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Completing a Doctoral Dissertation During a Global Pandemic: Lessons Learned

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Abstract

In March 2020, when the World Health Organization declared a global health emergency, I was a doctoral student at the University of Calgary. I was about three-quarters of the way through the program and was in the early stages of data gathering for my dissertation. The interruption to my studies was sudden and abrupt.

Fortunately, I was able to continue interviewing research participants after a six week pause, but in a manner dramatically different than planned. I was also able to lean heavily on technology to adapt to the new conditions. The topic of my dissertation was collecting faculty perceptions of the need and urgency for change in the publicly funded postsecondary education system. Ironically, my participants identified technology as a major force of change in their paradigm as well.

While completing the writing of my dissertation, the results of my data analysis and new literature being published magnified the strength of my findings. In hindsight, I realize that the timing of my work bridged the pre and post-pandemic environments. It also happening in real time, at a pace that might be unprecedented.

While the pandemic cannot be declared over, it has already become clear that the nature of academic research has been irrevocably altered and that the publicly funded post-secondary education system has been similarly impacted. The results of my research provide a clear view of some of those changing conditions and allows us to project some perceptions of the future of the system.

Keywords: global pandemic, publicly funded postsecondary education system, change, faculty perceptions, technology

Introduction

Doctoral work is conducted over several years and features a number of critical points and milestones. Dramatic events in the course of a program can have devastating impacts on the candidate as well as consequential outcomes to the research conducted. Add in time sensitivity and the financial implications of extended deadlines and the "normal" experience is a mixture of stress and worry. Occasions of "hurry up and wait" are also commonplace. Reliance on an institution's computer network and associated software was fine, as long as problems did not arise.

I began my doctoral journey on July 8, 2017, with a projected four-year time horizon. I experienced the normal challenges described above. Then, on March 17, 2020, the Government of Alberta declared a health emergency (Bartko & Heidenreich, 2020, n.p.). Post-secondary institutions in the province of Alberta were ordered to close their doors and to prepare to teach their students using distance delivery methods until further notice. As a full-time instructor and a doctoral student, I faced a dual challenge.

I was approximately three-quarters of the way towards completing my doctoral program; the research proposal for my dissertation had been accepted by my committee on November 29, 2019, and I had received the final ethics board approval on March 1, 2020. My methodology was heavily reliant on face-to-face interviews of faculty members. At our institution, we were given one week to transition our classes for distance delivery. I was too busy to consider booking further interviews and potential participants were likely also too busy to consider invitations to participate. Details of my response to these unanticipated developments follow, including a more detailed description of moments of adaptation. Finally, I share some reflections and lessons drawn from the experience, strengthened by hindsight gained in the year following the completion of my dissertation.

Before proceeding, I'll take a moment to acknowledge that, as a graduate student, I was not alone in facing new and unanticipated challenges. While the particular circumstances described in this article were my own, fellow academics were also confronted with similar dilemmas. I also note wider societal implications, in part, reflected through the increased usage of phrases such as "social distancing" and "fully vaxxed" and the sudden overuse of the term "pivoting." The following discussion expands on my experiences with these elements.

A Doctoral Student's Conscientiousness

A quick review of a key student perspective: I was new to the process of writing a dissertation, the process of applying for ethics approval, the implications of the conditions to which I agreed and, in general, the parameters within which I was to operate. That said, I had approached my doctoral dissertation with the proper perspective – striving to meet all conditions and the highest ethical standards. Furthermore, I perceived that the research proposal approved by my Committee on November 29, 2019, was akin to a contract between myself and the Committee. Two sets of ethics approval were required: that from the University of Calgary and the second from the institutions where the research would take place. I received the second of those approvals on March 1, 2020.

The data collection process started smoothly and according to plan. Research participants were recruited via email through the use of a third party. Invitations were sent out on March 2, 2020, setting the stage for my first interview which was conducted on March 10, 2020. I was able to complete two more face-to-face interviews before the sequence of events triggered by the declaration of the health emergency forced a stoppage. At this point, I needed time to reassess my plan and to seek guidance from my supervisor.

Despite the burning desire to keep going, my earliest decision was to suspend my research activities. The early response rate to participate in the interviews had been lower than anticipated and I did not want to antagonize potential future participants by contacting them during the one-week period which they had been given to convert their face-to-face courses to a distance delivery format. Besides, I was experiencing the same circumstances. At first, I did not know how long I should delay; after a week or so, it was clear that I should postpone any further research activity until the winter term was complete. My target date for resumption was May 1, 2020.

