How COVID-19 will Affect the Future of Universities

Yuqian Zhang, BA\textsuperscript{1}; Lina Lombo\textsuperscript{2}; Jasrita Singh\textsuperscript{3}; and Austin Mardon, Ph.D, CM, FRSC\textsuperscript{4}

\textsuperscript{1}McGill University, Montreal, QC, Canada. \\
\textsuperscript{2}University of Western Ontario, London, ON, Canada. \\
\textsuperscript{3}McMaster University, Hamilton, ON, Canada. \\
\textsuperscript{4}University of Alberta, Edmonton, AB, Canada. \\

E-mail: yuqian.zhang@mail.mcgill.ca* \\
amardon@yahoo.ca

ABSTRACT

As a result of the COVID-19 pandemic, most post-secondary schools are going to be more reliant on digital forms of instruction for an indeterminable amount of time. As universities search for ways to improve teaching and learning and to keep students and staff healthy, their ability to do so might be compromised by the drop in funding which renders them more amenable to governmental decisions. A blended or hybrid learning model is recommended as it maximally accommodates for students with different needs. 

(Keywords: COVID-19, higher education, blended or hybrid learning model).

INTRODUCTION

Most Canadian universities continue to deliver their courses online through the winter semester of 2021. This comes with little surprise as Canada undergoes a second wave of COVID-19\textsuperscript{12}. While some universities like McGill are considering introducing more in-person activities for the winter term, this ultimately depends on the public health situation in the new year. Currently, with COVID-19 cases skyrocketing in many provinces, the opening up effort has to give way to virus control. Even Canadian Mennonite University – one of the few universities in Canada offering full-scale in-person teaching this fall – has recently announced a temporary suspension of all in-person classes as Winnipeg’s pandemic alert moves to code red\textsuperscript{3}.

The fact that students are not physically present in the campus and are learning from home in different cities, countries, and time zones has immediate and long-term consequences. For students, distance learning means not being physically present with their peers, struggling to find quiet places to study, and juggling online classes with family schedules and responsibilities. The quarantine has also likely disrupted their personal and academic plans. In general, students report lower satisfaction with their education\textsuperscript{8} and mental health issues have surged\textsuperscript{9}. For universities, the pandemic has brought immense financial strain due to the loss of revenue from international students. Moreover, they face the acute pressure to transform the way they operate in order to meet the evolving health protocols, if they want to open again. Those changes are going to have impacts on students of the current and future generation.

UNIVERSITY FINANCES TAKE THE HIT

Canadian universities rely on government funding (45.8\%) and tuition fees (29.4\%) for approximately three-quarters of their revenue\textsuperscript{10}. The majority of the tuition fee comes from more than seventy thousand international students\textsuperscript{5}. In McGill University, for example, an undergraduate science degree costs $45,656.40 for an international student, compared to $2,622.90 for a local student\textsuperscript{6}. As national governments bring in travel restrictions in response to the pandemic, a recent report by Statistics Canada projects that, for the 2020-2021 school year, universities will witness a $377 million (0.8\%) to $3.4 billion (7.5\%) loss in revenue, depending on the scenario\textsuperscript{10}. Possible reasons for the decrease include reduced international student enrolment, as well as changes in domestic student enrolment and the loss of revenue from ancillary services.

Anticipating revenue losses, there are several directions universities could take. They could
reduce the cost, or try to increase the revenue by either raising tuition - a wildly unpopular option, especially given that students are already unsatisfied with courses going online - or resorting to government support. Many institutions have already announced plans to reduce operating costs; and as school expenditure mainly goes to salary and capital purchases, this might lead to staff layoff and fewer new facilities. In addition, universities could count on government subsidies. As part of the national COVID-19 response plan, the Trudeau government is currently covering up to 75% of wages for university and health research institute employees and up to 75% of total eligible costs for research activities⁴.

While there has not been signs in Canada that the subsidy to universities comes with a condition, in other Anglo-Saxon countries, the state did not pay universities’ bills for free. In both Australia and Britain, governments push universities that receive COVID loans to change their fee structure and focus more “on subjects that either deliver high wages … or are judged to be particularly important to the country”¹¹. In Australia, this entails lowering fees for subjects like clinical psychology and agriculture while doubling the cost for humanities courses.

The same tension between the government and liberal arts could also be observed in the US, where former President Trump complained that “too many Universities and school systems are about radical left Indoctrination, not education”¹³. While the election of Joe Biden might change America’s policy direction concerning higher education, the idea is that as universities become more reliant on government financing, they might have to increase their compliance with the governments’ agenda.

