

President's Steering Committee on Disruptive Technology

Final Report - April 9, 2015

Co-chairs	
Ken Reimer Director, Centre for Enhanced Teaching and Learning (Fredericton)	Karen Keiller Director, Information Services and Systems (Saint John)

Introduction

The President's Steering Committee on Disruptive Technology (DT) met from January 2013 to May 2014. This is the final report of the DT Committee and the report includes several recommendations and summarizes the activity of the committee. The initial terms of reference for the committee were aspirational (Appendix I) and the membership included faculty, administration and students (Appendix II). The initial mandate of the DT Committee was 18 months.

We recommend that work in this area be carried forward by the Centre for Enhanced Teaching and Learning (Fredericton), the Centre for Teaching and Learning (Saint John), the Joint AUNBT/UNB Impact of Technology Committee, the College of Extended Learning and all faculties and departments on both campuses. We recommend that the DT Committee be thanked and disbanded. If an on-going steering committee is necessary the name, membership and mandate should be reviewed.

Recommendations

The Disruptive Technology Committee has been successful at engaging large numbers of the campus community in various committees, working groups, focus groups, and conference sessions. We have used this information to gather information, write reports, get some momentum and broader engagement, which has resulted in the following six broad recommendations.

Recommendation 1 - Develop Online Courses and Online Programs

In order to encourage the development of online courses the process for revenue allocation should be reviewed. Growth in audiences outside the local community has typically been a result of the creation of whole programs rather than individual courses (e.g. MEd, OHS Certificate/Diploma). Faculties and departments need sufficient financial incentive to develop and deliver online programs and UNB should create an environment that encourages the creation and delivery of more online programs. We recommend that UNB identifies and develops a pilot online program based on a new more attractive business model. Ideally this would be a bi-campus credit program, such as a course-based Masters degree.

Recommendation 2 - Use New and Existing Video-Conferencing (VC) Infrastructure to Deliver Bi-campus courses

Currently about 5 courses per term are delivered between the campuses using videoconferencing technologies. These include SOCI, APSC, EDUC, NURS and others. Most of these courses are delivered from Fredericton, a few delivered from Saint John, and occasionally they are co-taught with instruction from both campuses. The committee recommends that Academic Units on both campuses identify courses that would be good candidates for video-conference delivery, and develop processes for recognizing units who extend their classroom to the other campus. The existing facilities and support services (McLaggan 015 (F), Oland Hall 120, 203, and Hans W. Klohn Commons 107 (SJ)) are existing facilities, but may not be sufficient for the need. There is also potential for leveraging existing infrastructure: Cisco (VoIP), Microsoft (Lync, Sharepoint, Exchange) and Polycom. Options should be explored to handle growth in this area.

Recommendation 3 - Provide Stable Funding for Innovation

Based on the work of the DT Committee the University has adopted Poll Everywhere, a single classroom response system, but the ongoing funding is perilous. The pilot projects for a classroom response system was funded from the Student Technology Fee (Saint John) and departmental budgets (Fredericton). This points to the need for stable funding for innovative projects. We recommend the CETL 'Teaching & Learning Priority Fund' as a model for handling the submissions, adjudication, and administration for funding innovative projects.

Recommendation 4 - Foster a Culture of Innovation

We recommend that a web presence be created and supported that documents and celebrates existing innovative uses of technology for teaching and learning at UNB. We also recommend that there be ongoing workshops and conferences, such as the **#DisruptED2013: How innovative forces are changing higher education** (Appendix III). There is already a group sharing of bookmarks on disruptive technology in higher education that can also be nurtured¹. Other ideas for encouraging a culture of innovation include secondments and work exchanges for innovative projects.

Recommendation 5 - Leverage Open

Open Educational Resources, Open Journals, Open Research Data, Open Textbooks, Open Source Software - the culture of Open has a transformative power. The recent Tri-Agency Open Access Policy on Publications and the policy based at both UNB Senates² have highlighted the need for institutional support for open access. We recommend support for the UNB Scholar Research Repository³, and funding for the Proposal to Encourage the Adoption of Open Educational Resources: Improving Student Outcomes Through Open Textbooks (Appendix IV) as a start.

¹ <https://groups.diigo.com/group/disruptive-technology-unb>

² <https://www.lib.unb.ca/openaccess/>

³ <https://unbscholar.lib.unb.ca/>

Recommendation 6 - Join the MOOC Movement

Now that the hype cycle is reaching the slope of enlightenment⁴ it is time for UNB to develop at least one MOOC and to consider how UNB students will gain recognition for learning outside of the traditional face-to-face classroom. We recommend that Prior Learning Assessment be explored as a way to give credit to students completing learning through MOOCs delivered at UNB or elsewhere.