I planned to use virtual meeting software for the delivery of my classes. It seemed logical that I would also then consider to use it to meet with future research participants. For my face-to-face interviews, I had created a slide presentation to guide us through the semi-structured interview questions. As I gained more competence in the use of the virtual meeting software, I was able to prepare a document file that could essentially replicate that feature. Furthermore, I discovered a feature of the program which would allow me to utilize voice recognition to capture my research participant's comments and convert them into text. I refined the process as I proceeded, including enhancing the data transcription by completing minor edits immediately after an interview had been conducted. In the meantime, I was able to hold a remote meeting with my supervisor and gain his assurance that these changes in research process were still in line with the proposal intentions.

All interviews conducted during the pandemic were conducted using remote meeting technology and software. I ran those sessions from my office, while the respondent participated from a location of their choosing.

The Academic Foundation of my Research

I sought answers to two research questions:

- 1) What were the perceptions of faculty in an Alberta comprehensive college with respect to the need for change in many aspects of the publicly funded post-secondary education sector?
- 2) To what degree did these faculty see need for change and urgency of that change?

The core of my research proposal had been built on the paradigm presented by Barber et al. (2013) in their publication, *An Avalanche is Coming: Higher Education and the Revolution Ahead*. They stated that a "deep, radical and urgent transformation is required in higher education" (Barber et al., 2013, p. 3). They identified and described 10 components of a successful 20th century university, then explained that "the traditional university is being unbundled" (Barber et al., 2013, p. 5), delivered in a variety of new ways and by a host of non-conventional providers in the 21st century. Essentially, their message was that institutions who failed to adapt to this new operating environment might be swept away (Barber et al., 2013). They set an urgent tone and intimated that time was of the essence (Barber et al., 2013). I heeded their warning, and wondered if my colleagues felt the same way.

Lawrence Summers, president emeritus of Harvard University, in the foreword of their publication, framed the discussion:

The fundamental question in *An Avalanche is Coming* is whether a university education is a good preparation for working life and citizenship in the 21st century or, more precisely, whether it will continue to be seen as good value, given the remorseless rise in the cost of a university education over recent decades. (Summers, 2013, p. 1)

The authors' ominous prediction was duly noted: "While some incumbents will thrive ... others will suffer and some will go under" (Barber et al., 2013, p. 48). This was definitely a dramatic statement. Noting that this prediction had been made pre-pandemic, I returned to contemplate that statement many times.

I would not be asking my research participants to do any preparation for the interviews so, I had to prepare to review a wide variety of responses. My literature review, therefore, was purposefully wide and far-ranging. As I anticipated, much of that research material was not relevant to the resulting product. Therefore, I limit the following discussion to the most pertinent of those resources, gathered before the pandemic. In a later section, I review material gathered while the pandemic was underway.

The following brief discussion of reference sources is organized along the lines of two key themes: the first, is a listing of key works highlighting the evolution of the modern post-secondary education system. The second is an exploration of modern leadership concepts, especially as they apply to publicly funded post-secondary education institutions. Essentially, these perspectives are shared to demonstrate my foundation for discussion of the current context as well as to provide a contrast for future conditions that are discussed.

Wernick (2006) established historical context by reminding us that a university "is an archaic institution and can claim to have a more or less continuous history over more than two millennia" (p. 557). The writings of John Henry Newman and the contributions of Wilhelm von Humboldt were noted as important historical developments in the 19th century. The release of the Robbins committee report in Great Britain in 1963 provided more modern foundational concepts.

The modern era of universities can essentially be traced to the second half of the 20th century. Two major social influences pressured changes to universities: the shift in political power

from the elites to the middle classes and the rise of nationalism versus internationalism (Anderson, 2010). In the 1960s, approximately 4% to 5% of the university age group sought that level of education. By the 1980's that number had risen to over 15%, which is often perceived as "the tipping point between elite and mass education" (Anderson, 2010, p. 3). As participation rates reached 40% to 50% late in the century, "the question arises whether the older university model was so bound up with elite education that it is no longer relevant" (Anderson, 2010, p. 3). In my opinion, the answer to that question was affirmative.

