Back to the Future: Reflections on Post-COVID-19 Higher Education in the United States and the Latin American and Caribbean Region

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A few weeks ago, in what now seems like another era, many universities in the United States were strategizing about how to deal with decreasing enrollment and the associated financial issues (Nietzel 2019). Suddenly, the COVID-19 crisis occurred, and in eight weeks, not just education but the whole world changed. Now the discussion among top university administrators is about what the future of higher education institutions (HEIs) will be after this crisis is over. This article reflects on the future of higher education from a management perspective and argues that while the overall trends identified prior to the crisis will hold, the crisis has drastically accelerated their rate of change and impact. What we expected to be the future is now. Let's explore some of the pre-COVID-19 issues that are drivers of change in higher education and possible scenarios in a post-COVID-19 world.

The Pre-COVID-19 Situation

To begin with, the changing US demographics are not helpful for HEIs. The traditional pyramidal shape of a population with a large base of young people and decreasing numbers as people age has changed to a more evenly square shape. People in their 30s even slightly outnumber those in their teens (US Census Bureau 2018).[1] This means HEIs in the US and in many developed countries are competing for a diminishing traditional

student population market (Grawe 2018). The opposite situation exists in the Latin American and Caribbean (LAC) region, which struggles with growth in the youth population, and where providing access to quality education and related jobs is the current challenge.[2]

The second issue HEIs face is a financial problem. Most HEIs have invested heavily in redesigning their campuses to make them attractive to potential students. Also, in their efforts to compete effectively, universities have increased top-level management staff responsible for developing the latest marketing strategies. All of these factors have steadily increased the cost of education (although not significantly the income of faculty) and the HEIs are not recouping their investments because enrollment of traditional students is decreasing and they receive far less support from the state than before (Piereson and Riley 2020). On the other hand, in the LAC region, national universities struggle because governments do not have enough funds to cope with a growing student population, so their problem is mainly underinvestment. For this reason, many governments in the region have encouraged the formation of private universities to fill the gap. Private universities that started as elite institutions (nonprofit religious institutions) have grown to address the growing education demand

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[1]   US Census Bureau, "U.S. and World Population Clock," https://www.census.gov/popclock/.

[2]   United Nations, "World Population Prospects 2018: LAC and the Caribbean," https://population.un.org/wpp/Graphs/DemographicProfiles/Pyramid/904. This growth will eventually stop. As the LAC region keeps developing, its demographic distribution will start to resemble that of many developed countries. LAC population growth is expected to reach its peak by 2058, when it will start decreasing (CEPAL, "Latin America and the Caribbean: Population Estimates and Projections," https://www.cepal.org/en/topics/demographic-projections/latin-america-and-caribbean-population-estimates-and-projections).

and are currently in a stage of differentiation with an increasing weight of a for-profit orientation (Rama 2016).

A third issue is that potential students have their own financial problems. In the past, US students borrowed from the US government and paid whatever high tuition HEIs would demand. They counted on getting good jobs and being able to start repaying their student loans upon graduation. However, this is no longer possible. While it is still accepted that higher education helps to obtain higher salaries, in particular for fields in the STEM (science, technology, education and mathematics) disciplines, the profitability of higher education for many other degrees, in particular those related to humanities, is questionable.[3] Even the venerable MBA (master of business administration) has lost its panache due to its indiscriminate spread and the trend toward accepting underprepared students in order to keep tuition income. MBA graduate salaries have also begun to decline because they now depend more on the student's experience than on the degree (Simon 2013). Because of this, students tend to be older and have more responsibilities; they are hesitant to get loans and look for ways to decrease their investments while getting the desired, although now questionable, degrees.[4] For this reason, fast and cheap alternatives to college have been promoted as new ways to have a career (Craig 2018).

The financial situation for the college-age student population in the LAC region is even worse because the governments, which have traditionally been responsible for funding education, cannot cope with the growing student population. This has led to the creation of many private higher education institutions. Unfortunately, while some of these universities are successful in academic research and innovation, as shown by Gregorutti and Delgado (2015), many others are of questionable quality and grant degrees, including doctorates, which convey more local respectability than academic expertise.

The fourth, and perhaps most visible issue in higher education, has been the widespread use of technology. Many HEIs have been systematically upgrading their "smart" classrooms and learning-management systems, adopting electronic portfolios, and in general introducing new educational technology. However, even when universities adopt new educational technology, a deeper exploration may reveal that the technology has not been fully assimilated into the teaching process. Mu et al. (2010) found that a successfully adopted electronic portfolio platform was regularly used by only 3 percent of the faculty and only occasionally by an additional 21 percent even five years after its initial deployment. In summary, it is easier to deploy a new technology than to fully assimilate it. This was the situation that virtual education faced prior to the health crisis.

