

Written Submission for the Pre-Budget Consultations in Advance of the Upcoming Federal Budget

By:



Open/Technology in Education, Society, and Scholarship Association

A Canadian non-profit corporation, established in 2019, to drive innovation, research, and practice in areas where either technology or openness intersect with education, research, and, more broadly, within society

Our board and community consists of university professors and instructors, including a Canada Research Chair, university administrators, learning designers, educational technologists, university librarians, and K12 teachers and administrators.

<https://otessa.org>
admin@otessa.org
1-250-208-2441

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).



Overview of Recommendations

- **Recommendation 1:** That the government provide \$100,000 annually:
 - to convene an expert panel to support evidence-informed decision-making at the federal level in relation to digital, online and open teaching, learning, and scholarship, spanning post-secondary, K12, workplace, and informal learning as it pertains to equality, diversity, inclusion, employment, and business and social development.
 - to support a pan-Canadian collaboration to network researchers, research funding bodies, and institutional support associations with the federal expert panel in educational technology, with attention to digital, online, and open education and scholarship
- **Recommendation 2:** That the government provide \$300 million annually for provincial/territorial funding envelopes to support research excellence in digital/online/open teaching, learning, and scholarship for the K-20 and workplace sector, similar to provincial health research.
- **Recommendation 3:** That the government provide \$25 million annually to support cutting-edge research in educational technology, with a focus on digital, online, and open education and scholarship by way of Tri-Council funding for research grants, graduate scholarships, and business development projects.
- **Recommendation 4:** That the government provide \$20 million to create Digital Learning Leadership Chairs (teaching and service leadership to create capacity within sectors) and Digital Learning Research Chairs (creating capacity for research).
- **Recommendation 5:** That the government provide \$10 million to create or maintain existing provincial digital/online/open learning non-profit associations for both K12 and post-secondary to provide supports for institutions as they adopt and evolve their teaching and learning practices based on evidence-informed knowledge created by research.
- **Recommendation 6:** That the government provide \$50 million to create essential open educational resource infrastructure to support sharing and open learning culture for K12, post-secondary, and workplace learning.
- **Recommendation 7:** That the government provide \$250,000 for start-up to support OTESSA in supporting its growing community and developing a certifying process for post-secondary learning designers, post-secondary online instructors, and for K12 teachers.

Recommendation Descriptions

Recommendation 1: Convene an Expert Panel and Establish a Pan-Canadian Collaboration Network in Digital, Online, and Open Education

Canada and its provinces and territories lack an integrated approach to the advancement of digital, online, and open teaching, learning, and scholarship, both to support public good as well as socially responsible corporate development. To address inequities within and between institutions and provinces/territories, a federally-convened panel could pool expertise from educational institutions and related associations. Our institutional and governmental roles have typically comprised education or CIO/IT positions, yet educational technology with expertise in digital, networked, and open education and scholarship is a specialized area, requiring digital, networked, and open literacies, a strong IT background, and robust pedagogical knowledge. Canada and its provinces need advisors from our field to help navigate the way forward for public good, government strategy to build flexible educational systems to address equity and human rights, and also to build nimble educational systems amidst emerging and ongoing crises (e.g., COVID-19, climate crisis, etc.). We are not realizing Canada's full participation in a global educational technology market, which is expanding rapidly. Venture capital investment in EdTech is up 2x on 2018 at \$16 billion in 2020 (HolonIQ, 2021). This market

- has an estimated global worth of 90 billion USD and expecting a compound annual growth rate of 19.9% from 2021 to 2028 (Grand View Research, 2021) while
- is expected to be a \$7 trillion USD industry by 2025 (HolonIQ, 2021)
- is expected to add an additional 2 billion more learners for upskilling between now and 2050 (HolonIQ, 2021)