The passage of the Bologna Declaration, in 1988, "signed by the heads of most European universities" (Anderson. 2010, p. 4) marked another major milestone in the evolution of the modern global post-secondary education system. While distinctly European, the influence of the declaration was felt widely, including here in North America. In addition, neoliberal thinking was beginning to influence the governance of the modern institution: "managerialism within the universities at the expense of academic self-government" would make universities "more responsive to outside pressures, from corporate funders, donors, and the media as well as the government" (Anderson, 2010, p. 4).

Derek Bok (2015) added an American focused perspective to this discussion, in his book, *Higher Education in America*. His comprehensive discussion of the evolution of the system brought forward two modern dilemmas: the fact that tuitions have been rising at a rate faster than the rise of inflation and the political challenges of properly funding the public system. Romero (2014) further described the impossible dilemma created by legislators who act on "pervasive populism" which results in the careless cutting of taxes, while demanding that higher education institutions provide high quality education that is more accessible and affordable (Romero, Jr., 2014, n. p.). Their descriptions were important considerations related to developments in Canada.

Several other sources discussed various aspects of how the "conventional" system is being challenged in ways that it has never faced before. For example, sister institutions are extending their reach into new territory and distance providers are increasing their influence by harnessing improved learning management software and more effective communication technologies. In addition, new, unorthodox competitors are on the scene offering new formats, new credentials and drawing followers from the conventional paths (Barber et al., 2013, Kolodner & Butrymowicz, 2020). Publicly funded postsecondary institutions are also vulnerable to the expectations of an electorate as expressed through their representatives, the ruling government of the day. Internationally and nationally, government funding for postsecondary education has been on a declining trend.

Petrie (2014) provided us with a contemporary framework for leadership presents the words volatile, uncertain, complex, ambiguous (VUCA) to help describe the operating environment of the near future. His words were about to be proven true in dramatic fashion.

In summary, as I launched into the data gathering stage of my research, I prepared to analyze my results through those pre-pandemic lenses. The rhetorical question posed by Scott and Dixon (2008) "have the walls of the 'ivory tower' been forever breached?" (p. 2) and the ample evidence that they provided to support a positive response to that question swirled in my mind.

Research Methodology and General Results

Semistructured interviews were conducted to collect the information necessary to answer the primary and secondary research questions. This format was chosen because it allowed for flexibility; as the interviewer, I was guided by a predetermined set of questions, but there was room for deviation as per my judgement. Usually, the additional questions were to seek clarification, deeper specifics and/or to follow up on an interesting response.

A set of 15 questions, divided into four sections, was produced. In the first section, four close-ended questions seeking basic demographic information were asked, including one to confirm eligibility criteria (that the individual was a permanently appointed Academic Staff Member of the selected institution). In the second section, six questions sought information about the participant's perceptions with respect to the state of change occurring in postsecondary education sector. Two of those questions were open ended, including one in which the individual was asked to relate an experience or experiences that they had personally witnessed or experienced during their time as an instructor in the postsecondary education system. They were also asked to share their perceptions with respect to the current state of change within the postsecondary education system. In the third section, three generally close-ended questions inquired about the individual's perceptions with respect to the urgency of the need for change. Finally, in the fourth section, the participant was asked two questions with respect to whether they wanted to return to an earlier question in the interview and/or if they wanted to add any information to any of those questions or change their answers to any of those questions. A total of fourteen interviews were conducted to achieve saturation.

The following, limited discussion of findings is necessary to provide context for later discussion. All 14 respondents expressed a belief that change must occur within the publicly funded postsecondary education system. They were asked to respond to a ten-point Likert scale questions, with one representing no urgency and ten representing immediate need for change. If one were to try to generate an "average score," based on this scale, an approximate number would be 7.36. Answers varied widely, ranging from a low of two to a high of 11. (The response "11" was actually "a 10 or an 11," and I believed that that response was given simply to emphasize the sense of urgency being perceived by the individual.) Only two responses were below the midpoint

(five). Three respondents answered "seven," and three others responded with either a 7.5 or between seven and eight to create the largest cluster of answers. At least two of the answers were conditional. The most reluctant respondent stated, "only, if required." A second respondent initially answered "not really," but the longer they presented their answer the more the answer changed. In fact, halfway through the response the individual stated, "Thinking about it more carefully, I guess yeah, in order to continue to be sustainable, postsecondary does need to change." A third respondent added that the change needed was "more internal, without maybe too much government direction." Two other affirmative answers were accompanied with the following comments: "all across North America ... there is less money to be given out to postsecondary institutions" and "the cost of postsecondary education in Alberta is too high."

