

¡Oportunidad perdida! La education virtual durante la pandemia Covid-19

Lost Opportunity! Virtual education during the Covid-19 pandemic

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RESUMEN

Este articulo es una evaluacion temprana de la interaccion en el proceso del Covid-19 y la adaptacion del sistema educativo de Republica Dominicana a las restricciones sanitarias impuestas. La decision de la “virtualizacion” de las clases produjo una inversion en equipos, entrenamiento de profesores y adecuacion en el sector universitario y de las escuelas “bilingues”. La disposicion de volver a la “presencialidad”, es estimada como un dislocamiento de la experiencia lograda en las universidades.

Palabras clave: educacion presencial ,educacion virtual, restricciones sanitarias, universidades

ABSTRACT

This article is an early evaluation of the interaction process of Covid-19 and the Dominican Republic’s Educational System adaptation to sanitary restrictions imposed by authorities. Virtual classes' decision produced an investment in equipment, teachers' training and adaptation in universities and “bilingual” schools. The decision to return to classrooms is estimated as a dislocation from experience gained by the universities.

Keywords: classroom education, sanitary restrictions, universities, virtual education

1 The “puzzling” pandemic

After meeting the monster, why call the Covid-19 pandemic puzzling? I say this in extrapolation from the main actions and statements of the World Health Organization (WHO), from the notification of the first cases of Covid-19 in late December 2019, to the publication of a report on the origins of the disease³. We will follow the WHO log in those early days of the pandemic⁴.

A necessary introduction

The 21st century began with high expectations. We thought we had won the war, when we witnessed the fall of the "Berlin Wall" in 1989, to put an end to the fear of a nuclear catastrophe. Foolish humans. The new terror appeared in the form of a pathogen that came to be called COVID-19, as if suffering ebbs of viruses every year in the form of influenza were not enough. The response was disorganized. The result, more psychological than lethal, leaves us hugely schizophrenic and dangerously disoriented.

The response of the academic community was of enormous agility to comply with a certain "normalcy" - at least in the Dominican experience - and the teaching staff was trained "on the run" in the educational platforms, assisted by various and diverse techno-experts. My assessment is highly positive because of its effectiveness and timeliness. We are going to discuss the effort made and the progress achieved in the twenty years prior to COVID-19 in the "virtualization" of Dominican education system, compared with the pioneering education of the three leading countries in the PISA Tests: Finland, South Korea, and Singapore, with an outsider that completes the quartet, the Chinese city of Shanghai, which won first place, but was not recognized because it was not equivalent to the entire nation of China.

We will then discuss in extenso the comparative position of the Eastern and Western attitudes of Byun-Chul Han, regarding the experience with Covid-19, to arrive at some provisional conclusions that we call hopeful. On December 31, 2019, the WHO office in China notifies its regional referent of cases of "viral pneumoma", after a media statement on the subject is published on the website of the Wuhan Municipal Health Commission. For this notification on the final day of the year, the virus is identified as Covid-19 by the WHO.

On the same day, the WHO Epidemic Information Service notices another press report from the international outbreak alert system, ProMed, about the same cluster of cases of "pneumoma of unknown origin" in Wuhan. On January 14, the WHO speaks of possible "limited human-to-human transmission", an observation based on 41 confirmed cases.

On January 20 and 21, WHO experts from China and the Western Pacific Region travel to Wuhan. On the 21st, the regional office of the institution indicates that "it is now very clear, based on the latest information, that there is some inter-human transmission."

How did we go from emergency to pandemic? On January 30, WHO declared the situation a "public health emergency of international concern", and on February 11 gave the disease a name: COVID-19. From February 16 to 24, a scientific mission comprising 25 experts from the United States, China, Germany, Japan, South Korea, Nigeria, Russia, Singapore, Canada, and WHO travels to Wuhan.

On March 11, the WHO declares a "pandemic", but states that several countries have shown that the virus, which has already caused 4,000 deaths, mostly in China, can be "suppressed or controlled", leading us to believe in a minimal risk. On April 24, the WHO launches the ACT Accelerator, an international device aimed at accelerating the production of vaccines, treatments, and diagnostic mechanisms against COVID.

