



## DIGITAL YOUTH SUMMIT 2015

October 22-23, 2015 | Ottawa, Ontario | Canadian War Museum

### Report for Day One: Cyber Citizenship



## Background

To better understand the skills young Canadians need as citizens and future workers in the digital age, MediaSmarts and the Information and Communications Technology Council (ICTC) hosted a national Digital Youth Summit in Ottawa (October 22-23, 2015) to hear directly from secondary students on this topic.

The Summit was a follow-up event to a highly successful Youth and Digital Skills Symposium organized by ICTC and MediaSmarts in 2014, which brought together industry, government and education experts to discuss ways to ensure Canadian youth have essential digital literacy skills for the digital economy and society.

Several discussion themes emerged from the 2014 Symposium, including:

- digital literacy is not just for ICT jobs – it increasingly applies to all industries;
- the focus in education should not be on technology for technology’s sake, but on how it can support engaged learning;
- the need for learning hubs outside formal school settings;
- social sciences (not just STEM courses) are important to provide the critical skills necessary for the digital age (including adaptability);
- the need for industry to support internships, co-ops and mentorships;
- the critical role of home and parents; and
- the need to ensure that marginalized communities are not left behind (i.e. Aboriginal, socioeconomically disadvantaged, youth out of school, new Canadians).

At the Youth and Digital Skills Symposium in 2014, speakers Andrew Wyckoff of the OECD and Andrew Parkin of the Council of Ministers of Education Canada highlighted the internationally-recognized literacy, numeracy, and problem-solving skills that are essential to “full integration and participation in the 21<sup>st</sup> century labour market, education and training, and social and civic life” – and talked about the need to ensure that our education systems are developing these skills amongst Canadian youth.

In addition to these internationally-recognized skills and competencies, speakers such as Symposium Keynote Elyse Eldman-Adahl, of the U.S.-based National Writing Project, argued for the need to augment “bricks and mortar education” with more holistic *connected learning* in the digital age, where technology facilitates experiences and learning that is driven by personal interest and peer culture, as well as academics.

## How are our young people LEARNING in the midst of today's abundance of information, creative potential, and social connection? Elyse Eldman-Adahl

In break-out discussions at the Symposium, participants reiterated the need for young people to develop “soft skills” such as risk-taking, entrepreneurship, self-directed and collaborative learning and critical thinking, in addition to STEM and technical skills.

(The full report and presentations from the Symposium can be accessed at: <http://www.ictc-ctic.ca/youth-and-digital-skills-symposium-outcomes/>.)

### Digital Youth Summit Overview

Participants at the 2014 Symposium expressed a strong interest in continuing this important dialogue to further explore the issues that were raised. With that in mind, and to encourage youth input and engagement on these topics, in 2015 the partners brought together approximately 250 high school students over two days in Ottawa for a Digital Youth Summit, to talk and learn more about digital literacy, digital citizenship and cyber security.

The first day of the Summit brought together 160 senior secondary students from across Canada to listen to engaging speakers talk about the skills youth need for working and living in a digital world. The students were part of a week-long science and technology forum through Encounters with Canada. This report provides an overview of the important themes raised and discussed by the students during panel discussions, brainstorming sessions, Speakers' Corner, and through evaluation forms. On Day Two of the Summit, 120 secondary school students from Ottawa came together to learn about cyber security skills from a panel of experts and from mentors, followed by a day of hands-on learning activities.

Learning for working and living in a digital world – where, how and what – emerged as a key theme at the 2015 Youth Summit. To provide context and inspire thinking on these issues among the students, the opening comments, keynote and morning panel offered multiple perspectives on this topic.

The theme of the Day One morning session was “working in a digital world” with a focus on entrepreneurship. Opening comments were provided by Daniel Therrien, Privacy Commissioner of Canada, who framed his comments around privacy protection as a critical skill to surviving – and thriving – in digital environments. He asked the students to stop and think about what they

share online; to ask questions about what organizations are going to do with their personal information; and to become digital literacy ambassadors by encouraging their family, friends and teachers to also respect and protect privacy. These comments set an important tone for the day, as the theme of privacy emerged again and again as a topic of significant importance to the students.

