

Exploring Online Learning: Student Feedback on Factors for Effective Online Learning Post COVID-19

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Abstract

This paper reports on a study of students' views of online learning, the obstacles and challenges they experience, as well as their suggestions for improving the online learning model. The COVID-19 pandemic resulted in an unprecedented move for traditional post-secondary institutions from mostly in-person learning pre-pandemic to a quick transition to online learning to comply with pandemic-related restrictions. Despite years of progressive growth in the use of the online learning model before COVID, for many post-secondary students, this emergency remote teaching was their first exposure to an entirely online learning experience. Students who might otherwise have not selected to study online were suddenly obligated to do so. Yet, there is an associated behavioural and technological learning curve for students to overcome to be comfortable and academically succeed with online learning. The goal of this study is to discern students' experiences, motivations, benefits, and barriers with online education and how this shapes their intention of continuing or not with online learning. To investigate this, we conducted a survey of 177 Canadian post-secondary using open-ended questions. Qualitative data analysis was used to arrive at the primary findings related to themes of 1) technology learning curve, 2) accessibility, 3) engagement, 4) agency, 5) distraction and procrastination, 6) support, and 7) isolation. These findings can aid universities and colleges to understand student views on online learning and, hence, to design and support this form of education more effectively.

Keywords

Online Learning, Remote Learning, Emergency Remote Teaching, Education, COVID-19 Pandemic

1. Introduction

The COVID-19 pandemic had a profound impact on formal, post-secondary education institutions, and, as this paper will show, their students. Public health measures to limit transmission of the virus, such as social distancing and quarantining, were implemented across many jurisdictions worldwide; this necessitated in-person colleges and universities to quickly move a large number of their courses entirely online to continue their activities. Students who might not otherwise have elected to study online or had the opportunity to do so, were suddenly moved to online-only classes to be able to continue their studies (some students elected to postpone entrance to post-secondary or take a temporary break from their studies instead of studying online). Statistics Canada found in their 2020 study of post-secondary students that 92% of them had some or all their courses moved online (Government of Canada, 2020). This represents the largest percentage of Canadian post-secondary students ever undertaking online learning. The resulting widescale exposure of post-secondary students to online learning during the pandemic prompted anecdotal discussion on the pros and cons of online learning, yet formalized study of students' experiences of this phenomenon has not been fully explored.

This paper reports on the findings from a survey of 177 Canadian post-secondary students that collected qualitative data and revealed student's experiences, motivations, benefits, and barriers with online education and how this might shape students' future educational plans with respect to continue with online learning. Samples of participants comments are provided to offer their lived experience with online learning and their assessment of the impact the online model has on their academic performance and personal and emotional lives. The findings will benefit post-secondary institutions as well as other organizations currently providing or planning to offer online learning or training.

Many post-secondary institutions pre-pandemic had already implemented, to varying degrees, components of online technologies needed to deliver online learning, and utilized existing technologies, such as web-conferencing and learning management systems. The pedagogical techniques used in online learning also draw upon a long history of developments in the field of distance and remote learning (Harting & Erthal, 2005; Pregowska et al., 2021). Yet, the scale of in-person courses suddenly moved to online-only and the number of students attending online classes combined to entail a unique phenomenon. The speed at which this transition was made was also remarkable. For many post-secondary students this emergency remote teaching was their first exposure to an entirely online learning experience. Yet, there is an associated behavioural and technological learning curve for students to overcome to be comfortable with online learning. The resulting large number of students studying online affords an opportunity to access a sample of the population that might otherwise not be attainable.

To assist in combatting the COVID-19 pandemic, various governments world-

wide passed public health restrictions against large gatherings of people to prevent the transmission of the disease. COVID-19 was a quickly propagating contagious disease caused by the novel Coronavirus SARS-CoV2 (Ferretti et al., 2020). It is believed this disease appeared at the end of 2019 and then spread rapidly worldwide, thus being declared a pandemic by the World Health Organization in March 2020 (WHO, 2023). Since then, several waves of the disease occurred resulting in an increasing amount of human and societal costs, despite various efforts to contain the disease. To continue necessary tasks while quarantining or social distancing, society responded with extraordinary workarounds often involving making use of digital tools. Accordingly, traditional universities and colleges provided online emergency remote teaching starting in early 2020 in order to be able to address pandemic restrictions (Aguilera-Hermida, 2020; Mishra et al., 2020).

