THE TRANSFORMATION OF HIGHER EDUCATION DURING THE PANDEMIC

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Abstract

The novel human coronavirus disease COVID-19 has become the fifth documented pandemic since the 1918 flu pandemic. COVID-19 was first reported in Wuhan, China, and subsequently spread worldwide. The coronavirus was officially named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the International Committee on Taxonomy of Viruses based on phylogenetic analysis. SARS-CoV-2 is believed to be a spillover of an animal coronavirus and later adapted the ability of human-to-human transmission.

In this article we will discuss the impact of the Covid-19 pandemic on higher education, its transformation in the current conditions.The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges. Most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of COVID-19. In response to the closure of schools and universities, UNESCO recommended the use of distance learning programs and open educational applications and platforms that teachers can use to reach students remotely and limit educational interruption.

According to the author, the education system no longer has time to reconstruct and adapt to the needs of the 21st century. The teaching model where the teacher is the only source of knowledge is outdated. Our children are accustomed to cramming and do not have the skills of independent learning. A teacher in the 21st century should be a mediator, an expert who follows the right direction and helps the student find a way to solve the problem, and the student learns the necessary material.

Keywords: pandemic COVID-19, quarantine, higher education, system transformation, distance learning.

Introduction

Epidemics and pandemics are frequent and familiar phenomena for science. They occurred in different eras, regardless of the socio-economic situation of countries. The first epidemic Justinian's plague, according to historical data, occurred in the middle

of the VI century in Ethiopia or Egypt. Justinian's plague killed almost 50 million people.

As opportunities for trade increased in human history, human and animal interactions also grew. This, directly or indirectly, paved the way for many epidemics. Some of these outbreaks included malaria, tuberculosis, smallpox, influenza, and leprosy. Over the years, the world witnessed many other bacterial and viral disease outbreaks. But the cause of the disease and the way it spread remained a mystery in some. This timeline mentions some of the biggest epidemics in human history. (fig.1) [1, p23]
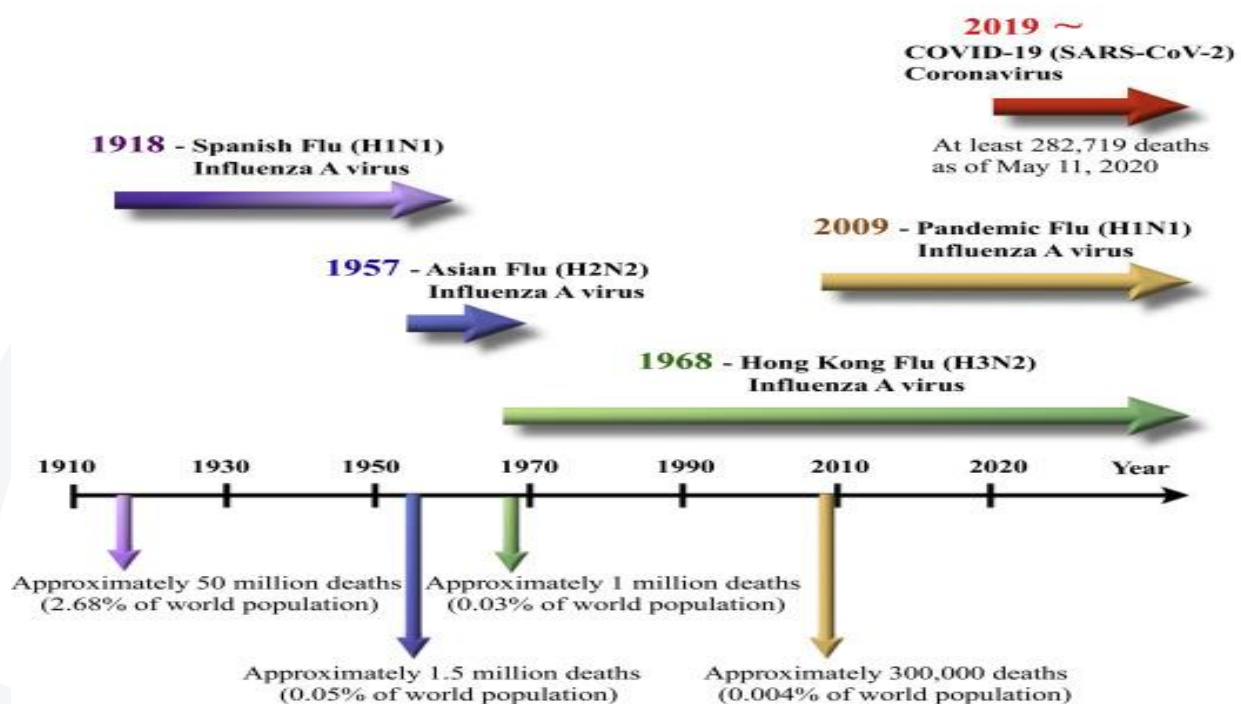

Fig. 1. A timeline of five pandemics since 1918 and the globally circulating viruses afterward.