**WILL UNIVERSITY EDUCATION EVER BE THE SAME?**

As universities attempt to cut their budget, discussion of permanent online education to reduce the cost of maintaining in-person teaching environments becomes prevalent. This may be especially important given the increased cost of implementing post-COVID health measures including more frequent cleaning, availability of masks and hand sanitizers, better ventilation, and a larger space. Online education platforms such as Coursera have so far mostly confined themselves to providing vocational classes to mature students. While a growing number of universities are providing their degrees online, the percentage of undergraduate students enrolled in exclusively distance education programs was only 13.3% by 2017. This number has boosted to 97% since COVID and is likely to stay high in the immediate aftermath of the pandemic¹.

In Singapore, where there has been a COVID outbreak but now the virus is more or less under control (fewer than 10 cases per day, as of November 2020), the president of the National University of Singapore still does not foresee any return to pre-COVID-19 learning⁷. Hybrid learning – a mix of physical in-person and virtual teaching – is and will continue to be used to minimize the number of people on campus, alongside extensive health precaution measures like contact tracing.

Taiwan is one of the few places where universities have fully returned to in-person teaching. However, Taiwan has never had more than 30 daily cases to begin with; and even then, according to government protocols, a university should be prepared to switch to online teaching as soon as it has 2 confirmed cases².

**THE DOUBLE-EDGED SWORD OF ONLINE LEARNING**

Even in the best-case scenario, online learning remains an indispensable backup plan. This might be bad news for the 63% of US college students who reported the online instruction they receive has been worse, compared to in-person instruction¹. The majority of the complaints arise from the lack of the sense of involvement due to reduced interaction with the instructor and peers⁸. Besides, some subjects – labs and field work, for example – are extremely difficult to be replaced online. Technology access issues are also more prevalent than they may appear. Almost half of the students experience internet connectivity issues at least occasionally, a quarter have faced serious hardware or software problems, and ten percent lack access to personal computing devices and need to share the device with others. Moreover, both academic and technological challenges are more frequently experienced by low-income, underrepresented, and rural students. On the other hand, a small portion of students report preference for online instruction; reasons include not having to spend
time and money on commuting and more flexibility with when and where they do the learning.$^8$

Much of the discontent has to do with the abrupt transition to remote learning for both students and instructors. Remote learning demands increased motivation from students. It also requires different practices from instructors. 85% of online students who have previously taken online courses feel their distance learning experience is the same or better compared to face-to-face instruction, in contrast to 36% of students in general.$^1$

Undergraduate students have had worse experiences with COVID distance learning than graduate students. It has been more commonplace for graduate programs to be taught entirely online (28.9% vs. 13.3% for undergraduate programs)$^1$, which could have been part of the reason why graduate schools adapted better in the face of the pandemic. It is probable that some of the initial difficulties with distance learning will fix themselves over time. However, unpreparedness should not overshadow the structural difficulties associated with the new learning medium.

CONCLUSION: WHERE TO GO FROM HERE?

The pandemic has shaken up many sectors of society, and post-secondary education is one of them. Due to various reasons including budget cuts and public health concerns, most schools are going to be more reliant on digital forms of instruction for an indeterminable amount of time. E-learning favors students who are highly autonomous and who have difficulties maintaining physical and timely attendance, and on this matter, it is a platform with plenty of potential. It disfavors students who have technology access issues, are dependent on the concrete resources that school provides, or simply have different learning styles. As universities search for ways to improve teaching and learning and to keep students and staff healthy, they will need to take into account, the specific challenges faced by this latter group of students.

Notably, all the effort will have to be taken under the constraint that universities are going to have less funding at their disposition and they are going to be more amenable to governmental decisions. This might compromise their ability to correspond to the needs of disadvantaged students through material means, especially in the humanities discipline. On the other hand, extreme circumstances might catalyze innovations.

Practices such as more frequent assessments, personalized feedback, and interactive activities have been proven to heighten student satisfaction with their courses overall.$^8$ In addition, a blended or hybrid learning model is generally recommended as it maximally accommodates for students with different needs.

REFERENCES


Survey of Undergraduates During the COVID-19 Pandemic”. Digital Promise: San Mateo, CA.


ABOUT THE AUTHORS

Yuqian (Lillian) Zhang, BA, is a nursing undergraduate student at McGill University. She also holds a Bachelor of Arts (B.A.) in Sociology from McGill University. Her academic interests are in public health and policy making.

Lina E. Lombo, is a medical sciences undergraduate student at the University of Western Ontario, a scientist, author, and health advocate.

Jasrita Singh, is a student in the Faculty of Health Sciences at McMaster University, specializing in biomedical discovery and commercialization. Her research interests are in translational medicine and synthetic biology.

Austin Albert Mardon, Ph.D., CM, FRSC (University of Alberta), is an Adjunct Professor in the Faculty of Medicine and Dentistry at the University of Alberta, an Order of Canada member, and Fellow of the Royal Society of Canada.

SUGGESTED CITATION


Pacific Journal of Science and Technology