Edward Kidder Graham's arduous efforts to guarantee student safety and maintain communication with guardians, he tragically fell victim to the virus himself on October 26, 1918, after having already lost his wife two years prior. Subsequently, Acting President Marvin Hendrix Stacy was appointed to continue President Graham's responsibilities, yet he too met an untimely demise due to the severe strain of influenza.

2.2 The Impact of the 1918 Flu on Higher Education

During the outbreak of the 1918 flu, the lives of students on campuses were drastically affected, leading to changes in their curriculums and teaching methods. Harvard Magazine reported that Harvard University took measures to reduce the density of students

on campus, such as canceling large lecture courses that had over 50 students and transferring all students to share rooms with only one other student to comply with strict quarantine measures to reduce density levels ^[5]. As a leading institution of higher education, Radcliffe College followed in the footsteps of Harvard, and the institution's efforts successfully protected students from the flu. Comparing the death toll between higher education institutions and the rest of Boston's population, the institutions' safety measures proved effective, with only six deaths reported at Harvard and zero deaths at Radcliffe College. The Spanish Flu greatly impacted students' college lives, affecting not only their academic life but also their daily life.

Additionally, there was a notable development in online remote education during this time. As traditional face-to-face lectures were no longer possible, Pennsylvania State College became the first institution in 1922 to utilize radio as a method of distance education ^[6]. Following their lead, the University of Iowa developed distance education, pioneering television lectures as a teaching method according to data from Florida National University.

3 COVID-19.

3.1 Response of Higher Education Institutions to the 1918 Flu

The COVID-19 Pandemic has emerged as one of the most severe pandemics globally. In 2020, a majority of higher education institutions in the United States rapidly responded to COVID-19 by drawing from past pandemic experiences. According to data from State Education Policies and Legislation, at the onset of the 2020 spring semester, when coronavirus was spreading rapidly, over 1300 colleges and universities were closed ^[7].

Higher education institutions, such as UCLA, took significant measures to tackle the virus ^[8]. Initially, the school encouraged students and faculty members to wear masks and provided them with hand washing instructions and other health-related information. On March 10th, 2020, UCLA admission announced a suspension of in-person courses, transitioning to an online remote model from home. To support students facing anxiety, UCLA also provided remote mental health resources.

Similarly, private higher education institutions, including New York University (NYU), responded quickly to limit the spread of COVID-19. According to NYU COVID-19 Information, all NYU branch schools worldwide changed their teaching methodology to distance education on the internet ^[9]. NYU's branch located in Shanghai, China, was among the first institutions to take measures, closing its campus and announcing that all lectures and coursework would be conducted remotely.

In addition, while the exact source of the Coronavirus outbreak remains unknown, it is widely believed to have originated in the Wuhan province of China. In response to the appearance of COVID-19 in December 2019, the Chinese government acted quickly and implemented an emergency policy known as "Suspending Classes without Stopping Learning." The policy compelled higher education institutions to suspend all on-campus activities and transition to online learning models. With China being a one-party system, individuals were required to comply with the government's directives,

resulting in a highly efficient containment of the virus spread. According to Yang's research, prestigious Chinese higher education institutions such as Zhejiang University were able to successfully convert 5000 courses to distance learning formats in just two weeks in order to ensure that students' academic progress remained unaffected ^[10].

3.2 The Impacts of COVID-19 on Higher Education

The teaching method in higher education has undergone significant changes due to COVID-19. Prior to the pandemic, online courses were relatively scarce, but higher education institutions have since implemented several hybrids or fully online courses for students. Although this new teaching method has benefitted students in some ways, there have also been negative impacts on higher education. Studies show that online learning has made students feel safer from the virus, and academic performance has not been adversely affected. Furthermore, distance learning has provided students with a range of study tools that have helped to decrease anxiety. On the other hand, enrollment rates in higher education have been declining since the outbreak of COVID-19. Based on the data from the National Student Clearinghouse Research Center, enrollment rates at both public and private institutions have decreased since 2020, particularly among undergraduate students have already declined by 4.2 % ^[11]. This has created a negative loop as public institutions receive funding based on student population size. Additionally, the closure of parking lots and other amenities has impacted institutions' income streams, which has made tuition fees a larger financial burden for many students.

In relation to the issue of student affordability, low-income students on campus are seeing a noteworthy decrease in available job opportunities, resulting in difficulty covering tuition fees for many higher education students. Nonetheless, the federal government has implemented measures to ease this predicament by bestowing roughly \$1800 each year to around 700,000 undergraduate students. This funding allows them to pay their tuition fees. Moreover, the government has revised student loan policies to promote greater flexibility.