Throughout the history of the epidemic, damage has always been inflicted, which is comparable to the damage from major armed conflicts and natural disasters. The economic losses from infectious diseases are enormous, and experts find it difficult to give even approximate figures for global damage.

The coronavirus pandemic that has swept the world today is no exception. Despite the high level of medicine and the economy in the 21st century, the spread of insidious infection created a lot of obstacles and undermined the usual way of life.

Currently, people all over the world have been affected by coronavirus disease 2019 (COVID-19), which is the fifth pandemic after the 1918 flu pandemic. As of now, we can trace the first report and subsequent outbreak from a cluster of novel human

pneumonia cases in Wuhan City, China, since late December 2019. The earliest date of symptom onset was 1 December 2019. Initially, the disease was called Wuhan pneumonia by the press because of the area and pneumonia symptoms.

Therefore, this virus is the seventh member of the coronavirus family to infect humans.[2,p.265] The World Health Organization (WHO) temporarily termed the new virus 2019 novel coronavirus (2019-nCoV) on 12 January 2020 and then officially named this infectious disease coronavirus disease 2019 (COVID-19) on 12 February 2020. Since COVID-19 initially emerged in China, the virus has evolved for four months and rapidly spread to other countries worldwide as a global threat. On 11 March 2020, the WHO finally made the assessment that COVID-19 can be characterized as a pandemic.

As of June 22, 9 078 502 cases of infection were confirmed in 213 countries and territories, 471 248 fatalities, 4 861 784 people recovered. (fig.2)
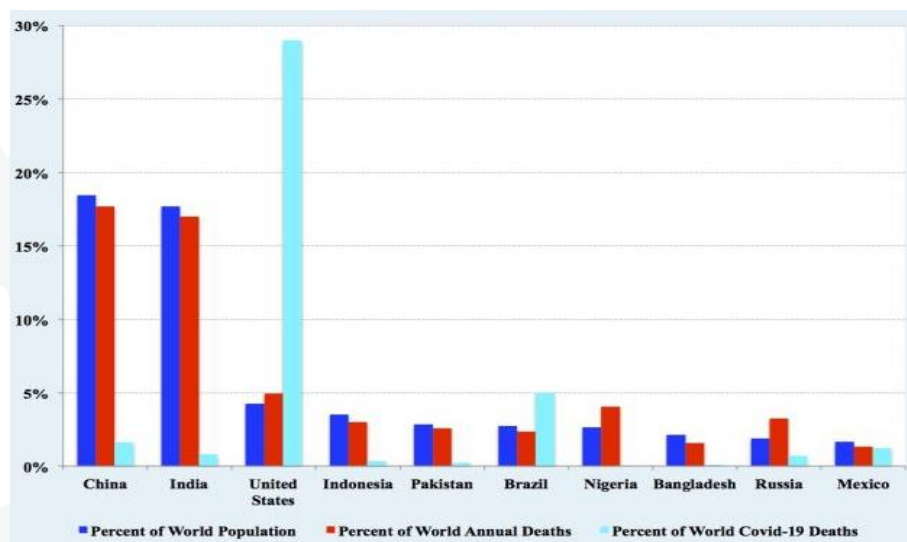

Fig. 2. Estimated Percentages of World population, World annual deaths and World Covid-19 Deaths for the 10 most populous countries: 2020 (Covid-19 deaths as of 15 May 2020) [3]