Fifteen themes grouped into six separate topic areas emerged from my analysis. The six topic areas were: students, curriculum, technology, faculty, provincial government and governance and administration. Two or three themes related to each topic area were discovered; in general, those particulars are not relevant to this discussion.

Late in the analysis process, I reviewed the order in which I had identified and listed those six topic areas. At one point, I had considered them all roughly equivalent to each other. Eventually, I realized that thematic areas "technology" seemed to be far more pervasive than the other five. In an attempt to visually represent my findings, I initially tried to create a diagram featuring each topic area with circles of exactly the same size. Late in the process, having discovered the dominant presence of the discussion of technology, I started to visualize that circle as far more dominant than the other five. In fact, at one point, I wanted to envelop those other five entirely within the one, but an effective visual to attempt to communicate that concept eluded me.

The "technology" thematic area was pervasive and was expressed using several key terms such as "learning management systems," "PowerPoint," and "online learning." Many respondents discussed how their own presentation style had changed to incorporate the use of technology. One of them admitted to enjoying the experience of pioneering the use of some technology, identifying that crashing and burning occurred on occasion. Yet, they persisted in trying to get their students using many online resources including YouTube, Google Maps, "cheap GPS apps," and others. Due to the impact of the pandemic, a number of respondents identified their increased use of Google Meet or Zoom in response to the transition to online instruction.

One participant noted that "communication, I think, is much more refined due to the technology involved." Another identified the change in behaviours during meetings, "we can be on the device looking at the agenda and then quickly going off to another screen and doing our email quickly, doing something else very quickly, so our attention is not quite as focused as it was before." He further identified an interesting dichotomy; on one hand technology made us feel more distant from each other, while on the other it meant that when we did interact with each other, it was on a more "human" level.

Further discussion of lessons learned in hindsight are in a later section of this article, but some commentary is required here. One distinct possibility for the perceptions captured during the collection of this project's data may have arisen from the recent circumstances of attempting to operate within the newly created conditions. In other words, my participants and I may have been more acutely aware of the role that technology was playing in our ability to maintain some semblance of normal operating conditions and we may have attributed more importance to that topic area due to the particular set of circumstances in which we found ourselves.

Selected Specific Findings

Despite the challenges incurred in the production of my dissertation, several interesting findings emerged from this project; here is a sampling:

- 1) In general, faculty are ill-equipped to discuss large, global publicly funded postsecondary education system issues.
- 2) Select faculty, for various reasons, were able to contribute more to the discussion with respect to the larger picture and future direction of the sector as a whole. In part, perhaps they had a greater aptitude for that topic. Leadership experience in faculty associations or graduate education may also have exposed them to more discussion of those issues.
- 3) While the Barber et al. (2013) 10 element model still holds value with respect to understanding the change forces impacting publicly funded postsecondary education, new dynamics resulting from the global pandemic should be the impetus for revisiting previous assumptions and beliefs with respect to the sector. In other words, the "new normal" will likely be significantly different than the former one.
- 4) The dramatic changes in general economies, social and cultural practices, and other elements of an institution's environment have increased the possibility of the emergence of new operating and business models.
- 5) Fiscal pressures on publicly funded postsecondary institutions may become so significant that those institutions able to fully engage their faculty in the adaptation process may experience a competitive advantage in their efforts to survive, or even thrive, in these transitional times.
 - Current conditions are changing so quickly that these conclusions may become invalidated in a relatively short period of time.

Interrelationship Between Themes

Despite the tremendous amount of time and energy invested in dissecting participant responses, to capture and separate specific comments in order to communicate the themes discovered, it became clear, late in the analysis process that there was significant interrelatedness between many of these themes. For example, I began to see clearer connections between students and curriculum and between faculty and students.

The words of two selected respondents continued to reverberate with me, as I pondered theme interrelatedness. One participant linked technology, student expectations, and his perception of their corresponding perspective of education, using these words:

Technology has changed vastly since I began, and it has changed how we teach vastly, and I think that all of these three things I'm talking about are actually connected; they have separate parts definitely, but there are connections between them and one huge connection I see is that, because of technology, students do tend to see education like a product. They are very used to having their gratification satisfied instantaneously - they want a song, they can just go to Spotify, press the button instantly, they want to buy something then go to Amazon, it gets delivered to them instantly. If they don't know something, go to Google, get the answer instantly.