The alarm begins: on June 5, the institution advises the use of masks in crowded places in the regions most affected by the virus. On July 7, it acknowledges that there is evidence of airborne transmission of the coronavirus. On August 21, it recommends the use of face masks from children ages 12 years and onwards, under the same conditions as for adults. On December 16, the WHO assures that international travelers should not be considered priority groups for the detection of the

disease, and opposes "certificates of immunity".

The response of science is to accelerate research in the pharmaceutical industry with mercurial objectives "clumsily disguised" by the multinational pharmaceutical industry: On December 31, WHO gives its first emergency approval to the Pfizer/BioNTech vaccine. On February 15, it does the same for AstraZeneca's vaccine, and on March 12 for Johnson & Johnson's.

On January 11, 2021, the institution's Director-General, Tedros Adhanom Ghebreyesus, urges all countries to start vaccinating healthcare workers and people at risk within the next 100 days.

On January 14, a group of international experts arrives in China to study the origin of COVID. Their visit lasts until February 9. On March 1, the first Covax vaccines are distributed in Ghana, a program to send these drugs to countries with the least recourses.

On March 29, the joint report by the WHO and Chinese experts concludes that transmission to humans via an animal intermediate is a "likely to very likely" scenario, while an incident in a laboratory remains "extremely unlikely", something which has long been touted as "the education of the future".

A different experience was that of pre-university education and the public and private sectors - with shortcomings some more than others, since bilingual schools have been following "First World" curricula for years and justify their "aristocratic" status, while the public sector was "fed up" with the propaganda of a virtual education "on the run" through the distribution of "tablets and laptops" without connections or platforms in the public school system during the government in force early into the pandemic.

Subsequently, in the new government sworn-in in 2020, there was a solution praised even by international organizations with the integration of mass communication, radio, and television to replace schools without internet platforms.

Why was there a rush to return to the "face-to-face" if the media solution had been a success?

Let's leave this question until here, because the interest is to highlight why it was included in this return to face-to-face when the university system was "dabbling" with virtuality and made long-term investments in equipment and programs to train technicians?

If they were thinking of converting certain curricular programs to a "blended" or mixed system, because the platforms have advanced so much that there are systems "immersed" in virtuality, as in the cases of Singapore, South Korea and Japan. Why did we clip our wings and take a step back? That's what I have found puzzling about the pandemic; we missed the opportunity to be better when the "*floor of our certainties*" was moved by the pandemic.

The three examples of virtual education systems of the 21st century are Asian, so I will complete my argument with a South Korean philosopher educated in Germany and based in Berlin, Byung-Chul Han, in a comparison between the two worlds: East and West, where we, the children of Socrates, Plato and Aristotle, do not come out well.

3. Is the destination culturally determined?

It is an old dilemma to deal with the question of whether we are determined by nature or by nurture, which, to put it more curiously, is the dilemma between "nature or nurture". This question has reached the Dominican intellectual milieu by the hand of Fernando Ferran⁸, but I pick it up in this opportunity, from our Korean philosopher, Byung-Chul Han⁹.

Is the successful containment of the pandemic in Asia due - as many in the West assume - to a regime of hygiene that acts with confidence and resorts to digital surveillance? Clearly not. As we know, the coronavirus is transmitted by close contacts and any infected person can specify them themselves without the need for digital surveillance. In the meantime, we already know that it is not so relevant who has been briefly where and when, nor who has gone through which streets of our colonial or third

world cities, for chains of contagion to occur. How is it then explained that, regardless of the political system of the respective countries, the rates of contagion in Asia have remained so low? What links China with Japan or South Korea? What do Taiwan, Hong Kong or Singapore do differently from our European countries? Virologists speculate on the reasons why infection rates in Asia are so low. Byung-Chul Han points to Japanese Nobel Prize winner Shinya Yamanaka, who speaks of an "X factor" that is difficult to explain.

