PART 2: CURRENT TECHNOLOGIES & THEIR EFFECT ON LEARNING OUTCOMES
The E-book is divided into four separate parts, with each part providing insights from 17+ thought-leaders and students:

Following are the Questions we asked our speakers:

Part 1 - What do you believe the future of Education Technology looks like?

Part 2 - What technologies does your school utilize & how has it affected learning outcomes?

Part 3 - What according to you are the biggest challenges in implementing Education Technology? Why?

Part 4 - Which disruptive technologies are on your radar?

STAY TUNED FOR PART 3
What technologies does your school utilize and how has it affected learning outcomes?

Jon Dron,
Professor & Chair, School of Computing and Information Systems,
Athabasca University.

Athabasca is a distance university and therefore makes extensive use of digital technologies, and very little use of physical technologies at all. We use just about everything digital, from virtual reality to social networking (my pet project), from email and webinars to learning management systems. Our customized Moodle LMS dominates most of our teaching and is normally, often in combination with integrated e-texts, the primary interface to courses and programs. However, there is much diversity. The vast majority of our teaching is asynchronous and, for undergraduate programs, self-paced, with continuous enrolment, which provides great opportunities and great challenges, especially when it comes to gaining the social advantage: we don’t have classes or cohorts. Increasing use is therefore being made of our social learning commons, the Landing, which supports richer connection, social presence and beyond-the-course learning, playing a role not unlike that of a traditional campus and supporting greater learner control.

Through this and other technologies we are slowly moving from a largely asocial cognitivist model of teaching, supported by course packs, text books, and personal tutors, to a more distributed, social, engaged model, informed by social constructivist and connectivist approaches and theories. Because of our self-paced model, cooperative rather than collaborative pedagogies tend to be used, though the social advantage remains strong. Learning is richer, belongingness is enhanced, and motivation is stronger, while students retain the benefits of controlling the pace, place and time that they learn.
What technologies does your school utilize and how has it affected learning outcomes?

Nathalie Lemelin,  
Head of Innovations in Teaching & Learning,  
Lower Canada College

What I hope to see more in the future is a seamless integration of technology in education. I am hoping for a new paradigm when we won’t be talking so much about technology any more, but innovations in teaching and learning that will empower students to become independent and creative learners, critical thinkers, collaborators and excellent communicators.

We use iPads in our elementary school (they are school owned). Our Middle School has a 1:1 iPad program and our Senior School a 1:1 MacBook program. Our Pre-U students bring their own device. Rolling out iPads in our Middle School two years ago has pushed us, teachers, to rethink our practice as our students and we had a more mobile and creative tool to work with.

Farbod Karimi,  
Chair, Digital Initiatives and Academic Educational Technologies,  
Algonquin College

Algonquin College has fully embraced the use of technology in its classrooms. Majority of our classrooms are enhanced with teaching technology and complete wireless connectivity. We have a growing list of applications that many of our faculty currently employ such as Adobe Creative Cloud, Lynda.com, and Techsmith Relay. All of these technologies can be accessed through our fully integrated Blackboard learning management system (LMS), giving students an accessible means of learning about their subject areas. Moreover, many of our programs have taken a “bring your own device” (BYOD) approach to delivering course concepts. The amazing aspect of BYOD is that every student can transfer learning concepts in real time in a way that makes sense for them.

Furthermore, in recognition of our social responsibility for creating a greener and more sustainable environment, many of our technologies are directed toward reducing the volume of printed materials. The majority of our textbooks are now available in eText format. Through the use of technology, we are teaching our students to be more environmentally conscious and BYOD approach to course delivery complements this concept.
What technologies does your school utilize and how has it affected learning outcomes?

Garth Nichols,
Director of Teaching & Learning,
Bayview Glen

We are rolling out Microsoft 365 - we are leveraging the intuitive nature of, and familiarity with the MS Office Suite with cloud computing and collaboration. We are focusing on the use of OneNote Classroom Creator - a collaborative approach to teaching, learning and assessment. It is changing the way our teacher and student approach their learning by giving the teachers eyes into the process of learning, and being able to provide feedback at that time, versus waiting until the product is complete. We know that feedback is most meaningful in process and is often ignored after the teacher assigns a mark. Our use of technology allows students to learn as they go, and the teacher to have a fuller picture of the learning that is happening.

Beth Peterson,
Branch Manager, Division of Innovation and Program Engagement,
Kentucky Department of Education

Specific technology varies among school districts in the state, however, we have state-wide data to show that technology use is strong in Kentucky schools. Across the state, the ratio of students to instructional devices is 1.66:1. 100% of schools provide Wi-Fi access to students. Some form of learning management system is used in 71% of school districts and 71% of districts are using Google Apps for Education. 86% of districts offer online or blended courses to students. There is also strong support for technology in the classroom: 89% of parents believe technology use in class can enhance student learning. Other state-wide data, such as student and teacher proficiency in foundational, online, and multimedia technology skills, information on specific brands in the schools, teacher professional development and technology support, can be found at http://education.ky.gov/districts/tech/kmp/Pages/S-and-R.aspx
What technologies does your school utilize and how has it affected learning outcomes?