In BC alone, educational services make up 5.2% of BC's GDP (Statista, 2021). Total US govt expenditures on education in 2019 (all levels of education and all levels of government) was 1,021 billion or 4.8% of GDP of government spending alone with combined spending with government and private being 6.3% of GDP (Federal Reserve Bank Economic Database, 2019, 2020). Much of this investment is driven by a realization that education is a huge market that is grossly under-digitized and is starved of capital compared with other sectors. Significantly, China is a key driver of growth in VC investment making up 60%+ of all Global VC in 2020 (HolonIQ, 2021). HolonIQ further cautions that the "devil is in the details when it comes to education. **Education is a complex system. ... it pays to understand the nuance.**"

This panel and collaboration network can position Canada to play a significant role in this global market. Recommendations from this panel, for instance, may help Canada and its institutions understand the nuance. Some of the educational technology market belongs to socially responsible corporations; however, others are not, and we need to critically examine the role of private companies in the ecosystem of teaching, learning, and scholarship, especially with regard to data ownership, control, intellectual property, and data rights. Furthermore, some of that market is expenditures by the federal and provincial governments by way of educational institutions and libraries, where it is in the best interest of the Canadian taxpayer or their government to reduce ongoing for-profit corporate expenditures by investing in open infrastructure and open research, teaching, learning, and scholarship as supported by UNESCO recommendations (UNESCO, 2019). It is also important to note that educational technology spending and investment estimates is a primitive cut at economic impact, as it does not take into account: reduced unemployment rates, higher labour force participation rates, externalities on communities that is not captured in GDP (e.g., impact of education on pollution, crime rates, creativity and art, vaccination rates, etc.), and increased productivity (J. Luke, economics professor, personal communication, August 4, 2021).

Overall, we believe Canada has a strong potential to provide leadership in the areas of socially responsible, educational technology market participation, government savings with investment in open access initiatives for education and scholarship, and ethical national and international policies and regulatory frameworks, which guide and steer post-digital teaching, learning, research, and education business models for the public good. We recommend the government:

- Convene a panel of Canada's most experienced online/open education researchers and professionals to advise on, and potentially assist with, decisions regarding research and evaluation, critical digital pedagogy, capacity-building, partnerships, strategy and business development, infrastructure for access to education for rural and remote areas or learners facing socioeconomic barriers, and policy and legislation. OTESSA would be happy to serve as or contribute to this panel.

- Establish a federal digital education officer as a chair of the panel. We have experienced a health crisis and worked collaboratively due in part to our government's efforts and that of our federal health officer. Education is a major sector impacting all areas, from employment, economic well-being, climate change, social development, health, etc. This role can oversee deliverables and ensure that all Canadians are equally supported in their ability to access quality education.
- Establish a pan-Canadian collaboration to network the federal expert panel, researchers, funding bodies, and institutional support associations. This network will ensure a cross-pollination of ideas, strategies, successes and failures, research collaboration, database development and connectivity of research, institutional, and governmental data, development of policies and legislation, responsible business development, and result in a comparison of regional responses to inform how we conduct education in a post-digital age.

Recommendation 2: Provincial funding envelopes to support research excellence in flexible digital/online/open teaching, learning, and scholarship for the K-20 and workplace sector

The federal government needs to build capacity for research and evaluation of digital, online, and open education and scholarship in Canada's educational institutions (K-20) and the workplace. The amount will vary by province/territory, but should be approximately \$30 million on average, with a total funding of \$300 million across Canada. Matching arrangements could potentially be set up with provinces/territories. Currently, the health sector receives upwards of \$60 million in provincial grants to advance the provincial health sector in B.C. (e.g., Michael Smith Foundation for Health Research), yet neither K12 nor post-secondary sectors receive funds to advance research and innovation into our system and practices to support its adaptation for our current society. This will support flexibility in systems that have faced challenges due to COVID-19, but was required even pre-pandemic. Provincial and institutional leadership requires evidence in order to make appropriate decisions for the benefit of all. We recommend the government:

- Leverage the convened panel to work with federal and provincial staff to identify essential data collection and research needs to support evidence-informed decision and policy making.
- Develop a research network for flexible digital, online, and open education and scholarship with funding support, which advances its research excellence in Canada.
- Task the network with providing strategic guidance on what works, in what contexts, how it works, where inequities exist, and how inequities could be addressed.
- Connect the research network with innovation networks to find socially responsible business opportunities to replace irresponsible ones.