Prior to the COVID pandemic, many post-secondary institutions had already launched Learning Management Software (LMS) to provide each of their courses with their own website that can host syllabi, educational materials and readings, and assignment dropboxes. Such foundational features are often used for many post-secondary courses whether online or in-person. LMS can also offer more advanced functionality such as hosting online quizzes or tests, threaded conversations via forums, and various other forms of interactive learning. Some online courses offered a lecture component, such a standard part of many classes, delivered through the use of webcams and web-conferencing software, such as Zoom during the pandemic. Depending on each individual instructor, these web-based classes might allow students to ask questions or participate in classwide discussions on camera or chat-based features. Online exam proctoring services enabled exams to take place while supervised by co-present proctors to ensure academic integrity. The exact delivery method and educational set-up of these online courses would differ by institution and instructor, as they would vary with in-person classes.

For the purposes of this article, we group certificate-granting colleges and degree-granting universities under the term of post-secondary institution. This study also focuses on formalized online post-secondary study, opposed to more informal online learning, such as available via massive open online courses (MOOC), educational mobile applications (e.g., Duolingo language app), or various educational and training information readily available online (e.g., HowStuffWorks.com, Khan Academy). Within this context, online learning refers to official post-secondary education where the “learning experience is delivered via the Internet either synchronously or asynchronously” (Johnson et al., 2021). Although the COVID-related situation also applied to elementary and high school education, the focus in this paper is on post-secondary education. Online learning, as we defined it, can thus range from synchronous webcasted lectures and seminars to online courses with asynchronous online interactions and assignments delivered via online learning management software or LMS.

At this point, there is an important distinction to be made between “online learning” and “emergency response remote learning”. The urgent pivot to online learning due to the pandemic has been dubbed “emergency remote teaching” (Johnson et al., 2021; Hodges et al., 2020), yet this primarily differs from online learning due to the speed at which it was delivered in response to the pandemic and not necessarily in the suite of online tools used to deliver the education. Formalized online learning involves courses that were specifically planned and created in advance for online learning opposed to emergency teaching work. Students in our study were asked to reflect on their online learning in whichever form it took.

This paper will first cover foundational terminology by providing background information on online learning and post-secondary educational institutions’ response to pandemic restrictions. A review of extant literature is then conducted followed by an overview of our study methods. Findings and discussion sections are then covered together, with a focus on factors deemed by the researchers to be most salient. The key themes found are: 1) Technology Learning Curve, 2) Accessibility, 3) Engagement, 4) Agency, 5) Distraction and Procrastination, 6) Support, and 7) Isolation.

2. Literature Review

Although Internet based technologies have been used since the early days of the network’s invention in the 1960s to augment learning and knowledge sharing, more formalized, comprehensive online courses did not begin to appear until the 1980s (Perry & Pilati, 2011). The roots of online learning date even further back to distance and correspondence courses originating in 1700s (Harting & Erthal, 2005; Sleator, 2010). Despite years of progressive growth (Perry & Pilati, 2011), online learning experienced the greatest growth in adoption during the COVID-19 pandemic. Part of the challenge of studying online learning is the diverging definitions and scope in the terms (Johnson, 2020). Johnson found that institutions consider online learning whether offered synchronously, asynchronously, or a mixture. The online learning model is not substantively different than in-person learning except primarily for the delivery method and, if an asynchronous course, the use of live lectures, and online learning primarily differs from prior forms of distance learning through the use of multimedia resource and online interaction methods (Anderson, 2008).

Prior studies have identified the main reasons for institutions to switch to online learning are to improve education access for students and to lower costs (Panigrahi et al., 2018). The advantages of online learning in synchronous and asynchronous forms, over traditional in-person education include the freedom to access information almost anytime and anywhere, in synchronous and asynchronous conditions, the potential to reach a larger audience student base at once, and consistency of content for various settings. Consequently, both academia and industry have been successfully using online learning at increasing

rates, together or instead of in-person learning, with favorable results (Panigrahi et al., 2018). Conveniences and the flexibility to determine one's study times and locations that online learning (primarily asynchronous) offers has been identified in studies as a primary motivation for students to choose the online learning model (Dos Santos, 2022; Zhang & Chen, 2023). Despite these identified benefits of online learning, it is possible that the involuntary shift from a traditional to an online environment exacerbated the already high attrition rate of this form of education, as retaining students in such a setting has been acknowledged as being a significant challenge even before the COVID pandemic (Panigrahi et al., 2018).