Background

“Disruptive innovation is already at work in higher education, and universities have to look no further than online classes to see examples of change at scale. And how universities respond to this change will determine whether they live or die”⁵

The bi-campus President’s Steering Committee on Disruptive Technology was struck in October 2012 to begin the process of considering how UNB can and should respond to a rapidly changing technological environment. While the term “Disruptive” caused some consternation, the tension inherent in the term, which in this venue refers to “game-changing” technology, indeed reflects much of the tension surrounding the adoption of such advances. The term “disruptive technologies” was first used in 1995 by Clayton M. Christensen and Joseph Bower in an article *Disruptive Technologies: Catching the Wave*. Since that time, our understanding and recognition of disruptive technologies has grown, and numerous articles and books are emerging on the topics of disruptive technologies, disruptive innovation, disruptive moments, and other disruptive forces.

With UNB’s overarching goal to be the best teaching and learning institution in Canada, we are compelled to engage change wherever it is found – that is the essence of a University education. Our strategic plan commits us to provide an exceptional and transformative student experience, to support academic programs that are engaging, challenging and relevant, and to lead in discovery and innovation. As noted in the committee’s terms of reference (see Appendix 1), “Serving our students to the best of our ability requires us to understand their motivations and expectations to ensure that they will become and remain educated and engaged citizens, fully equipped to adapt to a rapidly changing world.”

To that end, the Committee’s mandate is wide-ranging:

- Advise the University regarding developments and UNB’s response
- Provision of a forum for conversation at the university and in the community
- Build understanding and awareness on campuses of potential impacts
- Gather information on related developments at other institutions

⁴ <http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>

⁵ 3 Things Higher Education Should Know about Disruptive Innovation. (September 30, 2014). Retrieved February 27, 2015, from <http://www.centerdigitaled.com/news/3-Things-Higher-Education-Should-Know-about-Disruptive-Innovation.html>

- Stimulate possible opportunities for research or business development
- Help identify or promote interdisciplinary innovation initiatives
- Help UNB provide leadership in the province that enhances the Province's Economic Development and Innovation Strategies
- Communicate findings to the university community

Membership (see Appendix II)

With an initial 18 month mandate, the committee's membership saw several evolutions during the first several months. The call for members was met with such ardent interest that representation was broadened to ensure adequate participation from Faculty as well as Staff and Students.

The Steering Committee was appointed, co-chaired by Ken Reimer, Director, Centre for Enhanced Teaching and Learning (Fredericton), and initially Laurelle LeVert, Associate Vice President (Saint John) followed by Karen Keiller, Director of Information Services and Systems (Saint John), consisting of members from both campuses with experience and /or interest in disruptive technologies. A larger Working Group was also created with representatives from Faculties, Senate, Board of Governors, Student Unions, ISS, ITS, the provincial K-12 system, and more. Both groups were supported by a Project Manager, Katie Skead. The Working Group initially participated in several large brainstorming sessions that demonstrated a high level of engagement and interest. From this larger group, smaller Task Groups were developed that represented a number of themes that emerged.

Summary of Activities and Challenges

The committee was actively engaged, with 12 working group and/or steering committee meetings during the period 2012 – 2014. In addition dozens of task group meetings took place during that time period.

The meetings involved a combination of brainstorming sessions, planning meetings, and online discussion. Various articles and editorials regarding disruptive technology were circulated for consideration and thought; an EDUCAUSE Webinar on "MOOCS" was hosted in May 2013 on both campuses, and some members participated in "The Horizon Report in Action" Webinar in March 2013. We also hosted On November 12, 2013 a half-day conference entitled **#DisruptED2013: How innovative forces are changing higher education** (Appendix III), held on both campuses, using UNB's own technology to bring together groups in Fredericton and Saint John. Dr. Peter Smith, senior Vice President of academic strategies and development at Kaplan Higher Education was the keynote speaker, and other presenters included faculty and staff speakers from both campuses. The conference, attended by some 75 participants in Fredericton and another 20+ in Saint John, sought to build awareness of and highlight existing UNB projects, as well as encourage innovative thinking around these issues that affect the university environment.