Jo Axe, Director, School of Education and Technology, Royal Roads University

Royal Roads University (RRU) uses Moodle as the learning platform for both on-campus and online programs. For online courses where students are typically engaged asynchronously, Blackboard Collaborate is used to create the opportunity for students to work in a synchronous environment. While we do not mandate their use, courses at RRU have benefitted from a variety of tools that enhance the on-campus and online classrooms including those that enable students to brainstorm (Padlet), prepare concept maps (Virtual Understanding Environment), produce elevator pitches (videos in YouTube), make shared resources (Wiki), introduce themselves to classmates (Flipgrid), and work on teams (Collaborate).

Matt Devlin, Learning Technology Specialist, University of Toronto, School of Continuing Studies

Our most-used piece of technology is Blackboard. It has a rich library of tools, and a strategic approach can really enhance how our learners engage with content and each other, and improve their overall learning experience. We encourage all instructors to use Blackboard, regardless if their class is online, in-person, or a hybrid blend of the two, but ultimately it’s up to the instructor. Our approach is not to force technology onto instructors if they aren’t comfortable with it, but to make training and help resources easily available to guide instructors towards using online course components to better facilitate the learning experience. We recognize our learners are busy people, so having an online hub for content assessments, activities, and group discussion extends the reach of the classroom and allows learners to adapt their learning experience to their own wants and needs.
What technologies does your school utilize and how has it affected learning outcomes?

Gina Alexandris, 
Director, Law Practice Program, 
Ryerson University

I cannot speak for the university broadly, but I will say that two effective technologies specifically that our program has employed have been an online communication tool (Webex) and the online document sharing tool (Google Drive). Webex has allowed our candidates from across the province, indeed the world, to participate in real time and being able to see, not only hear, each other and the Mentor (ie instructor) adds to the learning significantly. This also applies to the role-play simulation we have with actors who are clients, as the candidates can then “meet” and interview them remotely, building their skills directly. Google Drive has just been a wonderful way for candidates to collaborate on documents in real-time, increasing their exposure to how things are done in the “real world”.

Greg McLeod, 
Principal, 
John A. Leslie Public School, TDSB,

We use Google Apps for Education as a main ecosystem for students and staff to work in. It has allowed for more collaboration and flexible learning environments for students. We also use social media platforms like Twitter. At first this was a one-way interaction, posting information for others. It has become much more now. We are using it to document student learning and to have students part of the twitter dialogue connecting them with others in the school and outside.
Brenda Massey-Beauregard, Program Manager, Interpersonal Skills Teaching Centre, Ryerson University

The ISTC delivers a program of live-actor simulations to schools and departments across the university. The Professional Law Practice Program at Ryerson has provided the first real opportunity to explore the use of technology and how it can allow us to translate the ‘live’, in-person experiences we traditionally provide to e-learning and distance education platforms. Rather than interacting with our actors (simulators) in person over the course of a 2-3 hour class, the LPP candidates engage with their ‘clients’ at regular intervals over the course of the program via Webex. The ability to engage with the simulated ‘clients’ has contributed to the candidates’ interpersonal skill development in the key practice areas of Oral Communication, Client Relationship Management and Ethics and Professionalism.

Jill Cummings, Associate Dean Faculty Development, Yorkville University

OmniJoin, our interactive synchronous platform, has enhanced student and teacher presence in all programs. Moodle is easy to use and reliable. We enjoy multiple media for production of presentations, game and simulation activities, videos, and webinars.

Leonora Zefi, Manager, eLearning Initiative and Course Development, The G. Raymond Chang School of Continuing Education

Our main focus is on how to use technology to support learning outcomes. We support distance programs for adult learners so it’s critical that our tools support relevant and experiential learning. In addition to standard Learning Management System and virtual communication tools, and Google apps for education, we have a number of homegrown tools such as serious gaming and collaborative online role-play.
What technologies does your school utilize and how has it affected learning outcomes?

Richard Saunders,
Technology Coordinator,
Avon Maitland District School Board

We primarily use iPads in our Board. Our initiative has put over 4,400 iPads in the hands of all our Grade 7-9 students. At this point in our research we are seeing the inclusion of students and the equity of students spreading throughout our classrooms. Quite simply, more students can access what their classroom has to offer. Further, we are seeing the amplification of communication strategies. Teachers are able to quickly and efficiently assess students’ knowledge and understanding and gather the artifacts of learning. Finally, our Board is finding a kind of energy that moves through classrooms that use mobile technology. Teachers are excited to build digital bridges and students are engaged in co-building and crossing over to explore what their classrooms have to offer.