Most HEIs had implemented some form of distance learning for certain courses prior to COVID-19. However, with the exception of certain institutions that specialized in this delivery format, many others resisted it and only a small fraction of their course offerings were available in an online format. COVID-19 ended all resistance to distance learning in just a few weeks. The faculty had no option but to comply by converting their courses to an online format, because unless a course was converted to virtual format, it could not be taught during the pandemic. While there will still be discussions about the effectiveness of virtual delivery after the lockdown is over, at the end of the day the reality is that all courses are now available and can be taught online.

The Future Post-COVID-19

The environment in which HEIs now operate is the same inexorable environment that they had foreseen in the future, with the difference that it is now here in the present. Some possible scenarios for higher education in the post-COVID-19 era can be suggested, based on a first extrapolation of existing trends.

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[3] More students are taking STEM and business classes than humanities and the arts (Wright 2016).

[4] Another important fact is that for the first time in the US history there are more female college students (56 percent in 2016) than males (National Center for Education Statistics, "Fast Facts: Enrollment," https://nces.ed.gov/fastfacts/display.asp?id=98).

The global financial crisis will exacerbate the economic problems of HEIs and many will be forced to close, merge, or drastically downsize. The number of students who need to work while in college will increase. In the LAC region, it is expected that there may be a steady increase in private institutions to educate (and profit from) the growing student population (in particular those with fewer resources, who after COVID-19 will have even less). However, even private HEIs need funding, which will also be scarce in the region due to the economic situation. This may drive the faster development and availability of open electronic resources for students. This change will be driven by students who may consider it financially unattainable to pay $200 for a textbook while a similar alternative (even if we concede it to be of slightly lesser quality academically) is available for free. This trend is already happening and will grow much faster now. Similarly, there is greater reliance on open access journals by students, scholars, and libraries due to easy accessibility and low costs, if any. In general, there is a trend toward open initiatives such as open electronic resources, open access journals, open data, and even open science.[5]

The traditional faculty job where a professor joins the full-time faculty body of an institution of higher education will definitely be gone. There was already a gradual trend in this direction, with less than 30 percent of faculty positions currently being either tenured or full-time (American Association of University Professors 2016), but this trend will increase exponentially after COVID-19. In the LAC region, a growing demand for faculty should be expected, but similar to the US, institutions will prefer to hire adjunct faculty, which has already been the majority model in the region.[6] In general, the traditional faculty full-time job model will be reserved for program chairs and deans, while the faculty body may become simply instructors for hire. How will this impact research and education? In terms of research, this activity may be restricted mainly to faculty in elite research-oriented institutions. Another effect of the adjunctification process, not usually mentioned, is the difficulty of mentorship, the process by which a faculty member guides a promising student, usually informally, beyond the boundaries of a course and a classroom. Because adjuncts are available only during specific instruction times, mentorship is neither part of their responsibilities nor easy to do for temporary faculty. This is a serious drawback because the most powerful influence in the classroom is and will continue to be a great teacher (Jukes and Schaaf 2019).

Because of the above scenarios, there may be specialized producers (e.g., Coursera, Udemy, edX) which will sell courses and programs to different HEIs. It will be similar to the situation of independent producers that sell their programming to TV stations (just think how many programs on the History Channel are not produced there). This makes business sense because HEIs need to adapt more quickly to the latest disciplinary trend to compete in the market. To illustrate the problem let's use an example from information technology management in universities. As soon as schools hired an expert in knowledge management, virtual worlds (e.g., *Second Life*) became the trend, and by the time a suitable expert in this area was brought onboard, big data had become the important topic, and then right after this, teaching artificial intelligence was needed. Traditional hiring of full-time faculty and staffing cannot follow this pace of change. Hiring task-oriented and temporary faculty is a

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[5] See OER Commons, https://www.oercommons.org/; Open Access 2020, https://oa2020.org/; Open Data Handbook, https://opendatahandbook.org/. Open data is data that can be freely used, reused, and redistributed by anyone, subject at most to requirements for attribution and sharing. Open science involves opening all the researcher's data, notes, and codes to all researchers and institutions around the world so research can be accelerated and there is faster access to data. In a sense research is carried on in a transparent and collaborative way. See "What Is Open Science? Introduction," Foster Open Science, https://www.fosteropenscience.eu/node/1420.