However, the impact of COVID-19 on higher education has been far-reaching, especially in terms of the quality of education received by students. The academic environment has also been significantly impacted. As evidenced by a recent article by Singh, Kumar, A., and Arya, A., many exams have been canceled due to the pandemic and the shift to distance education systems. Online exams pose a particular challenge when it comes to supervising students and cheating on assignments and tests have become more widespread ^[12]. Even standardized tests such as GRE and SAT have been affected by such cheating, making the overall atmosphere in higher education increasingly worse.

4 Comparison of Responses and Impacts of Higher Education between Spanish Flu and COVID

The 1918 influenza outbreak and the current COVID-19 pandemic are two significant occurrences that impacted higher education institutions. In response to the 1918 flu

outbreak, universities had different approaches, with some institutions like the State College of Washington and Yale acting quickly by shutting schools and imposing restrictions on public places to reduce the risk of infection to students and educators. Other institutions, such as the University of Illinois, decided to keep their premises open while increasing their hospital capacity to deal with infected students. Unfortunately, university presidents also died of the virus during that time.

In 2020, the USA higher education institutions responded promptly to COVID-19 by drawing from prior pandemic experiences. Over 1,300 colleges and universities closed their doors at the onset of the pandemic, while some institutions like UCLA and NYU quickly transitioned to remote learning models to contain the spread of COVID-19. Additionally, the Chinese government implemented an emergency policy for the institutions to protect staff and students, called "Suspending Classes without Stopping Learning," which required higher education institutions to shift to online learning models to limit the spread of COVID-19. Renowned Chinese higher education institutions like Zhejiang University modified thousands of courses into a distance education format within two weeks to ensure that students' academic life remained uninterrupted.

4.1 Similarities

Comparing the impacts of pandemics on higher education institutions between two pandemics. Both impacts stress the significant changes that have taken place in teaching methods and curricula due to these pandemics. A similarity between the two impacts is their recognition of the success of remote education during these difficult times. The 1918 flu pandemic was responsible for the development of distance education through radio and television, while the COVID-19 pandemic has facilitated the implementation of online and hybrid courses. Both impacts suggest that remote education has provided a means for students to keep up with their studies while decreasing the risk of infection.

4.2 Differences

However, there are also differences between the two impacts. The two impacts provide a comparison of the effects of pandemics on higher education during different eras. Specifically, the impact of COVID-19 on higher education brings the transition to remote learning and a drop in enrollment rates. The impacts of the Spanish Flu show how the Spanish Flu affected students' lives and resulted in changes to their curricula and teaching methods. These impacts differ in focus, as the impacts of COVID-19 emphasize the shift to online learning and enrollment declines, while the impacts of Spanish Flu center on the safety measures put in place by higher education institutions during the Spanish Flu pandemic and the introduction of remote education through radio and television lectures. Nonetheless, both impacts illustrate how pandemics have significantly impacted higher education, underlining the need to adapt to new approaches in teaching and safety measures to safeguard the well-being of students. In comparing the response of higher education between the COVID-19 pandemic and the 1918 Flu, it was observed that the response to the former was more effective than the latter. During the 1918 Flu, higher education struggled to respond uniformly, resulting in significant

loss of life. Although some institutions implemented preventive measures, these measures were insufficient in curbing the spread of the flu. However, the 1918 Flu was marred by technological limitations which prevented higher institutions from taking decisive action to contain the pandemic. Therefore, it can be said that the response of higher education to the COVID-19 pandemic was an improvement in its handling of the 1918 Flu.

5 Actions Higher Education do in the Future

In order for higher education to respond better to future pandemics, it is important first to identify the key issues. Previous research identified affordability, cheating, and declining enrolments as key issues deserving of attention. Addressing affordability is a responsibility that falls primarily on the shoulders of the federal government, as it is closely linked to enrollment issues. The government can provide more funding to students and their families, or provide additional funding to institutions in order to prevent tuition hikes and provide more scholarships.

Cheating in higher education remains a complex issue, particularly in the current era of technology. Online exams are often supervised by instructors through applications such as Zoom or lack any supervision at all. In standardized tests, monitoring websites like ProctorU are utilized, however, students may circumvent these measures by hiring substitutes to take their tests on their behalf. In order to ensure a heightened level of monitoring, it is necessary for students to utilize not only their computers to verify their identity through the camera feature, but also an additional device to monitor their workspace.

6 Conclusion

In conclusion, after exploring the impacts of the Spanish flu and COVID-19 pandemic on higher education. It is evident that both pandemics cause significant impacts on the system, but the comparison of both responses is clear that the higher education system is becoming more prepared and adaptable when similar emergency situations arise. Although the pandemics have brought numerous challenges to higher education and students, such as technical difficulties, financial issues, health concerns, etc, the higher education system and students are getting more and more prepared for future events. For the future of higher education, the system should be gaining experience from the pandemics to make progress and innovation in the system to establish a more adaptable and flexible system in the future.

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