The Privacy Commissioner was followed by the keynote speaker, digital entrepreneur and journalist Jesse Brown. The importance of personal attributes such as resilience, persistence and curiosity – in a labour market where many of tomorrow’s jobs don’t yet exist – was the focus of Mr. Brown’s comments. The practical aspects behind his tongue-in-cheek advice, that students need to “hustle” (work hard), “waste time online” (network and explore), “get fired” (look for new opportunities) and “fail often” (in order to innovate and grow), challenged them to look beyond technical competencies when assessing their workplace skills.

You are going to have lots of different bosses in your life,  
but you only have one reputation. Jesse Brown

The keynote address was followed by a panel discussion on digital entrepreneurialism.



*Working in a digital world: entrepreneurial skills panel*

***Working in a digital world:  
entrepreneurial skills*** panellists:

- Brennan Loh, Head of Business Development, Shopify
- Jennifer Whitson, Assistant Professor, Sociology and Legal Studies, University of Waterloo
- Sage Franch, Computer Science student and Content Developer, Microsoft
- Abdou Sarr, Secondary student and youth entrepreneur

The panelists' experiences and insights about employment and entrepreneurialism in the digital age provided additional food for thought for the students.

The 9-5 job your parents had is dead. To be successful today you need to be a maker and you need to be a Ninja... someone who is agile, who can move fast, teach themselves and keep on creating. Jennifer Whitson

Coding is important, but you need to bring skills to the table beyond coding to stand out. Find a company that you care about and find a way to get involved while you are still a student. Sage Franch

Don't be afraid of failure. When you're dealing with software and dealing with business, there are going to be lots of times where you think you've failed, but it's really a building block for the final product. Abdou Sarr

Given how quickly technology changes, in the future you are going to be working alongside peers who may be 20 or 30 years ahead of you – and you will all be learning the same things. So, find the best way that works for you to absorb new information: be someone who falls in love with learning, but not just limited to a textbook or a course.

Brennan Loh

The students expanded on many of these points in the brainstorming session that followed the morning panel. Facilitated by communications consultant Nicole Belanger, this session gave the teens in attendance a chance to voice and share their perspectives on what they know – and what they want to know – about being a digital citizen and future worker.

Youth participants were asked a series of questions framed to trigger the discussion:

1. [What digital skills do you think you currently have that would be valuable in the workplace?](#)

In response to this question students identified both technical and “soft” skills.

Some indicated already having skills for coding, animation, editing video and audio and keyboarding. Others highlighted critical thinking skills such as being adept at finding information, conducting research online and problem-solving when things aren’t working the way that they should.

Personality traits such as being flexible, imaginative and patient were seen as an asset that youth already possess.

Some felt they had a good knowledge about online security, as well as having hacking skills, and its flipside – knowing how to defend against hackers.

2. [How did you learn these skills?](#)

When asked how they were learning these skills, most students indicated having been “self-taught” through movies, YouTube, WikiHow, MOOCs, forums, and video games. They highlighted the importance of experiential learning “by doing”, “through natural aptitudes and abilities”, by “exploring search bars” and through “trial and error”.

Others had more formal instruction through robotics groups, support programs such as coding clubs, camps and workshops and through MOOCs (massive open online courses). “At school” (mostly in the classroom as well as in clubs) was referenced by students as well.

Several agreed with one student’s humorous suggestion that patience was developed through having to put up with slow Internet connections.

3. [What skills do you want to learn that you think will help you in your future work life \(both working for yourself or for someone else\)?](#)

Interestingly, when asked what skills students **want** to learn, technical proficiency did not come up. Responses here ranged from academic skills, to professional skills and personal attributes.

Academic skills included learning subjects such as Algebra, Science and Math and how to conduct efficient online research (students felt that research and citation skills would help in almost any field). Professional skills included wanting to learn about teamwork and collaboration, time management, networking (both personal and professional) and ways to develop speed and efficiency with digital devices and software. Students also wanted to learn more about how to handle difficult relationships in and out of the workplace.

Included in their list as well were personal attributes that students felt were needed in a future work life. These included creativity, motivation to learn (and, more generally, developing self-motivation), open-mindedness, optimism and confidence.

#### 4. What would be the best way or the best places for you to learn these skills?

In response to this question, “anywhere but school” was the answer that resonated with many of the students – with one adding that “90% of these skills are learned outside of school”.