The other respondent connected faculty, curriculum, teaching and learning, and governance/administration/management when they made the following prediction of the foreseeable future:

I think faculty are going to be asked to do more work, be assigned heavier workloads, have their time off eroded, be provided with less time for good and solid

preparation, and will be subject to more and more top-down decision-making that may or may not be in the best interests of classroom and student learning and teaching, but will be decided on because of financial considerations that management determine.

The Central Dilemma

In the early stages of my analysis, I realized that the environment in which my dissertation was based had changed significantly from its beginning. My proposal and its approval by my Committee had all occurred before the global COVID-19 pandemic was known. As mentioned earlier, the factor "technology" seemed to be the most pervasive of the six identified: yet, ironically, it seemed to have received the least discussion in the pre-pandemic literature and change models that were studied before the project began.

It seemed that I had little choice but to adapt to the new reality; while striving to maintain the balance between staying true to the original direction and perspectives of my proposal, I had to acknowledge the dramatic impact of the health emergency. It was unfortunate that I was able to complete only three of my fourteen interviews before the emergency measures were implemented. Had I been able to complete seven interviews before that disruption and seven after those measures, I could have perhaps conducted some comparative analysis of those two sets of circumstances. The manner in which events unfolded on this occasion did not allow for that exploration.

The following literature was consulted after my data had been collected. In my references section, I took the unusual step of including the dates on which most of those articles were published, to demonstrate the rapid release of the new material as well as a general sequence of those publications. I also had to establish a deadline of July 1, 2020, for the collection of new material, in order that my focus could be on completion of the dissertation.

Despite the fact that the pandemic was still in its early stages, damage to global, national, and provincial economies was already rivaling that of the Great Recession in North America was being predicted (Friga, 2020). In addition, it was anticipated that the impact on societies and on the postsecondary education sector would be massive and long lasting.

On March 31, Hill (2020) described three phases to the postsecondary education system response to the pandemic: Phase 1 - "put everything on Zoom and worry about details later" (Hill, 2020, para. 7). Phase 2, still part of the emergency response, - Hill identified a growing acknowledgement that remote teaching and learning is "materially different than online education that had been thoughtfully designed" (Hill, 2020, para. 7). Phase 3 - likely to be implemented in Fall 2020 - "there is a reasonable likelihood that many schools will remain with online delivery" (Hill, 2020, para. 7). Finally, he introduced a Phase 4 acknowledging that the emergence of a new normal would likely take longer than his initial time line and expressed thoughts covered.

Hill (2020) also referred to the work of Alexander, who coincidentally released a book in January 2020, exploring the challenging futures of colleges and universities. In a follow-up article, published on March 31, 2020, Alexander discussed how COVID-19 had turned the downhill slide into an avalanche (Alexander, 2020b). The use of the term "avalanche" caused me to think of the Barber et al. (2013) publication.

Steele provided some of the clearest messaging with respect to the longer-term future; on May 14, 2020, he published an article called Schrodinger's Semester, in which he told us that "we must plan for online delivery throughout the upcoming academic year. Any other announcement is just wishful thinking" (Steele, 2020). He then referred to an article entitled "The End of the Pandemic," part 5 of a five-part series discussing the strategic implications of COVID-19. Rather than focus on the short-term, this article looked into the future and described the pandemic as

"probably THE defining formative event for Gen Alpha," (eduvation, 2020, p. 6) for those individuals born between 2010 and 2025.

Several authors tried to view the major disruption of higher education as an opportunity to transform it and make it better than ever. The Royal Bank of Canada's Schrumm (2020) described the Canadian-based multinational financial institution's perspective in the article *How the COVID-19 crisis can help transform higher education* released on June 1. Friga (2020) tried to end his rather gloomy March 24 article, *The Great Recession was bad for Higher Education. Coronavirus could be worse* with the phrase, "this is the opportunity of a lifetime for enacting positive change in higher education" (p. 9). Latham and Braun (2020) added a sense of urgency and drama to the discussion with the provocative title of their June article, *It's Now or Never* in which they added to the discussion with the statement, "college leaders seeking to survive and thrive in a post-pandemic environment have no choice but to reassess and redefine their value proposition" (para. 1).

