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**Teaching Kids to Code: Implications for Canada’s Science Ecosystem**

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**Takeaways and recommendations**

**Digital literacy is more essential than ever**

* Digital literacy is more than learning code or programming languages. It is about experiential learning, solving real-world problems, critical thinking and understanding the impact of technologies like artificial intelligence on their life.
* Students who are not well versed in these areas will miss out on many careers, not just computer science.
* We need a diversity of individuals building technologies to solve problems. This can prevent problems like when the first voice recognition software did not recognize female voices.

**Government support is important**

* Recent federal funding has reinforced the importance of digital literacy and organizations that work in the field are finding it easier to get support. Corporate sponsors are more likely to sponsor again because they see their contribution having an amplified impact.
* CANCODE is good first step but more is needed to recognize the importance of digital literacy to the innovation ecosystem. Sustained support from government is needed.
* The current climate presents an opportunity for the federal government to guide school boards across the country to incorporate digital literacy fully in their curriculum.

**The curriculum should be updated**

* When developing curriculum for coding and other digital literacies schools should focus on the human element as well as the technical skills – the context of how students will use the skills is as or more important than the skill itself.
* Inspire and equip youth on how to use coding to solve problems that matter to them.
* Exposure to digital literacy (e.g. an hour of code every now and then) de-mystifies it, but children also need sustained engagement over a number of years.
* Digital skills programs meant to engage Indigenous youth need to be Indigenous-led at all stages – from planning, to design, to implementation – to properly meet the needs of the community and be successful.
* School evaluation methods should move from a grade-based approach (i.e. “what did I get”) to a knowledge construction/evaluating process (i.e. “what did I learn”).
* Students should be taught about empathy, emotional intelligence and design thinking.
* The digital literacy conversation should be about a disruption in the education process, not just getting a smartboard into the classroom.
* Corporate volunteers in digital literacy education have value but not everyone should be teaching kids directly. There needs to be a rigorous selection process and training.
* The informal learning space is essential because it can be designed without the shortcomings of formal systems.

**Parents play a role**

* Parents need to support and help their children; to do this they have to be taught to recognize the importance of digital skills beyond just getting a “computer” job.
* Parents need to understand online safety and digital citizenship.
* If parents are worried about too much screen time, they should be shown the value of digital literacy and taught that not all computer time is the same.