“Doing it yourself” through online research, hands-on experience, self-teaching, and trial and error were considered better ways to learn these skills. Some students recommended learning these at home, with the assistance of parents, while others thought that books and video games were helpful tools.

#### 5. Are there places that you *don't like* learning digital skills?

In response to this prompt, “boring presentations” and “discovery education” (where you are “forced to learn math and skills in a particular way through blocks, numbers and pictures”) were the two examples provided by the students.

#### 6. What gets in the way of you learning new digital skills? (i.e. access to technology, Internet or devices, education, language)

Students unanimously agreed that distractions, homework, stress and time constraints were major barriers to them learning new digital skills. Many also spoke of the challenge of not having sufficient technology in their schools (with half as many indicating that not having adequate technology outside of schools was a barrier as well). “Old school” teachers and out-of-date curriculum were also considered problematic. A few felt that their learning styles hindered them from acquiring these skills. Many agreed that financial challenges affect their ability to learn digital skills.

Fewer students saw parents as barriers than students who saw teachers in this way.

When specifically asked if there were barriers that prevented them from getting their ideas across to others, language issues and not having access to the Internet, courses and “places to go” were noted.

Intrinsic traits also made the list of barriers. A large number of students agreed that emotional states such as depression, lack of confidence and lack of motivation get in the way. Many also agreed that a “lack of interest” may prevent students from acquiring the skills that are needed for the digital workplace.

Negative aspects of engaging with technology, such as lacking manners or having no filters, were perceived as being barriers. “Things that get in the way of our health” and “Bad habits and addictions to bad things online” were also suggested.

The afternoon focused on digital rights and responsibilities and how youth can be drivers of positive change and good cyber citizens. A diverse panel kicked off the discussion, with participants representing privacy advocacy, youth activism and the Internet industry.

*Living in a digital world: rights and responsibilities panel*



***Living in a digital world: rights and responsibilities*** panel participants:

- Antigone Davis, Global Safety Head, Facebook
- Daphne Guerrero, Manager, Public Education and Outreach, Office of the Privacy Commissioner of Canada
- Brennan Wong, Student, Founder of Pledges for Change
- Jason Shim, Digital Media Manager, Pathways to Education
- Jason Olson, Director, International External Affairs, AT&T



Panellists encouraged students to use the power of digital tools for positive change:

I am a believer in the positive impact youth can have in their communities and it all starts when we encourage them to take action, one single action, in their communities. Brennan Wong

Leadership is the opportunity to take the brave step and say “that wasn’t supportive or positive” and diffuse a negative situation in your peer network. Jason Shim

Be a multiplier: take what you’ve learned and share it and multiply it in your community. Jason Olsen

People generate content. You control the content and how you contribute to your community. Antigone Davis

The idea of privacy rights and how to exercise those rights was also explored:

Sometimes you can feel resigned to the fact that your information can’t be controlled. Educate yourself and ask companies outright why they need this information, how are they going to use it. Daphne Guerrero

In the brainstorming session which followed the panel discussion, students were asked to reflect on what they had heard during the day and respond to a list of thought-provoking questions on digital rights and responsibilities.

## 1. What do you think are your rights and your responsibilities when using digital technologies?



Rights pertaining to freedom of expression – the right to express yourself, post your opinion, disagree with the opinions of others – were considered of high importance to the students.

Privacy rights were also significant: the right to know when your data has been breached, the right to only share the information that you wish to share when signing up for websites and services, and the right to limit others' access to your information.

Access – to technology itself as well as to unfiltered/unblocked content – was also seen as an essential right.

And lastly, intellectual freedoms – such as the right to ask questions and the right to explore – were considered important by the students.

When discussing responsibilities, students noted the importance of respecting the privacy rights of others. Honesty – in the forms of being truthful and not making fake IDs – was also noted. Being respectful, by not saying anything online that you wouldn't say to someone's face, protecting yourself and keeping yourself safe, were also considered personal responsibilities for the digital age.

## 2. What digital skills do you already have that let you do, make and build, things online?

In response to this question, students presented a diverse inventory of abilities that they bring to the table.