Members of the DT committee, and CETL members, are exploring MOOC possibilities with members of the academic community who have expressed interest in creating a pilot MOOC. CETL's Media Lab has renovated one area of the lab to create a "MOOC Studio", where professors/instructors and the other guest lecturers can come and record their lectures, their introductions, etc. There is also an area set aside for screen-recording, so instructors can demonstrate software, or show some other web-based materials with an audio track describing what they are seeing. In addition, the area is set up with LiveScribe pens for those who want to write or draw (and have that recorded).

An inventory of innovative uses of technology for teaching is currently in development, and various task groups have engaged colleagues at other institutions in order to learn more about what the Canadian landscape offers. Nonetheless, it is clear from the many campus discussions and activities occurring around the issue of disruptive technology that UNB, while perhaps not on the forefront, is indeed intensely engaged in adopting, exploring and using such technologies to push the boundaries of what “teaching and learning” are in today’s University. UNB engages social media, instructional media, e-commerce, and mobile technologies. Continual upgrades in both visible and invisible technologies on both campuses are serving the needs of the entire community: enhanced wireless, VOIP, classroom technology upgrades (SMART classrooms), website upgrades to be “responsive” to the many ways we engage with it, digitization of 50 years of UNBSJ’s historical photos and documents, D2L enhancements, and much more. UNB is also an active member of CVU, Canadian Virtual University, an association of Canada’s leading universities specializing in online and distance education which acts as an invaluable reference for students in Canada and around the world to find quality-assured online education. A website has been created⁶ outlining the mandate and activities of the Committee, and providing “stories” of interesting and innovative technological activities that UNB Faculty and Staff are engaged in and that support an enhanced learning environment.

Task Groups

Accessibility

The rate at which Canadians with disabilities graduate with a university degree climbed from 10% in 1999 to 13% in 2004 and exponentially since then. During the last decade, universities and colleges across Canada have worked with students with disabilities to establish and promote educational accommodations that are appropriate for postsecondary settings. In order to meet the needs of students, it is imperative that the supports and services being implemented include technology. This task group is looking at the challenges that are being faced by students in terms of accessibility and technology. The growth of “accessible” technology has been rapid, as has its adoption at UNB. Technologies such as accessible workstations, voice-to-text and text-to-voice, adoption of E-text resources, iPads and tablets, smart pens, and much more are just some of the ways that UNB is responding to and being proactive in addressing the needs of learners. Membership in this task group includes representatives from Accessibility and the Human Rights Office.

Classroom Technology

This group has considered the myriad ways technology has been, is, and may be integrated into the classroom environment and used to enhance the experience of instructors and learners alike. Some of the main items under consideration include lecture capture (audio/video/text) for universal instructional design, and innovative uses of D2L to enhance and broaden the scope of the classroom experience. Combined with the required elements for deep learning (group work, peer instruction, projects, etc.), technology can enrich the classroom. Members of this group are involved as well with other campus committees considering the impact of “live” recordings, privacy and human rights, and accessibility, and have been active in the development of draft guidelines and procedures to address “lecture capture” at UNB. They are exploring how technology is implemented at UNB and who decides which technologies should be adopted and whether there are or should be current policies governing this. Also under consideration are issues of technology infrastructure, human and fiscal resources, training and support. The rapidly changing world of technology means that “traditional” methodologies must continually adapt

⁶ www.unb.ca/initiatives/disruptiveinnovation

to and overlap with these changes – this poses challenges to instructors and learners alike. Is enterprise software the solution? Should Teaching and Learning Centres be charged with decision making around educational / instructional software solutions? Technology is more than a learning device – it encompasses the entire learning environment (instructor, learner, space, technology). How can technology fundamentally change “good teaching”? Membership in this task group includes Faculty, ISS, Library, Accessibility, and Teaching and Learning.

Online and Distance

This group has considered the opportunity and challenge presented by MOOCs as well as the larger approach to, and implications of, distance/online education at UNB. This group is working as well with a UNB committee tasked with updating our online “strategy”. Deeply engaged in the project, the task group utilized a number of “disruptive” technologies as part of its work – group discussions via Diigo, document storage on Google Drives, and member participation in MOOCs. The group is exploring the landscape of what UNB offers, and is considering a variety of scenarios that would engage us further in online opportunities from a realistic standpoint. Considerations must be given to issues such as Faculty engagement, academic freedom and intellectual property, technical support and resources, and the possibility of partnering with an external body such as Coursera or EdX – these are not simple issues. Questions being raised and debated include whether /how UNB can engage in MOOC culture (and if so, how to avoid the pitfalls faced by other institutions); how to better integrate online resources into day-to-day teaching; exploration of new models such as the “flipped” classroom; recognition (for credit) of MOOC learning, PLA, etc.; and how UNB can be more flexible in responding to the needs and desires of its learners using disruptive technologies. The group is also engaging in a SWOT exercise to explore the strengths, weaknesses, opportunities and threats posed by disruptive technology to UNB. Membership in this task group includes representatives from Faculty, Extended Learning, ITS, Student Union, the CETL Media Lab, and the K-12 System.