The COVID-19 pandemic affected most countries of the world and almost all spheres of public life, and the education system was no exception. One of the ways to contain coronavirus infection is still social exclusion; its measures required the partial or complete closure of educational institutions and their associated infrastructure. Localization and social exclusion measures have led to shocks that the education system has not experienced since World War II. As a result, more than 1.5 billion students worldwide (91.3% of the total number of students) are cut off from their schools and universities. (Fig.3.)
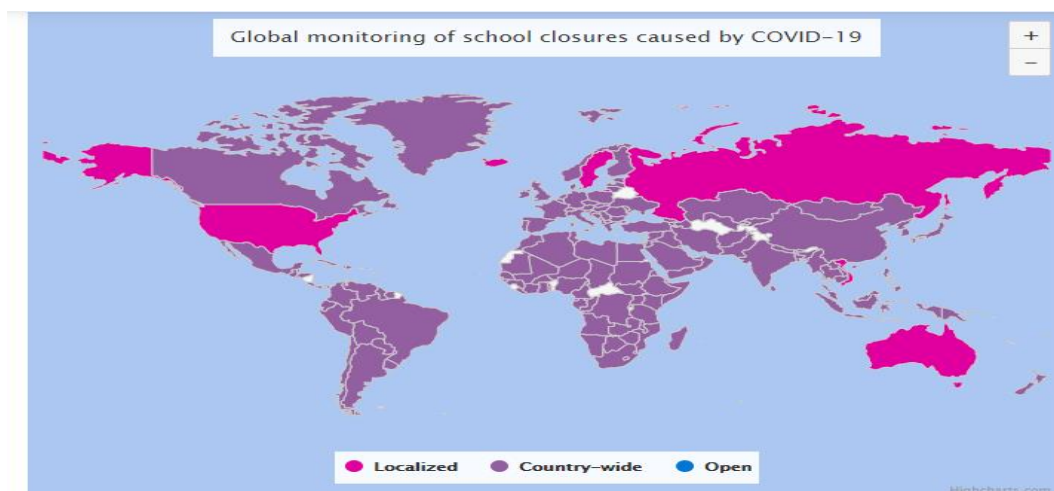
Fig. 3. Global monitoring of school closures caused by COVID-19. [4]

More recently, experts argued about how and when digital technologies will change the face of modern education, how they will affect general ideas about learning and, of course, about how the current education system will respond to a digital challenge. In the light of recent events, it has become apparent that answers to some of the questions posed can be received faster than one might have expected. The pandemic has already become a catalyst for rapid change in this area. Education managers in various parts of the Earth almost immediately faced a difficult choice: to try to transfer educational processes to the online environment or to put training on the pause, temporarily stopping the activities of institutions.

Methods
In these conditions, governments and professional organizations, representatives of the business community are joining forces to build the educational process using all available means, trying to literally "on the go" reduce the degree of the serious digital divide that has developed. The emerging practice of transferring full-time study to an online environment or distance learning formats can be reduced to several areas:
• Organization of training using educational online platforms
• Transmission of educational content on television and radio channels
• Conducting classes using social networks, instant messengers and email
• Replication of "hard" copies of educational materials and their delivery to students at home
To ensure the educational process, both specialized infrastructure and some "everyday" digital services are used, which have become widespread in recent years.

UNESCO experts in this regard offer the following classification of distance learning tools [5]:

• Resources providing psychosocial support to participants in educational relations in a pandemic

• Digital learning management systems (Google classroom, Moodle, Blackboard, Canvas)

• Mobile-based learning applications

• Programs with advanced offline functionality

• Massive Open Online Courses (MOOCs)

• Self-study services

• Electronic readers

• Programs that provide the ability to work together online (Skype, Zoom, WebEx)

• Tools for creating digital educational content and numerous electronic databases of educational materials

The pandemic revealed the weakest place in the education system, based on the concept of "direct education", in which teachers and students must be present in the same place at the same time. The only possible solution to this problem for most universities was the transition to distance learning. It turned out that a significant part of universities do not have the necessary technical and educational base for going online.

Despite the wide range of available technologies, even the leading countries in the field of digitalization of the economy (USA, China, Japan) experience significant difficulties in organizing online training. For example, according to Bloomberg Businessweek, even in the American higher education industry worth $ 600 billion and with experience in "emergency training" in connection with the hurricane Katrina in 2005, 70% of the 1.5 million teachers never taught virtual courses. [6]

In fact, now studying abroad is completely stopped. At least for the summer. And the possibility of its resumption in the fall remains a big question, because if some foreign educational institutions will be ready to accept foreign students in the fall, many problems will not have time to be resolved by this time. This is the unavailability of the coronavirus vaccine; difficulties with obtaining passports and visas; warnings by national governments from traveling around the world; the inability of many families to pay for the education of children due to a sharp decline in income; finally, the fear of parents for the health and safety of their children.