It is unquestionable that Western liberalism cannot impose individual cybernetic surveillance in the style of the Chinese plan. And it had better be so. The virus must not undermine liberalism. However, even in the West, we quickly forget our concern for the private sphere as soon as we start to move around the social networks. Everyone is stripping off their clothes with impudence. Digital platforms such as Google or Facebook have unrestricted access to the private sphere. Google reads and analyzes e-mails without anyone complaining about it. China is not the only country that collects data on its citizens to control and discipline them. The social credit scoring procedure in China is based on the same algorithms as Western credit rating systems such as FICO in the United States or *Schufa* in Germany. Looking at it this way, panoptic surveillance is not a uniquely Chinese phenomenon. In view of digital surveillance, which is already happening everywhere anyway, anonymized contact tracking via the Corona App would be completely harmless. But digital contact tracking is probably not the main reason why the Asians have been so successful in combating the pandemic.

Byung-Chul Han, in October 2020.



ISABELLA GRESSER/HERDER EDITORIAL

We note the importance of civic-mindedness, of joint action in a pandemic crisis. When people voluntarily abide by sanitation rules, there is no need for controls and forced measures, which are so costly in terms of personnel and time.

Byung-Chul Han mentions that, in Germany, during the catastrophic floods of 1962, Helmut Schmidt, who at that time headed the Hamburg Police Department, said: "It is in crises that character is shown". It seems that Europe is failing to show character in the face of crisis. What Western liberalism is showing in the pandemic is rather weakness. Liberalism even seems to favor the decadence of civility. It is precisely this situation that teaches us how important civility is. That groups of teenagers hold illegal parties in the middle of the street, that police officers who try to break them up are harassed, spat on or coughed at, that people no longer trust the State, are signs of the decadence of civility. Paradoxically, Asians, who voluntarily comply with strict hygienic regulations, have more freedom. Neither in Japan nor in Korea has total closure or confinement been decreed. The

economic damage is also much less than in Europe. The paradox of the pandemic is that one ends up having more freedom if one voluntarily imposes restrictions on oneself. Those who reject, for example, the use of masks as an infringement of freedom, end up having less freedom in the end.

Asian countries are not very liberal, says Byung-Chul Han, hence why they are not very understanding and tolerant of individual differences. That's why social imperatives then carry so much weight. That is also the reason why I, being Korean by birth, prefer to continue living in the hotbed of infection that is Berlin rather than in Seoul, no matter how virus-free it may be. But it must be emphasized that the high infection rates during the pandemic are not merely the natural consequence of a liberal lifestyle that we should simply adopt. Civility and responsibility are effective liberal weapons against the virus. It is not true that liberalism necessarily leads to vulgar individualism and selfishness that play into the hands of the virus.

The example of the coexistence of liberalism and civility is, for Byung-Chul Han, New Zealand, a liberal country that has beaten the pandemic for the second time. The success of the New Zealanders also lies in the mobilization of civic-mindedness. New Zealand Prime Minister Jacinda Ardern spoke glowingly of the "team of five million". Her passionate appeal to civic-mindedness was well received by the population. By contrast, the American disaster can be explained by the fact that Trump, driven by his sheer selfishness and lust for power, has undermined civility and divided the country. His policies make it utterly impossible to feel part of a "we".

Liberalism and civility need not be mutually exclusive. Rather, civility and responsibility are an essential prerequisite for the success of a liberal society. The more liberal a society is, the more civility will be necessary. The pandemic teaches us what solidarity is. Liberal society needs a strong us. Otherwise, it disintegrates into a collection of

egotists. And here the virus has it very easy. If we would also like to speak in the West of an "X factor" that medicine cannot explain, and that hinders the spread of the virus, this would be none other than civility, joint action, and responsibility towards one's fellow man.

4. What will education be like when COVID ends¹⁰?

COVID-19 has caused a revolution in education that will forever alter the educational world in all aspects, even after the pandemic is overcome. This is the prediction of experts who have analyzed what education will be like after the coronavirus crisis and who assure that teaching and learning will never be the same as before the pandemic and will tend to be online, especially among older students.

So far, millions of students have returned to schools around the world, either online or face-to-face. In Spain and Denmark, for example, students have returned to face-to-face classes under strict security measures and in "bubble groups", which, according to organizations such as the Organization for Economic Cooperation and Development (OECD), help to restrict a group's contact with the rest of the school. Other countries have opted for a hybrid back-to-school system that combines face-to-face and virtual education, as in the United States, or a totally remote teaching-learning system.