Studies from the initial months of online emergency remote teaching found some student dissatisfaction (Jaschik, 2020) and concerns, such as comfort with using the technology, specifically webcams, and digital divide issues (Bashir et al., 2021). A survey of students at a Malaysian university found some students appreciated online learning during the pandemic, but many students experienced difficulties that the researcher posited may be due to this being the first time many students use online learning (Lin et al., 2021). Yet, it remains to be studied whether online emergency remote teaching provided an opportunity for students to become familiar with online learning and how various factors may affect their future educational plans.

3. Methodology

The findings discussed in this paper are part of an online survey study conducted online with post-secondary students across Canada. The survey consisted of both quantitative and qualitative questions, with this paper focusing only on the latter. The survey was hosted by SurveyMonkey and ran from October to November 2022.

Participation was voluntary and anonymous and with an incentive provided in the form of a chance to win one of four Amazon \$ 50 gift-cards. Participants were recruited through a call to participation posted on a Canadian university's website and researchers' social media, websites, and newsletters. Participation was open to anyone able to provide their own consent for taking part in the survey (e.g., had to be at least 18 years old), who lived in Canada and was a post-secondary student in a traditional university or college in the period Fall 2019 to Fall 2021. A total of 177 participants answered the qualitative questions.

Participants of the qualitative component of the online survey were given the option to answer four open-ended questions on the questionnaire. The goal of these questions was to solicit participants' own thoughts and feelings on their experience with online learning in a more unstructured manner (Dillman et al., 2009). The questions were as follows:

- 1) Describe your top three opportunities or benefits of using online learning.
- 2) Describe your top three risks, challenges, or concerns about using online learning.

3) Propose any recommendations for developers or educational providers of online learning solutions to address your concerns.

4) Do you have any additional comments you would like to provide?

The data were coded and analyzed by the researchers using data analysis software. The first round of coding used Dey's suggested methodology with codes derived from literature and as emerged from the data themselves (Dey, 1993). These codes were reviewed with the researchers and using Dey's methods of splicing, splitting, linking and connecting codes a codebook was developed and shared with the research team. Sample coding was reviewed by the research team for reliability checks. This codebook was then used for a second round of coding, resulting in more focused coding. Participants addressed the above questions in their responses as well as raising additional, tangentially related points (such as about a specific course, textbook, instructor, etc.)—in such cases the data were coded as miscellaneous.

With data coding completed, the next stage entailed analyzing the data to find patterns and establish contrasting opinions to arrive at overall conceptual findings (Dey, 1993).

This study was approved by the ethics review board of a North American university and followed all established procedures for conducting ethical research.

4. Findings

The qualitative findings reflect the lived experience of participants who were taking online education, often for the first time. The first two research questions resulted in the most detailed participant responses. It was these questions that provided the depth and range of responses concerning students' motivations, benefits, and barriers with online education and how this shapes their intention of continuing. Overall, 28 themes were identified. For this paper, we will focus on seven themes that represent the greatest impact upon the students based on their own assessments or that present novel findings. The themes to be explored here are:

- a) Technology Learning Curve
- b) Accessibility
- c) Engagement
- d) Agency
- e) Distraction and Procrastination
- f) Support
- g) Isolation

Other findings and the corresponding themes were identified by some participants but are not covered in this paper as they received too few responses. For example, only three participants mentioned privacy concerns, with one participant identifying online proctoring services as a concern, noting it was, "really invasive and it makes me really uncomfortable, but I am not aware of any other options". No participants raised concerns with academic integrity or with lan-

guage barriers. A theme that many people experienced during the pandemic while relying on the Internet was bugs with the technology. Although the technology and network were often able to scale up to the unprecedented usage and bandwidth demands during the pandemic, yet the inevitable crashes that proved to be the bane of many of us was experienced by participants as well. Twenty-six participants referred to this issue with comments corresponding to “Internet quality cause issues with [online] classes”, “lost internet connection” or simply “technology errors”. Participants did not have anything more to add along this theme, but the extent of the issue is worth noting.

Additionally, students commented on the impact these factors had on their learning performance, desire to learn, emotional and social state, and life overall. Some of these factors were described by participants as both positive and negative, although many participants focused on the negatives possibly due to the timing of the survey and the speed at which some students had to adapt to a new learning model.