Heading the list were being able to work independently and having maturity and common sense. Students expressed confidence in their technical proficiency and knowledge, listing general skills such as keyboarding, familiarity with platforms, knowing how things work and being able to fix things. They also noted more sophisticated expertise such as knowing how to create digital art and animation and being able to program.

Having grown up with technology, students also pointed out that they were generally quick to learn and were easily able to stay up to date with and pick up new devices. Other strengths included being able to multi-task and navigate across different platforms.

Students expressed confidence in their ability to find and access information online. They also noted important critical thinking skills including communication and problem-solving and the ability to work collaboratively and share thoughts and ideas.

### 3. What digital skills do you want to learn?

In response to this question, students provided a number of skills that they were interested in learning:

- Programming skills: i.e. coding, developer tools such as Inspect Element
- Computer/network skills: i.e. command prompts, how to change your IP address
- Security skills: i.e. hacking, cybersecurity, preventing viruses and creating anti-viruses
- Software/Programs: i.e. Excel, Photoshop, 3D modeling, animation and art, 360 video, sound editing (logic X)
- Web-based: i.e. uploading videos to YouTube, web design and hosting
- Privacy/Authentication: i.e. privacy settings, how to handle privacy violations, authenticating information, interpreting the language of privacy policies

### 4. What are the best ways and places to learn digital literacy skills?

To learn more about privacy and security, students considered “professionals who work with privacy (because they know their stuff)” being best equipped to teach these skills – although they were unsure who these professionals might be. Students also wanted someone understandable and relatable – who they looked up to – as a desirable mentor/teacher.

A large number of students felt that DIY options, such as videos on YouTube, were excellent resources for developing digital literacy skills.

In the case of mentors, patience was considered an important trait. Surprisingly, considering the ages of the teens who were participating, “younger peers” were also considered a good source of education. As one youth noted: “Every grade five student I’ve ever met knows

literally everything about the Internet.”

#### 5. What are places that you *don't* like learning digital skills?

Students were quite emphatic about where they *didn't* like learning digital skills: despite their support of DIY approaches through online sources such as YouTube, students were not confident about sources they considered to be less-authoritative such as Wikipedia, blogs and websites like Reddit.

Students were also unenthusiastic at the prospect of learning digital skills from “anyone much older”. Teachers (specifically those who “don't know tech”), seniors and parents were included in this category.

#### 6. What gets in the way of you learning new skills? (i.e. access to technology, Internet or devices, education, language)

Students were unanimous in listing the cost of software, complexity and time constraints as major barriers to learning new skills.

Cost also emerged as a barrier in the form of having to pay for Internet services and subscriptions to learning sites.

All of the students from rural areas cited “slow Internet” as a barrier.

“Being in Canada” was universally seen as a limiting factor for both learning and career opportunities.

Although some students reported being daunted at not knowing where to start, a majority felt that a general lack of age-appropriate content inhibited their learning. Many students also identified lack of information and “not having people around to help and support you” preventing them from acquiring necessary skills.

Challenges in the form of jargon in agreements and policies, being unable to predict the difficulty levels of online courses, and hard-to-navigate websites, reduced the ability of students to learn new digital skills.

## Additional activities

### Hands-on workshops by Hive Toronto

In addition to brainstorming sessions, students also participated in two workshops hosted by Karen Smith, Simona Ramkisson and Ali Al Dallal from Hive Toronto.

In the first workshop, which focused on privacy, students explored what is meant by “personally identifiable information” through a web-making activity using Mozilla’s free tool X-Ray Goggles. In the workshop, students temporarily altered the code of a famous person’s Wikipedia page to remove any information that could be used to determine her or his identity. This activity – and the privacy issues that arose – left a tremendous impression on students, many of whom indicated “privacy” as a major lesson learned during the day.



In the second workshop, which focused on accessibility, students used Makey-Makey Boards to design video game controllers for people with disabilities.

This workshop also impressed students. In addition to privacy, coding – and how easily code can be manipulated – was cited as a major lesson learned by students in their feedback on the day.

### Speakers’ Corner

Throughout the day students were encouraged to take part in the Speakers’ Corner, where they shared their responses to the question: “Thinking about the places you spend time in online, what is your top tip for getting along with people and creating a more respectful and safe environment?”