But what will happen in the future when the pandemic is over? Will education return to the way it was before the coronavirus appeared? Experts from different international entities, such as OECD, the World Economic Forum, and the McKinsey consulting firm, give their opinion through reports and opinion articles on the aspects that will change in the world of university education and training when the COVID-19 crisis is over. These are some of the changes that they foresee...

Experts predict that innovation in education will increase, and that teaching-learning will

become more digital and distance from the pandemic, which will force a rethinking of educational methodologies at all levels and the establishment of public policies and economic support that will facilitate the most vulnerable groups of students to join these trends and not be left behind.

"Education has changed dramatically with the rise of E-learning, so teaching-learning will take place at a distance and on digital platforms from now on. Research suggests that online learning increases information retention and takes less time, which means that the changes caused by coronavirus could be here to stay," say experts from the World Economic Forum

However, there are those who believe that distance education will never be able to compete with face-to-face education, especially at educational stages such as kindergarten and primary school, where interaction and socialization are pedagogically necessary. "Online instruction may grow as a niche product, but for most purposes, human contact is superior", writes Dick Startz, a professor of economics at the University of California, in an article published in the Foreign Policy Journal¹¹.

"While greater use of technology in education may be inevitable, technology will never replace a great teacher. In fact, a single teacher can change the trajectory of a student," as noted by education experts at McKinsey Consulting in the article "Reimagining a more equitable and resilient K-12 education system".¹²

4.1 At scholar level, face-to-face classes will be priority, but with greater digital recourses

Regarding the above, experts from the World Economic Forum state that the effectiveness of online learning varies according to the students' age and insist that younger students require face-to-face classes as they are more structured environments and because boys and girls tend to be more distracted in online teaching and learning. Thus, experts predict that face-to-face classes will

continue in the future, especially for early childhood and elementary school students. They also consider that, after COVID-19, face-to-face classes will be more supported by educational methodologies using digital resources.

4.2 Educational inequalities amplified by the pandemic will take time to diminish

The pandemic has amplified already-existing inequalities in the world's education systems, such as unequal access to electronic devices (computers, tablets, or mobiles) and the internet, as well as a lack of family support for online learning, says Andreas Schleicher, director of Education and Skills at the OECD, in an article for Foreign Policy magazine in which nine experts weigh in on the future of education post-COVID19.

"The fact that children from privileged backgrounds have the support of their families to learn or after-school classes to support their learning further opens up educational gaps." These cannot be narrowed in the aftermath of the pandemic if governments and communities do not make an economic and educational effort to help the most vulnerable get ahead.

"We must reverse the inequality generated during the months of school closure with educational reinforcement programs and directing attention to disadvantaged groups and those with special educational needs", consider the Rosa Sensat Teachers Association, the collective "*Tornem a les escoles*" (Let's go back to school), the Federation of Movietas, the Federation of Movietas, and the Federation of the Movement for the Education of Children and Adolescents. the *Federación de Movimientos de Renovación Pedagógica* and the *Fundació Jaume Bofill*, in a recently published joint manifesto.

4.3 The offer of university and E-learning programs will grow

Due to the pandemic, university teachers have been forced to adopt digital technologies so that students can study anytime, anywhere. This will

continue after the health crisis and will cause universities to reinvent themselves and offer more online university studies.

We dare to envision that the university as we know it will survive, but not with the power it had before COVID-19, and faculty must embrace these changes as an opportunity to fulfill their core mission: to create opportunities for as many students as possible to discover and develop their potential and use them to make a difference in the world. The challenge and mission remain: to change the world.

Other experts believe that the health crisis has prompted a rethinking of the foundations of university education. They are questioning the high prices, the difficult access to university for students with limited resources and whether it is necessary to go to campus for less practical classes that do not require personalization and interaction, according to various reports. This is why online education is seen as "a real substitute for face-to-face education, becoming increasingly important, or in its case, as a complementary product, in a world of greater educational democratization.

5. There will be less international mobility among the student body.

The pandemic has abruptly curbed international student mobility in universities, which will continue to be in vogue in the future and will affect the income of these entities, especially private ones, according to expert Salvatore Babones, adjunct researcher at the Center for International Studies and associate professor at the University of Sydney, whose reflection appears in an article in *Foreign Policy* magazine.

In this regard, the OECD's *Education at a Glance 2020* report points out that universities around the world have been financially affected by the pandemic, as the enrollment of foreign students in their programs has dropped considerably, which is another reason for universities to reinvent themselves and increase their online academic offerings.