1) Technology Learning Curve

We defined the technology learning curve as a participant referring to their or other people’s (other students or instructors) process of adapting to the new technology or interfaces entailed in the delivery of online learning (such as web-conferencing systems, LMS, etc.). This includes an assessment of the skills needed to participate in online learning and feelings towards the process of acquiring these skills and adapting to a new technology or interface.

A technology learning curve was not a major issue for most participants, as many students at the time of the study were digital natives and had used the necessary technology before. However, there were some participants who indicated they struggled with online learning technology and some reported that the difficulties with using the technology was a barrier to their learning. For example, one participant wrote that with online learning, “much time was wasted navigating technology and technological requirements, when the time could have been better used simply studying the course content.”

Other participants expressed frustration with the ability of instructors to use the technology, such as one student who wrote, “Don’t leave professors to do all the online implementation themselves. They need help in the transition and to set up different tools to make the learning environment run smoothly.” Another participant also thought that “A challenge is classmates or professors not having strong tech skills and holding the class back. It is very distracting with so many people struggling to join a link and delaying the class or a professor doesn’t know how to share their screen.” A number of students thought that more technology training was needed for both students and instructors, “More tech skills training is needed I think, students need to do a digital skills bootcamp before starting online learning.” Another participant expressed that they found it “challenging to learn many new programs and online avenues all at once at the beginning.” Another expressed that with online learning, “If you are not good with

technology, you are doomed.”

2) Accessibility

We defined accessibility as a participant referring to real or perceived barriers or benefits encountered with online education based on one’s physical, mental, cognitive, health, learning, or perceptual abilities.

Accessibility barriers encountered occurred as a result of extensive screen use and the lack of ergonomic workstations in the participants’ homes. One participant wrote that during online learning, they “got constant headaches and worsening vision due to being in front of a screen for several hours.” Another participant expressed issues with “eye strain from staring at a screen for a long time.” Seven students mentioned similar problems with eye strain. Another student said that they experienced issues due to, “Poor ergonomics/desk/chairs/space where I study at home.” Another student expressed that paying attention is particularly difficult during online learning, writing, “I have ADHD [Attention Deficit Hyperactivity Disorder] so sometimes focusing during online learning is a struggle.” This participant did not elaborate on the reason for their difficulties focusing, but the home setting for online learning provides ample distractions, as covered later in this paper, and often lacks attention accountability measures.

A number of students expressed experiencing accessibility benefits to online learning. Some noted how this type of learning can be beneficial for some facing mental health issues. One wrote: “I have anxiety, so I don’t like going to actual in person classes.” Another noted that due to learning online, they, “can still work when depression hits.” A participant with autism noted that, “I am autistic and this [online] method allows me to pace my work and minimize groups work which I find challenging.” Another student with autism wrote that online learning, “helps me feel comfortable as someone with ASD [Autism Spectrum Disorder]. I don’t enjoy in-person learning.” Another participant stated that, “Online learning helps level the playing field for minorities, women and people with disabilities. The different methods of learning available online helps people with neurodivergence to not feel that they are less than their fellow students”.

3) Engagement

We defined engagement as a participant referring to whether the online course itself or online teaching methods or interactions are interesting to the student or not and if this involves the student in the learning process and course material. Many participants indicated that they did not feel engaged in the learning process during online learning. For instance, one stated that, “There is little to no engagement” while another wrote that online learning is “way less engaging” and another called it “boring”. One of the reasons for this lack of engagement was expressed by one participant as “no sense of involvement.” One student suggested that online learning needs “more interactive learning; breakout rooms are not the answer.” Another thinks that a “diversification of teaching methods [is] needed.” The lack of interactivity in some online lessons was also identified as a concern, with a participant noting “If online teaching is to be effective, teach-

ers need to take the initiative to bring more interaction, so that students have more sense of participation, more willing to invest in the course.” It was also mentioned that some instructors were not willing to experiment with learning methods to try to find ways to make online learning more engaging. One student wrote that, “Professors seem to be really wary of trying anything new, whether it be a new mode of teaching or new tools, so it feels like they are hamstringing the possibilities of online learning from the start.” It should be noted, however, that in-person courses may also share the same concerns as identified by the participants.

4) Agency

We defined agency as a participant referring to the role of their own abilities, motivations, and actions in empowering them to participate in their online education, including their self-discipline or lack thereof and their time management abilities.