Open Access

This group looked at the question of how the adoption and creation of open textbooks could benefit students, both in the ubiquitous access to quality resources and saving of money. “A great start to 2014: Open Textbook Project saves B.C. students over \$50,000”⁷ should inspire us to action in open textbook programs.. In May 2015 the Tri-Agency Open Access Policy on Publications comes into force. The policy recognizes that “societal advancement is made possible through widespread and barrier-free access to cutting-edge research and knowledge, enabling researchers, scholars, clinicians, policymakers, private sector and not-for-profit organizations and the public to use and build on this knowledge.”⁸ In 2014 both UNB Senates have passed guidelines on Open Access⁹. The policies and guidelines now need institutional support.

Communications and Conference

The communications and conference task group developed a number of communications that promoted the activities of the group, and documented its proceedings. The group set up a community for shared communications on the UNB Portal. Additionally the group set up a Diigo site that shared interesting articles with any interested parties (inside or outside UNB). A website was created to share the workings and progress of the group at www.unb.ca/initiatives/disruptiveinnovation/. Within the website, a

⁷ <http://bccampus.ca/2014/01/10/a-great-start-to-2014-open-textbook-project-saves-b-c-students-over-50000/>

⁸ <http://www.science.gc.ca/default.asp?lang=En&n=F6765465-1>

⁹ <https://www.lib.unb.ca/openaccess/>

portfolio of 'disruptive innovators' at UNB was established, with an initial six individuals highlighted with stories about their innovative activities. This group was also responsible for organizing the successful DisruptED2013 Conference (mentioned above, and detailed in Appendix III). Part of the work of this group was to highlight other related conferences or sessions, two of which included the EDUCAUSE Spring Focus Webinar series, in April 2013, and the Big Data Congress held in Feb 2014.

Appendix I

President's Steering Committee on Disruptive Technology

Terms of Reference

(Version of 19 October, 2012)

Background

Our overarching goal is to be the best teaching and learning institution in Canada. To that end, our strategic plan commits us to provide an exceptional and transformative student experience, to support academic programs that are engaging, challenging and relevant, and to lead in discovery and innovation. Serving our students to the best of our ability requires us to understand their motivations and expectations to ensure that they will become and remain educated and engaged citizens, fully equipped to adapt to a rapidly changing world.

Advances in interactive technology and social media and their widespread adoption by our students have the potential to dramatically change the traditional relationship between our students, their instructors and UNB. Recent changes to the post-secondary environment include the formation of the MIT/Harvard on-line consortium Edx; “massively open on-line courses” offered by Coursera; delivery platforms that quickly identify students at risk and sometimes much more; the use of technology to help students with common interests find each other; and much more.

How should UNB respond to this array of opportunities and challenges to lead innovation in the post-secondary sector?

Role of the President's Steering Committee

The Steering Committee will report to the President, the Senates and the Board of Governors, on a regular basis, the role of this bi-campus panel with respect to these issues is to:

- Advise the university regarding these developments and our response;
- Provide a forum for conversation at the university and in the community;
- To build understanding and awareness on campuses of potential impacts;
- To gather information on related developments at other institutions;
- To stimulate possible opportunities for research or business development that may arise;
- To help identify or promote interdisciplinary innovation initiatives;
- To help UNB provide leadership in the province that enhances the Province's Economic Development and Innovation Strategies;
- Communicate all findings to the university community

Meetings

The Steering Committee will meet once every month. Quorum will consist of a simple majority of the voting members. Relevant briefing documents, the agenda and minutes will be circulated prior to each meeting.

Project Manager

The Project Manager has overall responsibility for managing and executing this project according to scope identified by the Steering Committee. This includes maintain project documentation for the benefit of both the Steering Committee and the Core Working Group. The Project Manager will also be responsible for bringing deviations from this plan in terms of project scope, risk, schedule or cost to the attention of the Steering Committee for review and resolution.