There are more bleak predictions regarding the timing of resuming studies abroad and various forms of academic mobility. For example, one of the largest American non-profit organizations - providers of study abroad IFSA (Institute for Study Abroad)

believes that these processes will begin to recover no earlier than the spring of 2021 and on a much smaller scale than before.

The first stage of a prospective study of 11,000 potential foreign students conducted by QS this spring showed that the COVID-19 pandemic has clearly changed the intentions of 46% of respondents to study abroad; questioned them in 25% and only 29% left them unchanged. In other words, less than a third of students who previously wanted to study at foreign universities in the second half of February were still ready to implement their plans immediately after the pandemic. By the end of March, only 8% of those surveyed answered in the affirmative if they were going to study in another country. [7]

The lack of alternatives for transferring training online during a pandemic automatically led to a rise and a steady course of educational and methodological thought both on the scale of individual universities and the world system of higher education. The history of education did not know such a huge number of recommendations, systemic developments and cases on the organization of training in the new conditions. And most importantly, a significant part of this methodological wealth is in the public domain. Not only specialized sites, but also the platforms of the largest periodicals, familiarizing their readers with both problems and best practices in distance learning, are engaged in its "delivery" to consumers - university and school teachers.

The main changes should concern the goals of organizing studies abroad, its values and formats.

New Goals

Usually, the first question for future participants of foreign programs is: "WHERE exactly - in which country and university - would you like to study?". And it should be like this: "WHAT exactly would you like to study abroad for your successful career?" Of course, everyone wants to combine the useful with the pleasant - learning with visiting an interesting country for themselves. But if in the first place is "pleasant" and not "useful", then this is not study, but tourism. According to experts, those providers that focus primarily on organizing training programs, rather than "tourist" student trips, will be least affected by the global crisis.

New Values

The previous two decades have been a period of explosive growth in international educational services. Universities gained access to new educational markets, the best resources and talents on a global scale, using world rankings to rise higher and beat

others. However, according to the British expert Ellen Hazelkorn, the relations between active participants in the global higher education space were, rather, transactional in nature and depended on funding from the relevant structures (for example, the European Union) and income from training of foreign students. [8]

New Formats

In a situation where the whole "world pressed the pause button", the most proactive providers began to think through new scenarios of foreign studies: virtual international internships at border closures and hybrid options for academic mobility in the post-crisis period. In this regard, the concept of "home internationalization" appeared and became stable. Universities and colleges are forced to create, under these scenarios, which previously seemed completely fantastic, new formats for their programs. For example, the University of Arcadia in Pennsylvania (USA) has already proposed this summer the paid program "Virtual Europe". Under this program, students can enroll not only for online courses of teachers - "ambassadors" of the University of Arcadia in London, Dublin, Edinburgh, Barcelona, Granada, Athens or Rome; but also to participate in virtual internships with employers in the same cities. The thinking and motivation inherent in this experience and the like can have a wide impact on the whole world of higher education. It should be remembered that currently only 60% of the world's population uses the Internet. This digital divide between countries must change if we want to make virtual learning truly viable. During the crisis, the negative consequences of such a gap are exacerbated, which leads to a lack of information and educational opportunities for those who are not online. Now more than ever, we must collectively strive for more readily available technology in order to overcome the constrained limitations of offline communications in favor of virtual solutions.

The global pandemic has confirmed that in such crisis situations, online learning is indispensable; and that all educational institutions should spend the necessary amount of time and money on its development and improvement in order to better prepare for such historical upheavals in the future. "Our doors are now closed, but our minds are open," says Tal Frankfurt. "And this provides us with a better position for success in learning when life returns to normal." A pandemic can have a positive effect on new university students, as they will be better versed in digital technology than previous generations. This is due to the current transition of schools to the online format.

Results

The emergency transition to distance learning has generated a number of interconnected problems: [9]

- Some countries were not able to switch to online education for various reasons, including the lack of logistical support for universities, the lack of widespread Internet coverage, low living standards, etc. For example, Latin American countries suspended their studies at universities. One of Argentina's leading universities - the University of Buenos Aires - decided to cancel classes and make changes to the academic calendar, instead of moving to online education, believing that only full-time study can guarantee a high level of quality. The National Institute of Science and Technology of Zimbabwe, like several other African universities, announced its closure before further notice. Malaysian Minister of Higher Education has suspended the transition to distance learning.

