

Future of Jobs and Futures Thinking in the Time of COVID-19 and Beyond

Ernelea P. Cao

Introduction

The COVID-19 pandemic has changed how people conduct their daily lives. In the Philippines, it has affected schools, livelihoods, and even our home life. The COVID-19 pandemic, even if resolved by the discovery of vaccines and/or treatment, will not be the last of our health crises. There will be new viruses or pathogens that will evolve, leading to new and/or re-emerging diseases in our future. Therefore, we need to prepare not only for our actions in the time of the COVID-19 pandemic but also beyond it.

How do we prepare our youth for future jobs in the light of COVID-19 and the consequent restricted work environments due to the need for quarantine and isolation measures? So much has been discussed on new modes of delivery for teaching and learning. This paper deals with the emergent jobs and the strategies needed in order to enable our students to cope with the changing work landscape.

Futures thinking, according to the Organisation for Economic Cooperation and Development (OECD), is “a multi-disciplinary approach to examining transformations in all major areas of social life, including education” over the next several decades (n.d.). Despite the fundamental, long-term impact of education on individuals and societies, futures thinking has been neglected in education in comparison to other policy sectors such as energy, transport, and the environment. Long-term policies should therefore be implemented since future national and global crises will not

only involve COVID but other diseases and catastrophes that we might have never imagined.

Moving Forward

The International Labor Organization (ILO) data on the labor market impact of the COVID-19 pandemic reveals the devastating effect on workers in the informal economy and on hundreds of millions of enterprises worldwide. Based on the Labor Force Survey of the Philippine Statistics Authority (PSA), the unemployment rate in the country was 10.2 percent in 2020. More than 420,000 Filipinos permanently lost their jobs, while 4.5 million workers were affected by the unstable work arrangements and temporary closures of businesses, according to Department of Labor and Employment (DOLE) Assistant Secretary Dominique Tutay (Gutierrez, 2021). As the COVID-19 pandemic and community quarantines dragged on, the PSA's Labor Force Survey conducted in February 2021 showed that 4.2 million were unemployed and 7.9 million took pay cuts from shorter working hours (PSA, 2021). The slowing and closing down of businesses, particularly in the recreation, food, accommodation and tourism industries, have resulted in the economy suffering a deep recession in 2020, with the gross domestic product (GDP) falling at 9.6 percent. In March 2021, a year into the lockdown, the GDP dropped to 4.2 percent, with new surges of the COVID-19 cases forcing entire cities and provinces into enhanced community quarantine once more.

As a consequence of economies slowing or closing down, job competition and security will continue to be precarious. The challenge therefore is to create new jobs or new markets where our students and/or graduates can come in. Since long distance supply chains may not be working during a pandemic, businesses or organizations may have to look for more local suppliers and customer relationships. In general, there is a need to develop new approaches to how and where people work.

Leon C. Megginson in 1963 said that, "It is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself." This was probably an allusion to Charles Darwin's theory of natural selection, and being a Biologist myself, we find

that this is true of any organism, including us humans. The key word here is **adaptation**, and our educational system must provide the environment so that our graduates can adapt, whether it involves science and technology, business, or culture and the arts. Leaders in all sectors will have to focus their efforts from survival to adaptation. Yes, we must survive this pandemic, but for the long-term, we need to adapt to the “new normal” as well as to its future iterations.

Even before the pandemic, many companies and organizations had already shifted to the **mobile way of working**. Given the accessibility of communication and information technology, people can work anywhere and anytime without transportation issues. This is envisioned to be the widely adapted mode of working in the “new normal” where people do not need to travel to go to offices or physically meet clients. The **homes will be structured both as an abode and a workplace, and even a school space for remote learning**. There will be a **high demand for designers and builders to make small spaces that are multifunctional and efficient**. Probably small working hubs will be built very near homes to be accessed by walking or cycling (Barnes, 2020) for meetings or paper works that cannot be done remotely. Such may be the new norm in the workplace where organizations will migrate from the big buildings that house all employees to small local hubs for a few people at a time. This will address the need for humans to socialize and re-enforce the team spirit and a sense of belonging but in smaller groups and where social distancing can be practiced. This will also provide a safer work environment compared to congested offices and transport terminals (again COVID or no COVID). However, the challenges for such hubs would be the limited amounts of land as well as the fact that the majority of the working class live in small homes or apartments unsuitable for work. Most will still benefit from having access to office spaces, often in high-rise buildings as a solution to spatial limitations. In this scenario, **what most needs to be addressed in order for students, future graduates, and all working people to be able to adapt and have a better future are still the basic public services, such as efficient public transportation, better urban planning, and healthcare services**.