A great many participants raised the issue that students need to find their own motivation for learning. They noted that with online learning one needs “personal initiative”, “self motivation”, “time management” skills, and “It takes discipline.” They note that major difficulties with online learning include, “staying on track”, “keeping on track”, “too much freedom”, and complete autonomy. Participants noted that with online learning, questions and discussion cannot happen easily, often students are left to “teach” themselves”. As one participant stated, “You are on your own.” Participants also wrote that, “people don’t take online learning as seriously as in-person” and that “You need to be self-motivated in order to succeed, you have to be organized.” A number of students discussed their difficulty staying motivated in these circumstances. One wrote that “I had poor self-control, I don’t want to learn” while another noted that they had a “lack of discipline in maintaining a routine” and another commented on their “increased laziness.” As one stated, it was common to feel “no sense of involvement in class” as well as a lack of “organization, self-motivation, [and] lack of energy.”

Many students noted that they found it difficult to get their work done due to the lack of contact with their instructors. One noted, “I’m not able to prioritize my study due to lack of interaction with instructors on [a] daily basis.” Another student said that “I do much better in a structured environment where it is easy to ask the professor questions and receive face-to-face help when needed.” Another also noted that for them, online learning led to, “Bad time management because I didn’t set a time to start watching the lectures, whereas in the in-person lectures, the time and place was set up.” As well, as another participant pointed out, that with online learning, “Professors are unable to monitor their students’ behaviour.” Another student mention that one needs, “more responsibility for yourself to ensure work is done.” It may be possible for online learning to increase agency for some students. One participant mentioned that “Online learning has been revolutionary for people like me, I thrive as an independent learn-

ing and have never done as well with in person classes.”

5) Distractions and Procrastination

With online learning, students often study at home or other personal locations—during the pandemic with quarantines in place, online learning was largely conducted at student’s home. We defined distraction as a participant referring to external factors that remove students’ attention and efforts from their studies. Procrastination here is the act of a student delaying their studying for various purposes unrelated to their immediate education.

Many participants noted that a major problem of learning at home was the availability of many distractions. One student noted that one problem they faced was “getting distracted and forgetting to complete school work in a timely fashion. It takes discipline”. Another student concluded that many students are distracted during online learning because, “[p]rofessors are unable to monitor their students’ behavior. Most of the students who have computers can also use them to play games, message friends, or surf the Internet”. One participant noted that, “You can’t concentrate while studying online” while another stated than, with online learning, “It can be easy to turn off camera[s] and stop participating, more distractions available, such as computers, to do things like online shop or browse the web, easier to drift away and disengage.”

Many participants noted that learning from home makes procrastination too tempting. As one student stated, with online learning, there is, “procrastinating, lack of teacher mentoring, [and] lack of self-motivation at times.” Another stated that, “I’m more likely to procrastinate due to being stuck at home and always having my devices near me.” As well, one student pointed out that instructors “cannot directly control if online students are focused on the class, there are a lot of fun on the net.” One student pointed out that a positive aspect of online learning is that the tech allows them to tune out other students so that they “don’t have to listen to other students being disruptive” as happens at in-person classes.

6) Support

We defined support as a participant referring to the student’s perceived ability to ask questions or get help with their education or related experiences from educators or other college or university staff. Many students were concerned about having limited access to their instructors. For instance, one wrote that with online learning, there is “no face to face person to ask questions. As well, others stated that it is “difficult to get to know the professors” and it is “harder to speak with profs/TA’s, and you can’t always ask questions in the moment.” One student noted that a major problem with online learning is “[p]rofessors not seeming available and [a] lack of networking.” Other students agreed that “It is not easy to ask questions” and there is “limited access to asking questions.” The importance of self-motivation to access instructor support was identified by a participant who noted that with online learning, it “requires a bit more effort to reach out to get help when struggling.” A number of participants indicated that

they would prefer a more structured environment. One wrote, “I do much better in a structured environment where it is easy to ask the professor questions and receive face-to-face help when needed.” Another student suggested that online education needs to “add more teacher -student interaction” and “[d]o a good job in teaching design to increase interaction.”

Participants also pointed out that it is hard to get peer support as well, as “it is difficult to reach out to other students if we want to study together or have questions after hours.” One student thought that with online learning “[t]here needs to be more social opportunities for online students to get to know each other. Maybe a digital space to act like a study hall or library.” Another suggested that it would be beneficial “if we could have live break-out groups on Zoom to discuss deeper ideas.”

One participant did believe that communication was enhanced during online learning, writing, “Communication is easier and fuller. Everyone can ask questions, everyone can answer questions, and students and teachers, students and students can be equal communication, to achieve a free speech.”