Comments from Speakers’ Corner were turned into a tip sheet for teens: [Be Respectful, Patient and Kind: How youth are building a better world online](#) that MediaSmarts launched on Safer Internet Day, February 6, 2016, and an accompanying [video](#).

## Takeaways from Day One

Given the many different workshops, presentations and discussions that students participated in throughout the day, we were curious to see what they considered to be the most important lessons learned. An evaluation form was distributed to record the students' impressions and provide feedback.

We found that the topic of online privacy resonated strongly with the students:

- *Privacy is our responsibility.*
- *Know what "terms of agreement" are asking for.*
- *You have the right to your information online.*
- *You are entitled to answers when questioning social media companies about their privacy policies and standards.*
- *I have the right to ask sites to delete my information.*
- *Privacy is impossible.*

There were also many takeaways from the hands-on Makey Makey and X-ray Goggles workshops hosted by Hive Toronto. Students enjoyed learning an array of new digital skills:

- *How coding works.*
- *Coding and how easily it can be manipulated.*
- *Tech = Fun!*
- *How to change/mess with websites (temporarily).*
- *How video game controls can be modified to make them more accessible.*

Students also left the day reflecting on the importance of digital skills for their futures:

- *Learning about technology is important.*
- *Digital skills can further your chance to find a job.*
- *We need multi-skills to succeed.*
- *Tech isn't just for coders.*
- *The importance of:*
  - *Communication skills.*
  - *Being open-minded.*
  - *Thinking outside of the box.*
  - *Building networking skills.*
  - *Having confidence and patience.*

## Connecting findings from the 2015 Digital Youth Summit with findings from the 2014 Youth and Digital Skills Symposium

At the 2014 Youth and Digital Skills Symposium, participants highlighted several areas demanding attention from stakeholders. Comments and feedback from youth attending the 2015 Youth Summit echoed many of these same concerns.



Regarding education, students attending the Digital Youth Summit agreed with the takeaway from the 2014 Symposium that Industry needs to clearly articulate the key competencies that are needed for the workforce. Although it is generally accepted by youth that many of the jobs that they will be applying for “currently don’t exist”, they still want a better understanding of the various technical, academic and personal skills and knowledge that will be demanded by industry.

In relation to this, students are also looking towards educational institutions to provide them with relevant curricula and programs to help them develop these blended skills and to provide them with authentic hands-on work experiences through apprenticeships, internships and co-op placements.

The importance of mentorship – whether through the hands-on work experiences listed above, or through experts – was noted by students in 2015 as well as by 2014 Symposium participants. However, the students were less likely than the Symposium participants to situate teachers in this role.

The important role of parents was also noted by youth and experts at both events. Participants at the Symposium wanted greater focus placed on the role of families: empowering parents with digital literacy skills to better help their children. The need to support parents was emphasized by youth at the 2015 Summit who said they are more likely to turn to parents than teachers for answers to questions and to help learn digital skills.

Both groups agreed that acquisition of 21<sup>st</sup> century skills should not be restricted to schools and that opportunities for learning must be provided beyond brick and mortar educational institutions.

Another takeaway from 2014 was the need in Canada to convert users to creators. Although there were some youth attending the 2015 Summit who said they used digital technologies and platforms to create, the majority fit squarely into the category of users and not producers of ICT. At the same time, however, youth indicated a strong desire to learn more creative skills such as coding, web design, Photoshop, 3D modeling, animation, video production and sound editing.

As was noted in 2014, Canada faces challenges now and in the future when it comes to cultivating and retaining Canadian talent in ICT. The perception expressed by students at the Youth Summit that living in Canada may limit their opportunities for careers in this area is concerning, if we are to develop the skilled workers and citizens that we need.

## Next steps

ICTC and MediaSmarts are committed to continuing to foster an ongoing dialogue among Canadians on how to ensure youth have the digital skills they need for today and in the future.

The goals of further discussion could be:

- To create opportunities for the various stakeholder groups including youth to share best practices and innovative solutions to digital literacy and skills development;
- To collaborate with policy-makers on the possible shape of a national digital literacy strategy;
- To support partnerships between education and industry to better align education and career pathways for youth to industry needs; and,
- To identify opportunities for further research, white papers, and collaboration opportunities.

To these ends, the organizers are exploring mechanisms for continued events that bring together youth and adult stakeholders to discuss digital literacy skills.



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