Roderick Turner,
Professor, School of Information & Communications Technology,
Seneca College of Applied Arts & Technology

Standard LMS (Blackboard), which enables delivery of course-specific materials and resources, including relevant links and demonstrations online. Most testing and assessment is still completely ‘closed book’, allowing no access to resources. So far in most subjects learning outcomes do not reflect significant impact from technology. Also in my classes I use OneNote on a tablet to present material, recording all my notes and explanations live and distributing the resulting notes to students via the LMS. As of last semester I track all grades in software, including assessing lab performance against pre-defined EoP (Elements of Performance) for each lab activity, using a Surface Tablet, storing all grade sheets in the cloud so they are accessible on all my devices. In this sense, for my courses, Learning Outcomes have been adapted to allow a breakdown into the individual EoP’s within each Outcome.

I do not use the LMS for ongoing grade tracking, as it has too many restrictions and potential issues.
What technologies does your school utilize and how has it affected learning outcomes?

Paul Brown,
Teacher, Computer Studies,
North Park Secondary School

We have embraced the BYOD philosophy in our school, which has dramatically improved the opportunity for students to use technology in ways they never have before. More importantly than the hardware itself, online tools that facilitate learning are making the process of learning and assessing that learning has dramatically changed. But even more important than any technology per se, it’s the way teachers teach that has the most dramatic effect on learning outcomes. Project and inquiry based learning, facilitated by technology, is dramatically improving learning outcomes. I still am amazed that 5 or 6 years ago, we couldn’t access YouTube in our classrooms. Today, YouTube videos comprise a significant portion of the resources my students access as they teach themselves and each other about the building blocks they use for the learning development. As a result, I find that their investigation and learning is dramatically improved over a standard classroom environment, and their retention in particular is much improved.

Katherine Turner,
Writer/Trainer/Facilitator, Interpersonal Skills Teaching Centre (ISTC),
Ryerson University

Through the partnership with the Law Practice Program (LPP), we, The ISTC, had the opportunity to experience live actor simulation delivered using Webex. The simulators as clients would meet with their law firms using technology to discuss, argue, demand and acquiesce in real time. This provided the LPP candidates with the experience in managing a client’s case over time through to a resolution. Without the technology, building this relationship over time would not have been feasible and the valuable experience would have been lost or not even considered.
What technologies does your school utilize and how has it affected learning outcomes?

Neil McClung, Teacher, Peel District School Board (PDSB)

Like all PDSB schools, Kingswood Drive Public School is fully WiFi enabled, has at least 5 computers (netbooks), a teacher computer, a document camera and a LCD projector in every room. We also have an iPad cart with over 20 units, and a netbook cart with a class’s compliment of units and a computer lab with 31 netbooks and desktop computers. There are also five SmartBoards that have been placed in classrooms where teachers have shown enthusiasm for their use and what they can do for their students. Where it has been used as assistive technology, the outcomes have been quite positive. However, it is too early to determine the long-term benefits of the use of tech at Kingswood owing to -

- the varied use technology from classroom to classroom
- the inequity of exposure to technology from family to family
- the inconsistency of instruction in computer-related skills from year to year

I would say that most schools in areas considered “high-risk” would also report the same findings.
A STUDENTS PERSPECTIVE

What do you believe the future of Education Technology looks like?

Ahmed Tahir,
President, Humber Students’ Federation,
Humber College

One of the biggest most impressive use of technology has been in its classroom redesign, which Humber calls its HIVES (Humber Interactive Spaces). It has removed the “front” of the classroom in favour of allowing students to sit in groups at a table that has a screen. This screen either shows the contents of what the instructor is sharing or what a student within the group would like to share from their laptop. The instructor acts as more of a guide than a lecturer and helps drive discussion among students, and the screens can either connect all the students on a single topic or be used to spur discussion among a smaller group.

Cormac McGee,
Vice President Education,
Ryerson Students’ Union

The biggest thing I think Ryerson is working on right now, in terms of student engagement and technology, is the creation of an electronic co-curricular record, where students will be able to record and receive a transcript for their work in the university community. As the amount of people getting degrees from universities continues to decrease, the value of that degree diminishes, and the value of these co-curricular activities increases. That’s what employers are looking for today — critical thinking, problem solving, confrontation and teamwork skills, not that you managed to complete your degree requirements. Students need a way to record and reflect on these experiences to be able to connect them to what employers are looking for.
Jasmine Denike,
Vice President External,
University of Toronto Students' Union

U of T has been known to use any and all technologies that work to progress the learning experience. That includes anything that is now seen as 'basic' uses of technology including slides and online databases full of notes, readings and other resources to more in depth tools to communicate information to students like online lectures, live video lectures, projects that integrate technology into everyday life and so on. U of T's ability to adapt to new developments has helped it become such a powerhouse of new, creative minds that have been emerging to create new initiatives and find new cures.

The UTSU has focused heavily on coming up with more effective ways to use the technology we have - whether it be as simple as a listserv of our members or more broad attempts of making our website more accessible for students. The fact that we’re so willing to adapt to new forms of technology and communication is what makes us so effective in reaching our members and other students.
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4. Coding: Apply IT beyond the STEM disciplines
5. BYOD & 1:1: Roll out your programs effectively
6. Online Learning: Boost enrolment with distance options
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9. Faculty Culture: Develop support for your tech programs
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