7) Isolation

We defined isolation as a participant referring to their feelings of social isolation and loneliness that arose in regard to the learning method and learning environment. A large number of participants reported feelings of loneliness or isolation. Many students referred to how much they miss in-person interactions/communications with instructors or peers. This finding has already been reported, but our data backs this up.

Most participants expressed at least some feelings of social isolation, sadness, and depression as a result of online learning during the pandemic. Some of the many comments include that online learning can be “draining”, “very isolating”, “easy to feel alone”, and leads to “depression, isolation, [and] lack of motivation.” Students expressed that they were lonely and missed being around other students and professors, stating that, “Sometimes it can feel lonely because I do not get to see my professors or fellow students” and “I don’t have many chances to interact with other people and develop people/collaboration skills. I can sometimes feel lonely.” Another student wrote that with online learning, “It’s really lonely if school was your main source of socialization before the pandemic and making friends is hard for you.” Others stated that, “Online learning is not conducive to emotional communication between teachers and students” and “I often miss actual conversations and input from other students or professors.” Students were concerned about a “lack of emotional connection”, “[s]taring at a screen, lack of social/interpersonal contact, no campus life”, and “hardly ever going outside.” One expressed that online learning makes it “easy to become isolated.”

A number of students expressed the need for more mental health supports. One wrote, “Sitting alone in your room all day every day takes a toll on you after a while. Even if there are provided supports and such, it is still hard not to feel

alone.” Another participant stated, “My mental health decreased significantly because I didn’t have face-to-face interaction with people, nor did I go out very much. Staying too long in one place made me irritable. It was a challenge to get therapy help because the in-person visits were closed due to the COVID restrictions.” Some students wrote that universities and colleges should move to “provide resources on how to manage time, mental and physical health, stress” and “team up with online mental health therapy companies, so students can have an alternative way to get the help they need!!!” While many post-secondary institutions do offer some or all of these types of services to their students, perhaps the availability of this type of support is not prominent enough for students or the support offered is insufficient.

There were students who preferred the quiet of online learning. One wrote, “I am highly introverted. I prefer to study myself in a room. I thrive when studying in solitude.” Another stated that online learning is preferable for them even though they did experience some social isolation, “I do miss being around other people. This is just what has worked best for me.” Another student was pleased that there is “no crowded classroom” and “I don’t have to listen to other student being disruptive.” A few students mentioned how they liked the quiet environment to study at home in contrast to the hustle, bustle and noise of in-person campuses.

5. Conclusion

Although student participants were not specifically asked to comment on their overall assessment on the value and appeal to them of online learning, participants nonetheless shared interesting reflections that succinctly but effectively capture the totality of their feelings and experiences of their online learning. Presented below are highlights of such summative comments:

- “Overall, online learning is a great experience.”
- “I have been happy with my experience.”
- “I quite enjoy online learning.”
- “Yes, we were able to study from the comfort of our homes but that doesn’t necessarily mean it led to any good.”
- “Online learning is not helpful, it is horribly challenging and frustrating and if I had options for in person learning, I would never choose online learning.”
- “I hate online learning. It’s easier to learn in an in-person class environment.”
- “I can work with online learning and appreciate having that option, but I simply prefer a face to face experience.”
- “I honestly cannot think of any more benefits at all. I have hated the experience of online learning since COVID abruptly introduced it to the whole world”
- “I think online learning during the worst of the Covid periods was wise because it reduced transmission while still allowing classes to continue. However in regular circumstances I hate it.”

The pandemic resulted in an unprecedented move for traditional, place-based post-secondary institutions, offering mostly in-person learning pre-pandemic, to quickly transition to online learning to comply with pandemic-related restrictions against in-person gatherings occurring in many countries worldwide. The resulting surge of students studying online represents a unique uptake in this educational modality previously unseen in such numbers, affording an opportunity to study the feelings and experiences of students who might not otherwise have been exposed to formalized online post-secondary education.