Eighteen months¹ and counting of community quarantine has shown that there is and will be a reliance on the **online mode** as the safest means of conducting learning activities as well as the delivery of services either from

the government or private sector. The internet will continue to maneuver our daily lives. There are now even virtual museums and online theaters because we need to feed not only the body but also the soul and the spirit. To these, the **first order of things would be for the government to establish the necessary infrastructure to provide and improve internet connectivity for every Filipino. To make internet service free would actually make it accessible to every student and worker.** In the 2019 report of Secretary-General of the United Nations António Guterres on the progress of the Sustainable Development Goals (SDG), he noted that in many countries, the capacities of teachers and the quality of education have not kept pace with the rapid technological changes. He connected this with how developing countries still lack basic infrastructure and facilities such as electricity, drinking water, the internet, and computers. There is, therefore, an urgent need for our government to provide for these basic necessities and strengthen **nationwide infrastructure in IT hardware and software as well as cybersecurity measures.** If we will not do this, we cannot adapt to the changing education and work landscape.

Educational Support

Automation will be used by different sectors (production, manufacturing, transport, healthcare, etc.) not only to reduce the risks of human exposure to COVID and similar future infections but it will also allow faster and more efficient delivery of services. This, however, does not mean removing humans from the labor force since the **driving force for the development of automated machines or robots or even artificial intelligence will still be the human mind.** Therefore, **the education sector should redesign or reinvent all curricula to adapt to this working landscape.** While there has been an increase in the number of higher education institutions during the last three years (1,906 for AY 2017-2018; 1,963 for AY 2018-2019; 1,975 for AY 2019-2020) and a corresponding increase in enrollment and number of graduates (Commission on Higher Education [CHED], n.d.), the impact of the COVID-19 pandemic is still to be determined for AY 2020-2021 as no data is available yet. What is notable in the data obtained is the higher number of private institutions compared to State Universities and Colleges (SUCs), Local Colleges and Universities (LCUs) and Other Government Schools (OGS). For AY 2019-2020, there were more faculty with graduate degrees from private institutions (32,111 with MS/MA and 11,056 with PhD)

than public institutions (24,325 with MS/MA and 10,354 with PhD). With this, the performance of both private and publicly-funded HEIs during the pandemic remains to be seen. Of consideration is the students' and teachers' access to online teaching and learning modes. Institutions of higher education will eventually depend on the quality of graduates that will come from high schools all over the country. The OECD Programme for International Student Assessment (PISA) 2018 results show that the Philippines scored 340 points in reading, below the average of 487 points of OECD member and partner countries; 353 points in mathematical literacy, below the average of 489 points; and 357 points in science, below the average of 489 points (OECD, 2021). The PISA measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges. Given the poor performance of Filipino students from the basic education level, there is a strong need to strengthen the capabilities and facilities not only of students but of teachers as well. This could be done by taking advantage of the large 2021 budget allotted for the Department of Education for the development of learning materials and retooling of teachers. Only after such has been addressed will the country be able to move towards producing graduates who can adapt to and thrive in new work modes and new work skills.

Let me also emphasize the need to address the inclusion of Filipinos who had none or limited access to education, as well as those who lost jobs due to the pandemic, and the need for other means of livelihood, the creation of essential new jobs, and the education/training modes these entail. This then also brings the challenge to non-formal education programs.

With the above considerations in mind, education should focus on the development of the following among students:

1. **Critical thinking necessary for complex problem solving**
Filipinos are gifted with innate talent. Even with the meager resources available to many students in the country, **given the opportunity**, we find our students able to adapt and compete in universities abroad for higher studies. The presence of a Filipino in any part of the world performing various jobs attests to the varied skills that we are capable of learning. Access to quality education that involves critical thinking instead of rote learning must be ensured for every

Filipino so that everyone can be equipped to contribute in different ways to the solution of our many problems.

2. **Creativity necessary for innovations**

Innovations are necessary in healthcare, from preventive medicine to diagnostics to therapeutics; in agriculture and fisheries, from the farm to the market; in energy sources and utilization; in accessible and efficient mass transportation; and in information and communication technology. The creativity necessary for these larger goals can and should be instilled and cultivated from childhood within a well-developed and well-implemented education program.

3. **Interdisciplinary knowledge necessary for collaboration in different fields**

Effective and inclusive problem solving in education and in work environments require **a holistic approach**, which gives importance not only to the hard sciences but also to cultural, social, and historical knowledge. The value of collaboration cannot be overstated, because solutions and innovations in all fields benefit from access to a broad range of perspectives and expertise. This is possible and strongly supported by the human need for social interaction in order to learn and learn continuously, to stay engaged, and to stay well (with or without COVID-19). Though many aspects of work can be done online, there is an urgent need for the implementation of safety standards that will allow for safe and healthy modes of work and collaboration, which will help ensure that our society can continue to function and grow.