[6] To understand the sad extreme to which "adjunctification" can lead, read "Death of an Adjunct" (Kovalik 2013), which sparked a labor debate all over the country. For a more balanced discussion read "Straight Talk about 'Adjunctification'" (Jenkins 2014).

more flexible response to these trends.[7] A faculty job can be divided into tasks ranging from curriculum development to course preparation, course instruction, and assessment. If in the past HEIs would assign courses to adjunct faculty, now HEIs can either outsource or automate specific tasks such as course development, course preparation, course instruction, and even course assessment. This has been called the learning (teaching) just-in-time era (i.e., right when it is needed) to contrast with the previous just-in-case era (learn it in case you need it). This is simply an extension to education of the management principle of manufacturing a product just in time to deliver it, rather than stockpiling inventory in warehouses in case it is needed. The ability to provide the knowledge that is needed and when it is needed is key, and for this reason, to be quickly adaptable, the new role of faculty will be to become expert generalists (Jukes and Schaaf 2019).

Although the sudden change to virtual instruction has caught many institutions in the US unprepared, and institutions in Latin American and the Caribbean have had difficulty adapting to the new format, the greatest change in education may occur because of the sudden acceptance and respectability of massive open online courses (MOOCs) that are provided by companies such as Coursera, Udemy, and HEI consortia like edX. By providing instruction to hundreds of thousands of students worldwide, these companies reach impressive economies of scale and can provide customized and trendy courses and programs in a short amount of time. Until recently, the acceptance for credit of a Coursera MOOC, "Human Computer Interaction," by the University of Helsinki was seen as a typical Finnish rarity (University of Helsinki 2012). However, many highly respected universities have also started producing MOOCs of their own in the US and the LAC region. In the US, MIT created the not-for-profit MITx in 2012. Harvard,

as well as other institutions such as the University of California, Berkeley, the University of Texas system, Boston University, and others have joined the group, which has been renamed edX.[8] This shows that large, resourceful institutions can join efforts to produce MOOCs. In the LAC region, the University of São Paulo in Brazil, in partner with Coursera, and the Universidad Nacional Autónoma de Mexico, in partner with Veduca, have also started to offer MOOCs.[9] Why is this important? A MOOC approach offers the ideal financial model for HEIs (cost per student is very low) and for students (course tuition is very low). Furthermore, this MOOC approach can obtain synergy with the trend current growing, albeit slowly, in the US toward competency-based education. One tenet of competency-based education is the redesign of the education system around the assessment of students' learned competencies independently of how they have been acquired (Fain 2019). One sign of this trend is that several of these MOOC providers have begun to offer degrees even at the graduate level at very affordable tuition prices.

Conclusion

The COVID-19 crisis has instantaneously enacted the educational environment that was being feared prior to the health crisis in terms of both problems (HEIs' and students' dire financial prospects) and opportunities (technology). The widespread use of virtual instruction during the pandemic may have led to a cultural change in education. Virtual instruction is now acceptable because HEIs have shown that it was a valid form of instruction during the crisis, and it has been used by almost every educational institution worldwide during the past weeks.

On the basis of the above trends, an extrapolation of what the immediate future has in store for higher education has been developed, at least

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[7] Cognizant Consulting's Center for the Future of Work has recently released a report indicating 42 trends that will shape the future ("From/To: Everything You Wanted to Know about the Future of Your Work but Were Afraid to Ask," https://www.cognizant.com/future-of-work). One of them is the subdivision of jobs into tasks. While in the past, organizations would benefit from economies of scale by outsourcing jobs, now the idea will be either to outsource or automate job tasks. This could be called outsourcing at a micro level. An additional caveat is that the Internet allows outsourcing at a global level.

[8] See edX, https://www.edx.org.

[9] See Gomes (2013); Universidad Nacional Autónoma de Mexico, "Massive Open Online Courses (MOOC)," http://dec.fca.unam.mx/mooc.php.

from a management perspective. However, this approach cannot be exhaustive in terms of trends, their impacts, or even bibliography. More important, it does not allow for the discussion of interactions with weakening or strengthening effects among the trends, or what Alexander (2020) has called "metatrends." Furthermore, it does not (and by definition cannot) incorporate the appearance of sudden unexpected and unprecedented events. Still, a first approximation of the near future of higher education has been attempted here, to provoke thought and discussion. While it is not possible to predict the future accurately, we can be certain that higher education, as we knew it, is dead. Long live higher education!

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