Recommendation 3: Tri-Council SSHRC funding for research in digital, online, and open education and scholarship

We recommend the government under a new specific committee for SSHRC insight funding, to rectify decades of underfunding in educational technology research while also falling into a gap between hard and social sciences, which must be addressed. For example, only 10% of SSHRC doctoral funding goes to Education (generally), and rarely to educational technology or flexible, online, or open education. Only around 1% of SSHRC Insight grants go toward the area of ICT. More targeted funding is needed. Business development initiatives like the Digital Supercluster exclude the low hanging fruit of educational technology expertise and innovations, where educational technology is a multi-billion-dollar, if not trillion-dollar, industry globally.

Recommendation 4: Digital Learning Leadership and Digital Learning Research Chairs

These would operate similar to the Canada Research Chairs program, which has not yet addressed the demand for new knowledge in our field or for capacity-building for developing a society with digital, networked, and open literacies, through new research, new programs/courses, and campus leadership.

Recommendation 5: Provincial Non-Profit Associations to support adoption and implementation of evidence-informed practices in digital, online, and open teaching, learning, and scholarship

Funding for these associations will address inequities between provinces/territories, which then creates inequities among Canadians. Amount to vary by province/territory based on number of students, but approximately \$500,000 per K12 and post-secondary association per province/territory on average, totalling \$10 million annually. Currently, only a few exist at the post-secondary level only (e.g., BCcampus, eCampusOntario, etc.), but they are impactful.

Recommendation 6: Create and support open infrastructure to develop and share open educational resources and to support open culture

We must develop: essential open infrastructure for teaching and research, OER grants, Open Hubs within institutions, and increased funding with no start-up delay for Tri-Council scholarly journal funding. This must serve K12, post-secondary, be inclusive of workplace and informal learning, and must establish connected databases between sectors.

Recommendation 7: Support growth of OTESSA community and a certifying process

Start-up funds to support OTESSA will accelerate its operational growth, support its growing community, and develop a certifying process for post-secondary learning designers, post-secondary online instructors, and for online K12 teachers. Currently, there are no consistent requirements for these roles and they should be filled with highly qualified personnel in digital, online, and open education per explicit standards.

References

Federal Reserve Economic Database (2019). *Government current expenditures: Education, 2019*. <https://fred.stlouisfed.org/series/G160291A027NBEA>

Federal Reserve Economic Database (2020). *Personal consumption expenditures: Education services*. <https://fred.stlouisfed.org/series/DTEDRC1A027NBEA>

Grand View Research (2021). *Education Technology Market Size, Share & Trends Analysis Report, 2021 – 2028*. <https://www.grandviewresearch.com/industry-analysis/education-technology-market#:~:text=b.,USD%20106.04%20billion%20in%202021.&text=The%20global%20EdTech%20market%20is,USD%20377.85%20billion%20by%202028>.

HolonIQ (2021). *10 charts to explain the global educational technology market*. <https://www.holoniq.com/edtech/10-charts-that-explain-the-global-education-technology-market/>

Statista (2021). *Distribution of gross domestic product of British Columbia, Canada in 2019, by industry*. <https://www.statista.com/statistics/608359/gdp-distribution-of-british-columbia-canada-by-industry/>

United Nations Educational, Scientific and Cultural Organization (2019). *Recommendation on Open Educational Resources*. http://portal.unesco.org/en/ev.php_URL_ID=49556&URL_DO=DO_TOPIC&URL_SECTION=201.html