Another set of articles represented the full spectrum of current thinking, much of it presented in somewhat dramatic fashion. At one end of the spectrum, Paxson (2020), president of Brown College, made a rather emphatic statement with her April 26 article, *College Campuses Must Reopen in the Fall. Here's How We Do It.* At the other end of the spectrum was Tierney (2020) in his May 11 article, *Preventing the Collapse of Higher Education*, in which he argued as emphatically as Paxson that "the option of students returning to campus in the fall is not viable, regardless of economic implications" (para. 1). Essentially his argument was that the short-term benefits of immediate reopening were not worth the long-term risks to the system and to the health and safety of individuals, particularly faculty, in the system. He stated that the under 25 population, while "least likely to become sick with the coronavirus . . . are most likely to flout requests to stay

indoors, wear masks and avoid public places" (Tierney, 2020, para. 3). (As the scientific community learns more about the coronavirus, its variants and its subvariants, it appears that its impact on younger populations is more extensive than thought, on the date of publication of that article.) He also stated that a significant proportion of tenured and non-tenured faculty are over age 55 and/or immunocompromised and should not be expected "to come to campus until 2021" (Tierney, 2020, para. 4). And finally, he argued that "without constant testing of the people on our campuses, we do not know what we are combating" (Tierney, 2020, para. 4).

Walsh (2020) brought forward the most dramatic perspective encountered during the entire period of this research project, late in the process. He interviewed Scott Galloway, a professor of marketing at the New York University Stern School of Business, and published the results on May 11, 2020, in Higher Education. Galloway predicted that "hundreds, if not thousands, of brick-and-mortar universities will go out of business and those that remain will have student bodies composed primarily of the children of the one percent" (Walsh 2020, p. 2). Galloway envisioned that "the post-pandemic future ... will entail partnerships between the largest tech companies in the world and elite universities" (Walsh 2020, p. 2). This cooperation would allow those universities to "expand enrollment dramatically by offering hybrid online-offline degrees" (Walsh, 2020, p. 2) which would essentially crowd out the lesser lights, so to speak. These predictions essentially supported the proposals made by Barber et al. (2013), but were bolder by several degrees.

Bowen (2020) in his May 19 article brought us back to a sense of balance by asking if higher education is asking the right questions in the midst of this crisis. He correctly argued that during such times, "people are prone to focus on the tactical, but what we know already suggests we should be thinking longer term and for greater disruption" (p. 1). The following assessments were astute:

COVID-19 is an ambiguous threat. We do not know how long it will continue, and we certainly do not know how it will change people's behaviour. This is not the time to stay the course and downplay the threat. Hope is not a strategy. (Bowen, 2020, p. 6)

And "what we know already suggests that we should be thinking longer term and for greater disruption" and "if you are hoping that waiting will make complexity any clearer, it will be a long wait" (Bowen, 2020, p. 10).

Late-Stage Analysis and Commentary

I continued to analyze the data collected, with the benefit of both my pre-pandemic literature and materials published after my research proposal had been accepted. The fundamental aspects of my research were still sound and relevant, but my insights were enhanced by the new material.

As stated earlier, the order of topic areas was arbitrary. Little thought had been given to the implications of the order of the topic areas and related themes. The presentation order of the topic areas/themes did not reflect the number of references to each item. I chose a presentation order early during the analysis phase and it was used consistently from that point. A strength of that decision was a more orderly presentation allowing the reader to better follow along. One drawback of that decision is that it may have given a false sense of priority to some topic areas/themes over others. For instance, the themes related to students are no more important in this discussion than those related to faculty, provincial government, or any others, but it may have appeared differently.

The realization of the pervasiveness of the technology themes caused me to reflect on the perspectives expressed by Grajek et al. (2018). I noted that my research findings supported their assertion that technology was "disrupting" higher education (Grajek et al., 2018, p. 52). However,

given the circumstances brought on by the global pandemic, I also had a sense that technology had a role in saving the system, at least in the short-term.