- In a number of countries, students organizedly opposed the transition to distance learning. In the Philippines, there were strikes against the transition to the online format, demanding the termination of the contract and the refund of tuition due to the fact that distance learning is not an equivalent substitute for traditional forms of education, as well as due to a lack of necessary equipment and poor Internet access. In many African universities, student unions have opposed online learning because of the lack of the necessary facilities and facilities. In Tunisia, the student union protested the government's decision to adapt online learning during the pandemic, calling this action a discriminatory measure, and called for a boycott of online platforms. In Chile, students from the country's leading public university - the University of Chile, as well as the private University of San Sebastian, have launched online strikes. In the UK, more than 300,000 students signed a petition demanding reimbursement of their tuition.

- There is a significant decrease in the quality of education in the transition to distance learning in the absence of many learning management systems, software for administering training courses in distance learning, in many countries. For example, the Pakistan Higher Education Commission was not able to develop a clear and understandable online learning strategy and policy for public and private universities, which created confusion among university administrations, teachers, and students.

- There are problems with online applications through which universities conduct distance lectures or seminars. Some universities have announced the abandonment of the Zoom platform and the transition to Google Meet or other applications. In

connection with hacker attacks, online training at a number of leading universities was temporarily suspended
- The qualifications of employees for the transition to online learning are not enough: there is no knowledge about the available platforms and services for distance learning, their functionality, effective methods of teaching in an online format, etc. At present, what most universities in developing countries offer, neither in no way complies with the high standards of online learning and online education.

Discussion

It is expected that research institutes and leading universities, known in their own country and abroad and having a stable income, will recover quickly after the crisis. At the same time, a number of universities, primarily private ones, which are completely dependent on tuition fees, may close. Millions of students with financial disabilities will have to abandon higher education, or make a choice in favor of more accessible state universities. Universities with a significant number of international students will also face serious difficulties.

The implications for the development of international student mobility are not so straightforward. There is every reason to believe that after the completion of the coronacrisis, universities will continue to fight for foreign students, but at the same time the international educational market will become more sensitive, with higher competition. The market may shift towards poor countries, whose universities can offer more affordable educational programs. Professor Simon Marginson of the Center for Higher Education Studies at the University of Melbourne predicts that it will take about five years to restore the student mobility market. The most important factors when choosing a place of study will be the cost of training, security and level of well-being.

Obviously, the current crisis will become a kind of cold shower for higher education. It is still difficult to predict how serious the consequences will be for the development of higher education worldwide. Will universities become more systematic after the pandemic? Will universities begin to adapt innovative approaches to learning, which until recently were the prerogative of a small group of leading Western universities? Will a pandemic entail a shift in established approaches, tools and methods for assessing knowledge? How will the pandemic affect the internationalization of universities, international educational and scientific cooperation? The next six months will be a test for the leadership of countries and universities - how quickly and efficiently they can cope with the current crisis and provide high-quality education.

Conclusion

This situation suggests that the educational system no longer has time to rebuild and adapt to the needs of the 21st century. The teaching model where the teacher is the only source of knowledge is outdated. Our children are used to cramming and do not have the skills of independent learning. A teacher in the 21st century should be a mediator, an expert who follows the right direction and helps the student find a way to solve the problem, and the student himself studies the necessary material.

From this point of view, the crisis associated with COVID-19 can be considered as a "bypass button" for the widespread use of technological processes and models of thinking, which under ordinary conditions would require many, many years. Indeed, there is nothing better than a good crisis to shake up any industry, states one of the articles on THE World University Rankings.

The oil spill by the Exxon Valdez tanker in 1989 transformed the energy industry, 2008 financial crisis - banking sector. COVID-19 is doing the same thing today with higher education. Mansur Khamitov, a professor at Nanyang University of Technology in Singapore, says the following: "Higher education has already experimented with distance learning, but its "adoption" was slow. "COVID-19, of course, has made a major breakthrough, in which the vast majority of leading universities around the world have made a rather dramatic shift to full-scale distance learning."

It is still completely unclear what kind of experience this forced rapid digitalization will be able to bring to each individual educational institution, and the entire educational system, and to all of us, in one capacity or another, mostly encountering this system and the new social reality that is forming around it in connection with the pandemic. Perhaps, right now, the most favorable conditions are being created for educational institutions and the whole society for developing comprehensive development strategies. A certain "lull" caused by temporary isolation will allow us to take a fresh look at what is at the core of modern education, to better understand what tasks we set for it in the near future.

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