The findings here reveal the depth of the experience students encountered with regard to their online learning, as well as their key concerns, personal and pedagogical, with online learning. By identifying the benefits and barriers of online learning from a student perspective, this study will assist educational providers with anticipating student issues. This will allow educators to be able to plan and design online learning experiences, associated support and extra-curricular services that best meet student needs and accommodate barriers to provide an effective learning environment while also addressing the socio-emotional and contextual factors surrounding the student online learning experience.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Aguilera-Hermida, A. (2020). College Students' Use and Acceptance of Emergency Online Learning Due to COVID-19. *International Journal of Educational Research Open*, 1, Article ID: 100011. <https://doi.org/10.1016/j.ijedro.2020.100011>
- Anderson, T. (2008). Teaching in an Online Learning Context. In T. Anderson (Ed.), *The Theory and Practice of Online Learning* (pp. 343-366). Athabasca University Press.
- Bashir, A., Bashir, S., Rana, K., Lambert, P., & Vernallis, A. (2021). Post-COVID-19 Adaptations; the Shifts towards Online Learning, Hybrid Course Delivery and the Implications for Biosciences Courses in the Higher Education Setting. *Frontiers in Education*, 6, Article ID: 711619. <https://www.frontiersin.org/articles/10.3389/educ.2021.711619/full>
- Dey, I. (1993). *Qualitative Data Analysis: A User-Friendly Guide for Social Scientists*. Routledge.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Wiley.
- Dos Santos, L. M. (2022). Online Learning after the COVID-19 Pandemic: Learners' Motivations. *Frontiers in Education*, 7, Article ID: 879091. <https://www.frontiersin.org/articles/10.3389/educ.2022.879091>
- Ferretti, L., Wymant, C., Kendall, M., Zhao, L., Nurtay, A., Bonsall, D., & Fraser, C. (2020). Quantifying Dynamics of SARS-CoV-2 Transmission Suggests That Epidemic Control and Avoidance Is Feasible through Instantaneous Digital Contact Tracing. *Science*, 368, eabb6936. <https://doi.org/10.1126/science.abb6936>
- Government of Canada (2020). *COVID-19 Pandemic: Academic Impacts on Postsecondary Students in Canada*. Statistics Canada.

- <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00015-eng.htm>
- Harting, K., & Erthal, M. (2005). History of Distance Learning. *Information Technology, Learning, and Performance Journal*, 23, 35-44.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The Difference between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Jaschik, S. (2020, May 19). *The Online Risk*. Inside Higher Ed. <https://www.insidehighered.com/admissions/article/2020/05/19/one-third-high-school-seniors-say-they-will-defer-or-cancel-rather>
- Johnson, N. (2020). *Evolving Definitions in Digital Learning: A National Framework for Categorizing Commonly Used Terms* (p. 12). Canadian Digital Learning Research Association. <http://www.cdlnra-acrfl.ca/wp-content/uploads/2021/07/2021-CDLRA-definitions-report-5.pdf>
- Johnson, N., Seaman, J., & Veletsianos, G. (2021). Teaching during a Pandemic (p. 53). Bay View Analytics. <https://www.bayviewanalytics.com/reports/teachingduringapandemic.pdf>
- Lin, S., Sim, H., & Quah, C. S. (2021). Online Learning: A Post Covid-19 Alternative Pedagogy for University Students. *Asian Journal of University Education*, 16, 137-151. <https://doi.org/10.24191/ajue.v16i4.11963>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online Teaching-Learning in Higher Education during Lockdown Period of COVID-19 Pandemic. *International Journal of Educational Research Open*, 1, Article ID: 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online Learning: Adoption, Continuance, and Learning Outcome—A Review of Literature. *International Journal of Information Management*, 43, 1-14. <https://doi.org/10.1016/j.ijinfomgt.2018.05.005>
- Perry, E. H., & Pilati, M. L. (2011). Online Learning. *New Directions for Teaching and Learning*, 2011, 95-104. <https://doi.org/10.1002/tl.472>
- Pregowska, A., Masztalerz, K., Garlińska, M., & Osial, M. (2021). A Worldwide Journey through Distance Education—From the Post Office to Virtual, Augmented and Mixed Realities, and Education during the COVID-19 Pandemic. *Education Sciences*, 11, Article No. 3. <https://doi.org/10.3390/educsci11030118>
- Sleator, R. (2010). The Evolution of eLearning Background, Blends and Blackboard. *Science Progress*, 93, 319-334.
- WHO World Health Organization (2023). *Coronavirus Disease (COVID-19) Pandemic*. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- Zhang, Y., & Chen, X. (2023). Students' Perceptions of Online Learning in the Post-COVID Era: A Focused Case from the Universities of Applied Sciences in China. *Sustainability*, 15, Article No. 2. <https://doi.org/10.3390/su15020946>