6. People are more likely to choose studies that guarantee employment

The pandemic will force universities, training centers and other educational institutions offering post-compulsory education to change their training offerings to provide training with employment guarantees.

Therefore, we predict that centers will redesign their training programs to really respond to the needs of the economy and companies, for example, reducing the time in which a student must complete it. The immediate need for millions of people to find jobs and earn an income means that the length of programs will have to be measured in weeks, rather than years. It also means that programs must be accountable for generating employment outcomes.

I regret to highlight the missed opportunity for the higher education system by not leveraging the "window of opportunity" generated by the chaos created by the irruption, in the 2019-2020 school year of creating a virtual alternative; it was not taken advantage of to sustain and improve it when it was ready to return to pure and simple "presentiality". We would have advanced a few decades and caught up to speed with everything thus becoming a model of a "future" system, even if it had been in higher education with the equipment and platforms, the specialized personnel, and the students with their own computer equipment available.

It is a story that adds to the explanation of why underdevelopment is enthroned in societies that do not know how to properly leverage opportunities. The combination with another event, such as another pandemic, can be set in the strategic scenario, as it is considered as a recurrent event due to the mistreatment of the biosphere that we cause with a poor environmental policy. So we can expect a second chance.

7. Proposals for the entire educational system

We take on board the "eight recommendations for action to improve the quality of early education" presented by the Vice President for Sustainable Development of the Andean Development

Corporation (CAF), *Bibiam Aleyda Díaz*, adapting them to the Dominican scenario.

- First, define a vision of quality for education at all levels.

- In addition, to implement this vision, it is essential to have quality assurance systems in place.

- Family strengthening is the third recommendation and consists of including actions aimed at promoting the quality of life of families and making them co-responsible for their children's education.

- Likewise, family training should constitute a main axis of the work in education, which means developing programs for the training, participation, and empowerment of families, from a perspective in which the community itself is the main agent of change for the families that compose it.

- The fifth recommendation is related to quality measurement. It is essential that countries make progress in the institutionalization of permanent mechanisms to measure the quality of education services at all levels, to roll-out continuous improvement and understand the impact of the different programs.

- To have a competency framework and certification processes for professionals and personnel in charge of education at all levels.

- The seventh recommendation has to do with the revaluation of educational personnel.

- Finally, it is recommended that the public and private actors involved in the educational process maintain a space for regional exchange that facilitates a permanent dialogue of knowledge, the transfer and adaptation of action frameworks that provide feedback to national public policies and, at the same time, qualify decision making at all levels.

La séptima recomendación tiene que ver con la revalorización del personal educativo.

8. Hopeful conclusions

We have covered the period from December 31, 2019, when the fateful coronavirus was notified to the World Health Organization, and we reviewed in two periods the period marked on February 16, 2022, when President Luis Abinader announced the provision of preventive measures for the use of masks and time limitations.

One time was marked by technological advances in vaccines and the evolution of less aggressive strains of Covid-19 that presage its control. The other time was the adaptation of the Dominican school system with different levels of success to the virtual modality and, later, the aggressive use of mass media, given the limitations of computer equipment in the poorest segment of public schools.

On the other hand, universities and bilingual schools have obtained the equipment and platforms to continue the experience, and thus join the future of education together with virtuality and virtualization, with "blended" or hybrid experiences. With a stroke of a pen, it has forced a slowdown and return to normalcy and leave a niche to continue with the experience of virtuality; unlike the leading nations in innovative and innovative education such as Singapore, South Korea, and Finland.

We took the opportunity to discuss whether cultural difference makes a difference, and arrived at civic engagement, shown in white societies such as New Zealand.

In summary, a single phrase of hope: Let us learn to pick up our feet so as not to stumble over the same stone again in the future, be it near or far!