The prominent nature of the discussion with respect to institutional governance and administration brought me back to the words of Wernick (2006). He had indicated that, despite the essentially two millennia of evolution of "the university," including the dramatic transformation which occurred in the latter half of the 20th century, universities needed to prepare for the next round of evolution, which he named "hypermodern development" (Werner, 2006, p. 563). Despite his dramatic terminology, I suspected that even Werner had not factored a global pandemic into the scenarios that he foresaw.

Additional Insights, with the Benefit of Hindsight

With the benefit of hindsight, the limitations of the data set are slowly becoming apparent. Because of the time frame within which it had been gathered, it simply could not reflect new scientific information being rapidly compiled to assist the medical community in combating the pandemic. Furthermore, the resulting changes to societal practices and thus institutional responses could only be assessed as of a particular time. Populations in different areas also responded differently to practices such as mandatory masking, social distancing and vaccine mandates. Those factors have been considered as part of the context for the following discussion. I also alert the reader that conditions could still change rapidly, rendering some of the following points to become obsolete in a relatively short period of time.

Canada is currently experiencing a seventh wave of COVID-19, featuring the subvariant BA.5 of the Omicron variant (Fiedler, 2022, n. p.). Once a greater degree of stability and certainty returns to the teaching and learning landscape, academics will have a significant amount of work, generated by the need to understand a changed operating environment.

Since the declaration of the health emergency in Alberta, most post-secondary educators completed the end of the 2019-2020 academic year using distance-based methods. Furthermore, for most institutions, the 2020-2021 academic year was delivered in essentially the same way. Attempts to return to more face-to-face delivery in 2021-2022 were met with mixed results. In my local institution, most fall term courses were delivered face-to-face. We returned to distance-based delivery methods for the months of January and February, in response to a resurgence of pandemic cases. Finally, we ended the term (March and April) with a mixture of delivery methods. For many faculty members, it was our first intensive exposure to concepts like synchronous and asynchronous delivery and a method that has been termed hybrid or hi-flex, in which there are both face-to-face elements and distance-based approaches. We prepare for the 2022-2023 academic year with the intent of delivering the majority of our courses using face-to-face methods, but uncertain of what circumstances may bring.

I am limiting the rest of this discussion to local Alberta institution perspectives. I fully acknowledge that there are larger system-wide implications, but exploration of that aspect of this topic will be left to a future date. I also admit that much of this discussion is based on anecdotal observation, but it also draws on the insight gained with respect to the pervasiveness of "technology" in participant responses and to their assertion that student expectations have changed, likely influenced by the technological options now available. The collective experience gained over the last two academic years is simply too powerful to ignore or dismiss.

It is now abundantly clear to me that the sector will never return to the exact state which existed before March 2020. Too many lessons have been learned across the system and by the participants within it. For example, many members of faculty and students discovered benefits of distance-based approaches that they want adopted moving forward. Some faculty discovered the

attraction of teaching on-line and from home. Many students discovered their preference for learning from their home environment on a schedule that fits with other important aspects of their lives. For example, a single parent may have been able to continue with their employment and study later in the evening, after children had been sent to bed.

Conversely, many faculty and students are able to better articulate the benefits that they derive from face-to-face experiences and are able to relish those opportunities to a greater degree due to the consequences of having been denied access. The benefits of interpersonal and other social aspects of the educational process have become more apparent and thus valued.

Going forward, academic leaders are likely wise to offer a greater variety of delivery options to students and then work with their faculty to match them up with preferred delivery methods. Some course material, for example in the humanities and/or social sciences, which expect high levels of student interaction and comparison and contrasting of ideas may require face-to-face delivery. In courses in which material must be read and which can be tested via multiple choice and/or short answer methods may lend themselves very well to full distance delivery. Technical courses might supplement distance-based options with in-person activities delivered in a laboratory. Scheduling classes and assigning rooms could become significantly more complex activities.

On a personal level, I have always prided myself on my versatility and believe that I am well equipped with an even wider array of delivery options as compared to my pre-pandemic tool kit. I am no longer an exclusively face-to-face instructor, nor would I enjoy an entirely on-line instructional workload, though I acknowledge that some of my colleagues may have strong preferences leaning in one direction or the other. Astute administrators may soon start to recruit specialists for one mode of delivery or the other.

Hybrid or hi-flex deliveries also will likely become more popular and widespread. Within this category, I include courses with short burst residency workshops or in-person labs supplemented by on-line lectures. Registrar offices will have to reflect these formats in increasingly complex academic schedules.