Endpoint for the Future

At the end of it all, what we must establish is an **enabling environment** so that **our graduates will be Creators of Technology instead of Filipinos simply being Buyers of Technology**. In this way, we will not be at the mercy of foreign technologies which are often expensive and

inaccessible to many. For this, I will make my **second pitch to the government, which is to support the development of science and scientists in the Philippines.** For 2021, the Department of Budget and Management (DBM) only approved ± 23.8 billion for the Department of Science and Technology (DOST) compared to the proposed ± 36.2 billion budget of the agency to support its numerous research and development projects (DBM, 2020). The agency was not even among the top 10 departments that received the highest funding. Fortunately, funding for the DOST's proposed Virology Institute has been included in the national government's Build, Build, Build program. However, the need for research and development cannot be overemphasized in order for the country to prepare itself not only for future pandemics but for other ongoing and future natural disasters and catastrophes due to global warming and climate change. Otherwise, we will be caught with the same difficulties such as those we are experiencing with the COVID-19 pandemic not only in terms of the loss of lives but also the losses to the economy. Without support from the national government, more students will be discouraged from pursuing a science career.

Graduates of science programs have job options limited to teaching, research of short-term projects, and the handful of consumer goods companies. This contrasts to how scientists overseas are often employed in biotech or pharmaceutical companies and conduct long-term research programs. Science in the Philippines has not been given the support for it to be a thriving career; for example, we have no local companies producing chemicals and equipment necessary for our laboratory activities and for use in hospitals, and no incentives are available for putting them up.

Now more than ever, during this pandemic, we have come to realize the gravity of a lack of a strong healthcare system. The challenges we face with regards to testing and treatment for COVID-19 shines a light on the need for the government to consistently invest in laboratories and training of capable scientists.

The success of South Korea as one of the first countries to conduct mass testing for free and to continue daily living safely without quarantine and without paralyzing the economy can be substantially attributed to strong government support for science and technology resulting in a high number of biotech companies and competent scientists. **We need and can develop**

our own technologies, providing jobs for our equally competent science graduates who can be in the service of our people. These technologies can range from locally-produced respirators, laboratory equipment for diagnostics, mobile devices and apps for forecasting and information dissemination, as well as medicines and vaccines not only for COVID-19 but also for other diseases. The Philippines is a biodiversity hotspot. We have unique or endemic species of plants, animals and even microorganisms that can be potential sources of drugs and other pharmaceutical products, and we should be able to harness them in sustainable ways.

Lastly, what will be the role of the teacher or the educational system? **Teachers should be trained and regarded not as the Source of Learning but the Facilitator of Learning.** In an age where learning materials abound in the form of textbooks and online resources, it is the role of the teacher **to guide their students** to the correct and useful information, and to engage students' questions, which encourages two-way learning. The teacher should also be **capable to help students process vast information** not simply as stored knowledge but **knowledge that will have concrete applications to Philippine society.**

ENDNOTES

¹As of September 2021.

WORKS CITED

- Barnes, H. (2020). *The COVID-19 world and its impact on the future of work*. Workspace Design Magazine. <https://www.workdesign.com/2020/03/the-covid-19-world-and-its-impact-on-the-future-of-work/>
- Commission on Higher Education. (n.d.). *Higher education statistical data*. <https://ched.gov.ph/statistics/>
- Department of Budget and Management. (2020). *PRRD signs the P4.506 trillion National Budget for FY 2021*. <https://www.dbm.gov.ph/index.php/secretarys-corner/press-releases/list-of-press-releases/1778-prrd-signs-the-p4-506-trillion-national-budget-for-fy-2021>
- Guterres, A. (2019). *Report of the Secretary-General on SDG Progress 2019 special edition*. United Nations Department of Economic and Social Affairs Sustainable Development. https://sustainabledevelopment.un.org/content/documents/24978Report_of_the_SG_on_SDG_Progress_2019.pdf
- Gutierrez, P. (2021, Jan. 9). *Unemployment in PH soars to 10.2% due to pandemic: DOLE*. ABS-CBN News. <https://news.abs-cbn.com/business/01/09/21/unemployment-in-ph-soars-to-102-due-to-pandemic-dole>
- International Labor Organization. (2020). *ILO: As job losses escalate, nearly half of global workforce at risk of losing livelihoods*. https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_743036/lang-en/index.htm
- Megginson, L. C. (1963). Lessons from Europe for American business. *Southwestern Social Science Quarterly*, 44(1), 3-13.
- Organisation for Economic Co-operation and Development. (n.d.). *Schooling for tomorrow - The starterpack: Futures thinking in action*. <https://www.oecd.org/education/school/38981492.pdf>
- Organisation for Economic Co-operation and Development. (2021). *21st-century readers: Developing literacy skills in a digital world*. PISA, OECD Publishing. <http://doi.org/10.1787/a83d84cb-en>
- Philippine Statistical Authority. (2021). *Employment situation in February 2021*. <https://psa.gov.ph/content/employment-situation-february-2021>