Timeline of the Covid-19 pandemic

- 2020 was marked by the COVID-19 pandemic. Although it was initially thought to be a regional epidemic affecting only China and its surroundings, the coronavirus subsequently crossed the borders of Asia, spreading throughout the world and collapsing the economies of countries and social life in general.
- On December 31, 2019, China reported to the World Health Organization (WHO) the detection of an unknown disease affecting the respiratory system.
- On January 1, the fish market in the Chinese city of Wuhan, which was visited by the first infected people, was closed.
- On January 3, it became known that the genetic structure of the coronavirus resembled that of the virus that caused the SARS epidemic in China.
- On January 7, the WHO announced that the new disease was not SARS and was caused by a new type of coronavirus, called 2019-nCov.
- On January 11, the first patient in China died. He was a 61-year-old man.
- On January 13, the first case outside China was detected. It was a woman in Thailand.
- On January 21, the first case was detected in the United States.
- On January 23rd all traffic in Wuhan was stopped and quarantines were implemented.
- On January 24, the first case was detected in Europe. Two individuals from China and a relative were diagnosed with the virus in France.
- On January 30, the WHO decreed a state of emergency.
- On January 31, the first cases were detected in Italy, Spain, and the United Kingdom.
- On February 2, for the first time, a person outside China lost their life, in the Philippines.
- On February 11, the WHO named the disease COVID-19 (Coronavirus Disease 2019).
- On February 14, the first case was detected on the African continent. One person in Egypt was diagnosed with the disease.
- Likewise, a person who died in France from the coronavirus became the first COVID-19 victim in Europe.
- On February 19, the first cases were detected, and the first deaths were recorded in Iran.
- On February 21, the first case of local infection was detected in Italy.
- On February 25, Iran's Deputy Minister of Health, *Irech Herirchi*, was diagnosed with COVID-19.
- On February 26, the first case was detected in Brazil. It was a businessman returning from a trip to Italy.
- On February 27, Saudi Arabia suspended the lesser pilgrimage to Mecca.
- On February 28, the WHO raised the global risk level from high to very high.
- On February 29, the first COVID-19 death occurred in the United States.
- In the first six days of March, the number of cases in Italy increased six-fold.
- On March 8, the Lombardy region of Italy and 14 cities were quarantined.
- On March 10, Italy's Prime Minister, Giuseppe Conte, implemented the first restrictions.
- On March 11, WHO declared the coronavirus outbreak a global pandemic.

- On the same date, the first case was detected in Turkiye.
- U.S. President Donald Trump announced the closure of the country to all people coming from Europe, except the United Kingdom.
- On March 12, education, and teaching in Turkiye was suspended, except for the high school level.
- On March 13, Trump declared a state of national emergency.
- On March 17, the European Union (EU) restricted entry from third countries.
- In France, the first restrictions and quarantines began to be implemented.
- On March 21, Turkiye restricted people over 65 years of age and those with chronic diseases from entering the country.
- On March 23, the United Kingdom began to implement quarantine measures.
- On March 24, the International Olympic Committee postponed the 2020 Olympics in Tokyo to next year.
- On March 25, India decreed a 21-day curfew.
- On March 26, cases detected in the United States surpassed those in China.
- On March 27, the U.S. Congress approved a USD\$2.2 billion economic stimulus to alleviate economic losses for businesses and individuals.
- On April 10, the worldwide death toll from COVID-19 surpassed 100,000.
- On April 14, Trump announced the suspension of U.S. aid to the WHO, blaming it for the spread of the pandemic worldwide.
- On April 16, Japan decreed a state of emergency in seven regions of the country.
- On April 22, the United States suspended the entry of migrants for 60 days.
- On April 28, COVID-19 cases in the United States exceeded one million.
- On May 13, the United Nations announced that it expects the global economy to shrink by 3.2%. This is the largest decline since the Great Depression of 1929.
- On May 16, cases in India surpassed those in China.
- On May 20, the number of cases worldwide exceeded five million.
- China also banned the consumption of wild animals in Wuhan for five years.
- On April 21, the number of unemployed people in the United States reached 40 million.
- On May 22, Brazil became the country with the most cases after the United States.
- On April 27, the number of deaths exceeded 100,000.
- On April 29, Trump announced the severing of relations with the WHO.
- Likewise, the southern hemisphere of the Earth began to become the new epicenter of the pandemic.
- On June 27, the number of cases worldwide exceeded 10 million.
- On June 28, the number of deaths from COVID-19 exceeded half a million.
- On July 1, the United Nations Security Council passed a resolution calling for a 90-day global ceasefire.
- On July 7, Brazilian President Jair Bolsonaro was diagnosed with COVID-19.
- On July 17, cases in India surpassed 1 million.

