

EDITORIAL

World, Science, and Education in the post-covid era

Hortensia Rodríguez¹, Nelson Santiago Vispo²

DOI. 10.21931/RB/2021.06.02.1

1676

The current Covid-19 pandemic, produced by a mutant strain of coronavirus, SARS-CoV-2, has generated throughout the world, in the 21st century, a severe economic, social, and health crisis never seen before. It began in China at the end of December 2019, in Hubei (Wuhan city), where 27 cases of pneumonia of unknown etiology were reported, with seven severe patients. The first case was described on December 8, 2019,¹ and by March 2020, the WHO declares the global pandemic, which denotes its rapid global expansion².

The global response to this emergency presented apparent differences regarding speed and effectiveness relative to the level of scientific-technological capacities of each country and the development of its entrepreneurship and innovation ecosystems. An interesting aspect to highlight is the speed with which researchers and entrepreneurs from various work areas focused on the challenges posed by the health emergency. The development of rapid tests for COVID-19 detection, or the design and manufacture of vaccines, were some of the notable examples. Once again, it is shown that having talent and support is a considerable asset for countries³.

Right from the start of the pandemic, many international biomedical information centers and publishers agreed to make public worldwide all medical or applied research information on this viremia so it can be used to offer the best medical response in the shortest time possible. Publishing houses have sped up the editorial peer review processes and made them open. In this sense, having a free flow of scientific information is the best treatment to face any epidemic and respond in the shortest possible time⁴.

Governments should be asking themselves, when the pandemic subsides, what should we do now? Most stakeholders consider the knowledge about the disease in this pandemic to be an open-access common resource, a public good that should be freely available. How would this change when we do not have a crisis? So, is it acceptable to hold back the progress of science? Furthermore, who has the right to make these decisions? It would be governments supported by science. The research community's strategies to combat COVID-19 give us a proof of concept of what is possible.

It is possible to wonder if commercial publishers should rule: be the primary decision-makers and gatekeepers of access to knowledge. More importantly, it is possible to question what kind of scholarly publishing system we want (collectively as a society) and design it accordingly⁵.

Scholars agree that durable and robust trust networks are essential for setting priorities, making effective decisions in rapidly changing environments, solving problems, and building resilient institutions to manage shared resources in general and infrastructure for scholarly dissemination in particular. This collaborative culture in the hard sciences should not be the only one to be assumed and should be extended to any knowledge generation in everyday use.

In this current action situation, the accumulated experiences of past epidemics, the demands for access to research led by the WHO and governments, and the interest of scientists have been the driving force for joint action by publishers to release information and has allowed rapid diagnostic and therapeutic advance as weapons against COVID. All these dynamics have set new guidelines and regulations in open access to information.

In the educational field, this emergency has led to the massive closure of classroom activities in schools to prevent the spread of the virus and mitigate its impact. In this context, the coronavirus has instantly changed how education is delivered, turning every home into a classroom after the necessary regulations. Thereby, the health emergency has exacerbated the disparities that already existed in education. The prolonged closure of schools could reverse the advances of the last five decades, especially in terms of girls' and adolescents' education and young women.

In few weeks, the way students learn changed, and precisely these transformations give us a glimpse of the equity flaws that our educational system continues to present, even in the most privileged circles. The World Economic Forum³ suggests that this pandemic becomes an opportunity to remind us of the skills that our students need just in a crisis like these, thus being informed decision-making, creative problem solving, and, above all, adaptability. Resilience must also be built into our education systems to ensure that those skills remain a priority for all students.

After more than a long year of the pandemic, it is time for governments to focus on strategies that mitigate the impact of the covid on education. It may not be easy, but the path is laid out with at least four strong recommendations. 1) Focus on reopening schools safely, consulting, and considering all stakeholders, including parents and health sector workers. 2) Prioritize education in budget decisions. 3) Education initiatives must reach those most at risk of being left behind, such as people in emergencies or crises, minority groups, the displaced, and people with disabilities. 4) Promote the leap towards progressive systems that provide quality education for all.

With the unexpected emergence and rapid spread of the pandemic, it has been confirmed that local strategic capabilities are crucial. However, at the same time, it has highlighted the imperative need for solidarity and co-responsibility if we are to emerge victorious from the pandemic.

Facing the pandemic has also become a substantial educational equity challenge that can have consequences that alter students' lives in general, without a doubt affecting the most vulnerable. Therefore, governments must promote educational development strategies that minimize the gap that this pandemic has generated.

Although we are apparently on the verge of ending the coronavirus crisis, thanks to the development and implementation of vaccines, we are at a point of no return to our old nor-

¹ Escuela de Ciencias Químicas e Ingeniería, Universidad Yachay Tech, Ecuador.

² Escuela de Ciencias Biológicas e Ingeniería, Universidad Yachay Tech, Ecuador.



Photo by Vlad Tchompalov on Unsplash

mality. The pandemic irreversibly changed us, so the current challenge is to get all of us on the bandwagon of technological development, education and even eliminate the digital gap that discriminates against full access to opportunities.

Covid 19 is as close as humans can get to a wake-up call. The pandemic exposed how, and vulnerable our world economy is and how flawed and monetary biased our priorities are. However, on the plus side, it has also highlighted the scientific community's role in guiding governments and the importance of investing in science. It taught selflessness to prioritize isolation and confinement since stopping the disease is more critical when weighted against the psychosocial and economic effect this represents⁶. Finally, we have learned the importance of paradigm shifts in terms of the imperative need for scientific discoveries to be at the service of humanity and not as a private business.

Bibliographic references

1. Secretaría General de Sanidad. Actualización n°13. Numonía por nuevo coronavirus (2019-nCov) en Wuhan, provincia de Hubei, (China). Cent. Coord. Alertas y Emergencias Sanit. 1-6 (2020).
2. Organización Mundial de la Salud. Allocución de apertura del Director General de la OMS en la rueda de prensa sobre la COVID-19 celebrada el 11 de marzo de 2020. Discursos del Director General

de la OMS 1 <https://www.who.int/es/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> (2020).

3. Foro Económico Mundial. El Foro Económico Mundial. <https://es.weforum.org/> (2020).
4. Open Access to COVID-19 and related research. <https://www.openaccess.nl/en/open-access-to-covid-19-and-related-research>.
5. Tavernier, W. COVID-19 demonstrates the value of open access what happens next? *College and Research Libraries News* vol. 81 226-230 (2020).
6. Omar Domínguez-Amoroch, Luz Mery Contreras-Ramos, Laura Patricia Amaya Díaz. Cuarentena y COVID-19, una percepción más allá de la infección. *Revista Bionatura* vol. 6 1679 (2021).