

Technology and the Need for Integration in Public Education

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Abstract : Cybersecurity and digital literacy are pressing issues among Canadian citizens, yet formal education does not provide today's students with the necessary knowledge and skills needed to adapt to these challenging issues within the physical and digital labor-market. Canada's current education systems do not highlight the importance of these respective fields, aside from using technology for learning management systems and alternative methods of assignment completion. Educators are not properly trained to integrate technology into the compulsory courses within public education, to better prepare their learners in these topics and Canada's digital economy. ICTC addresses these gaps in education and training through cross-Canadian educational programming in digital literacy and competency, cybersecurity and coding which is bridged with Canada's provincially regulated K-12 curriculum guidelines. After analyzing Canada's provincial education, it is apparent that there are gaps in learning related to technology, as well as inconsistent educational outcomes that do not adequately represent the current Canadian and global economies. Presently only New Brunswick, Nova Scotia, Ontario, and British Columbia offer curriculum guidelines for cybersecurity, computer programming, and digital literacy. The remaining provinces do not address these skills in their curriculum guidelines. Moreover, certain courses across some provinces not being updated since the 1990's. The three territories respectfully take curriculum strands from other provinces and use them as their foundation in education. Yukon uses all British Columbia curriculum. Northwest Territories and Nunavut respectfully use a hybrid of Alberta and Saskatchewan curriculum as their foundation of learning. Education that is provincially regulated does not allow for consistency across the country's educational outcomes and what Canada's students will achieve - especially when curriculum outcomes have not been updated to reflect present day society. Through this, ICTC has aligned Canada's provincially regulated curriculum and created opportunities for focused education in the realm of technology to better serve Canada's present learners and teachers; while addressing inequalities and applicability within curriculum strands and outcomes across the country. As a result, lessons, units, and formal assessment strategies, have been created to benefit students and teachers in this interdisciplinary, cross-curricular, practice - as well as meeting their compulsory education requirements and developing skills and literacy in cyber education. Teachers can access these lessons and units through ICTC's website, as well as receive professional development regarding the assessment and implementation of these offerings from ICTC's education coordinators, whose combines experience exceeds 50 years of teaching in public, private, international, and Indigenous schools. We encourage you to take this opportunity that will benefit students and educators, and will bridge the learning and curriculum gaps in Canadian education to better reflect the ever-changing public, social, and career landscape that all citizens are a part of. Students are the future, and we at ICTC strive to ensure their futures are bright and prosperous.

Keywords : cybersecurity, education, curriculum, teachers

Conference Title : ICFEPS 2023 : International Conference on Future Education and Pedagogical Sciences

Conference Location : Houston, United States

Conference Dates : October 23-24, 2023