- On July 21, the EU approved an aid package worth EUR\$750 billion.
- On August 11, Russia approved restricted use of its Phase 2 vaccine.
- On September 7, India surpassed Brazil in number of cases.
- On September 22, the United Kingdom implemented additional restrictions on its citizens.
- On September 29, the number of COVID-19 deaths worldwide surpassed one million.
- On October 2, Trump tested positive for COVID-19.
- On October 3, deaths in India exceeded 100,000.
- On October 6, Trump was discharged.
- On October 22, Belgian Foreign Minister Sophie Wilmes was admitted to intensive care.
- On October 24, France declared a partial curfew in 54 of its regions.
- On October 30, France extended the curfew.
- On November 3, more than 80 million U.S. voters used the mail to vote in the presidential election.
- On November 6, COVID-19 cases in the United States exceeded 10 million.
- On November 7, COVID-19 cases worldwide exceeded 50 million.
- On November 18, the German biochemical company BioNTech announced that the efficacy of its vaccine is 95%.
- On December 2, BioNTech and Pfizer's vaccine became the first to be registered.
- On December 8, BioNTech and Pfizer's vaccine was administered to a 91-year-old woman in the United Kingdom.
- On December 11, the U.S. Food and Drug Administration (FDA) approved the emergency use of BioNTech and Pfizer's vaccine.
- On December 14, the vaccine was administered for the first time in the United States to a nurse in New York.
- On December 15, Russia announced the start of the population vaccination process.
- On December 17, French President Emmanuel Macron tested positive for COVID-19.
- On December 19, the FDA approved the emergency use of Moderna's vaccine.
- Also, the UK increased restrictions after a new mutation of the coronavirus that spreads 70% faster was detected.
- On December 21, Moderna's vaccine was tested for the first time on a nurse in Connecticut, while the European Medicines Agency (EMA) approved the use of BioNTech and Pfizer's vaccine in Europe.
- WHO Director-General Tedros Adhanom Ghebreyesus said he had no evidence that the new mutation of the virus causes more severe illness or even death.
- On December 27, China declared a state of emergency after a spike in cases.
- On the other hand, BioNTech and Pfizer's vaccine started to be used in Europe.

Source: <https://www.aa.com.tr/es/mundo/as%C3%AD-fue-la-cronolog%C3%ADa-de-la-covid-19-en-2020/2094182> Translated by Daniel Gallego.

References

- Feito, R. (2020). *¿Que hace una escuela como tu en un siglo como este?* Catarata .
- Ferran, F. (2019) *¿Los herederos? ADN cultural del dominicano.* Banco Central.
- Garces, M. (2020). *Escuela de aprendices.* Galaxia Gutenberg.
- Gonzalez Monteaquedo, J. (2001). *El paradigma inter pretativo en la investigation social y educativa: nuevas respuestas para viejos interrogantes.* Universidad de Sevilla. <https://idus.us.es/bitstream/handle/11441/12862/file/1.pdf?sequence=1&isAllowed=y>
- Han, B. (2012). *La sociedad del cansancio.* Herder.
- (2013). *La sociedad de la transparencia.* Herder.
- (2014). *En el enjambre.* Herder.
- (2014b). *La agoma del eros.* Herder.
- (2014c). *Psicopotitica.* Herder.
- (2015). *El aroma del tiempo.* Herder.
- (2015b). *Filosofia del budismo Zen.* Herder.
- (2015c). *La salvacion de lo bello.* Herder.
- (2016). *Sobre el poder.* Herder.
- (2016b). *Tcpolog^a de la violencia.* Herder.
- (2016c). *Por favor, cierra los ojos.* Herder.
- (2017). *La expulsion de lo distinto.* Herder.
- (2018a). *Buen entretenimiento.* Herder.
- (2018b). *Hiperculturalidad.* Herder.
- (2018c). *Muerte y alteridad.* Herder.
- (2020). *La desaparicion de los rituales.* Herder.
- Lazaro Cantabrana, J., et all. (2019.) *¿Como abordar la education del futuro? Conceptualization, desarrollo y evaluation desde la competencia digital docente.* Octaedro.



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