In summary, the benefits and opportunities for the future are boundless. There are, however, corresponding potentially negative consequences such as dramatic increases in academic integrity issues and increased faculty workloads in increasingly isolated conditions which could reduce collegiality and program-wide focus, to name a couple of apparent ones.

Concluding Thoughts

The original intent of my dissertation was to explore the urgent call to action made by Barber et al. in their publication, *An Avalanche is Coming: Higher Education and the Revolution Ahead* (2013). I discovered that my research participants generally agreed with their assertion of the need and the urgency for change in the publicly funded post-secondary education system. Furthermore, analysis of the participant interviews highlighted some specific themes that were noteworthy of further attention, as discussed in the previous section.

There are some important implications for the leaders of publicly funded postsecondary institutions; while not the primary focus of this article, in passing I refer to wise words from Buller (2015) in his book, *Change Leadership in Higher Education*, "spend your time improving the culture that produces the outcome" (p. 217). In other words, invest the time, energy and other resources as soon as possible, even if the exact change scenario is not immediately apparent. Once, a challenge presents itself, a prepared institution is likely to respond more effectively than one which has not made early investments. Those principles still seem applicable as the future unfolds.

In closing, I express pride in my ability to pivot my research methods to complete my dissertation under unimagined circumstances. In hindsight, I can see that my research straddled an important boundary between pre-pandemic conditions and those in which we find ourselves. (Note that I used the term "post-pandemic" only twice in this article, once in the abstract and in reference to a specific circumstance and the second time because it was in the title of one of my references). I believe that we will continue to experience pandemic-related circumstances for a yet to be determined period of time. While disappointed that I was unable to provide the reader with a contrast of pre-pandemic conditions with the current state, there is no question that the findings of this project were amplified by the emergence of the first wave of the pandemic. I strongly believe that the prominence of the "technology" topic area was magnified by the conditions during the data gathering process.

At the time of this writing, it appears to me that some features of our new learning and teaching environment will take permanent hold. The face-to-face instruction will be more appreciated and valued than in the past. Distance and/or hybrid delivery methods will become more firmly established in appropriate settings. As noted earlier, we may yet again experience pandemic-related circumstances, so it is possible that distance methods will again serve as an option, should emergency measures be re-applied.

I generated this journal article one year after the completion of my doctoral dissertation. I cannot predict when a "new normal" might be declared We know enough about current circumstances to state that the COVID-19 pandemic is a global scale change event whose impact has yet to be fully determined and will be felt for an extended period of time. We can also state firmly that technology is a pervasive and transformative change force which will continue to contribute to the evolution of new institutional business models, curriculum delivery systems,

teaching and learning processes, and communications between all parties. Finally, we can also see that additional change forces such as the geopolitical conflict in the Ukraine and the societal phenomena in North America being labeled "the Great Resignation" will impact the publicly funded post-secondary education sector. Perhaps Barber et al. (2013) were incorrect with respect to some of their specific predictions, but the general message of their publication still appears to be relevant.

In conclusion, I am grateful that I was able to complete my doctoral work, despite the trying circumstances. I share this story with those in the midst of their work, as an example of adaptation in circumstances that deviated from an approved research proposal and as a symbol that challenging circumstances can be overcome.

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Author Biography

Dr Larry Couture has a passion for adult learners and their learning environments. After completing a Master of Business Administration (MBA), he started as an Instructor at Olds College of Agriculture & Technology and remains there. Twenty years after completing his MBA, he demonstrated that he is a lifelong learner by enrolling in a Master of Education at the University of Prince Edward Island. In 2021, he completed the Doctor of Education program in the Werklund School of Education at the University of Calgary.

Larry's academic interests are diverse. Drawing from his business training, he enjoys teaching economics, international trade, human resources management, entrepreneurship and innovation. Applying the new knowledge that he gained from his credentials in educational leadership, he is fascinated with the discussion with respect to the evolution of the post-secondary education system in this country as well as with government funding of that system. As a taxpayer, he continues to monitor political policy that will contribute to surplus budgets that could be used to pay down some national debt.

Larry's dissertation allowed him to perceive the state of the post-secondary education through the eyes of faculty. He also captured those perceptions on the cusp of the pandemic, either just before it was declared or in the early days when few were able to perceive the potential impact of that health crisis. Now he ponders what the post-pandemic world will look like.

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