Core Working Group

In order to address specific issues and areas of priority more thoroughly, a Core Working Group (CWG) will be developed. The CWG will also be responsible for identifying tasks required to address the identified technical elements and to ensure that units responsible for these elements undertake and complete the tasks in an agreed upon time frame. The CWG is also responsible for identifying any technical elements that pose a challenge to the success of the project and to submit these to the Project Manager for consideration by the Steering Committee.

Meetings

The CWG will meet on a regular basis to accomplish the mandate set-forth by the Steering Committee. They will communicate to the Steering Committee via the Project Manager.

Terms of the Steering Committee and Core Working Group

The Steering Committee and Core Working Group will be established for an initial period of 18 months at which time the need for the Committees to continue will be reviewed.

Appendix II

PRESIDENT'S STEERING COMMITTEE ON DISRUPTIVE TECHNOLOGY MEMBERSHIP and PARTICIPATION

The Steering Committee was co-chaired by Ken Reimer, Director, Centre for Enhanced Teaching & Learning (Fredericton), and Karen Keiller, Director of Information Systems and Services (Saint John), who replaced Laurelle LeVert, Associate Vice-President (Saint John).

One member appointed by the Vice-President Saint John (Karen Keiller, replacing Laurelle LeVert)
One member appointed by the College of Extended Learning (Lloyd Henderson, CEL)
One member appointed by the Centre for Enhanced Teaching and Learning (Ken Reimer, CEL/CETL)
One member appointed by Information Services and Systems (Karen Keiller, ISS Saint John)
One member appointed by Information Technology Services – Terry Nikkel
One member appointed by Dean's Council – John Teskey
One member appointed by VPAC – Tim Alderson
One member appointed by the Board of Governors -Roxanne Fairweather (Chief Executive Officer, Innovatia Inc.)
Katie Skead, Project Manager

The Core Working Group includes members of the Board, the Senate, the University Management Committee, student, staff and faculty representatives.
Other members may be appointed by invitation of the president, or by invitation of the Steering Committee. The Core Working Group was co-chaired by Karen Keiller and Ken Reimer
One member appointed by the College of Extended Learning – Joss Richer (Manager, UNB Online)
One member appointed by the Centre for Enhanced Teaching and Learning – Ken Reimer (Director, CETL)
One member appointed by Information Services and Systems – Diane Buhay (Liaison Librarian for the Faculty of Science, Applied Science and Engineering at UNB Saint John)
One member appointed by Information Technology Services - Ben Steeves (Manager, Systems and Applications, Information Technology Services)
One member appointed by the Student Union - Robert Ogilvie
One member appointed by the Student's Representative Council – Eric Ofofu-Asare
One member appointed by the Graduate Student Association – (President of GSA)
One member appointed by Dean's Council – John Teskey (Director, Libraries, UNB Fredericton)
One member appointed by the Vice-President's Advisory Council – Tim Alderson (Professor, Mathematical Sciences, Department of Science, Applied Science and Engineering, UNB Saint John)
One faculty member from the Saint John Campus appointed by the President – Daniel Downes (Director - Arts Graduate Studies (MIDST), Coordinator - Information and Communication Studies, Associate Professor of Information and Communication Studies)
One faculty member from the Fredericton Campus appointed by the President – Guida Bendrich (Professor, Chemical Engineering, UNB Fredericton)
One member appointed by the Saint John Senate – Greg Fleet (Associate Professor, Faculty of Business, UNB Saint John)
One member appointed by the Fredericton Senate – Marc Andre Pelletier (Government of NB)

One member appointed by the Board of Governors -Roxanne Fairweather (Chief Executive Officer, Innovatia Inc.)

One member appointed by the Accessibility Centre – Kelley Flowers (Disability Resource Coordinator, Student Accessibility Centre, Student Affairs and Services)

One member from the K-12 system – Jeff Whipple (Technology Learning Mentor, Anglophone West School District)

One member appointed from Saint John College (Saint John Campus) – James London

One member appointed by the Teaching and Learning Centre – Mary Astorino (Instructional Technology Consultant, Educational Technology Services, Department of Information Services and Systems)

Records Management & Privacy Coordinator – Donna Curtis (Records Management & Privacy Coordinator)

Project Manager, Katie Skead (Engineering Outreach Coordinator, Faculty of Engineering, UNB Fredericton)

Appendix III

UNB conference to focus on Disruptive Technology

Could a disruptive innovation completely change the way universities work? The music industry, movie rental business, and the encyclopedia are examples of industries that have experienced a significant shift when new technologies were introduced.

Dr. Peter Smith, senior vice president of academic strategies and development at Kaplan Higher Education, will be the keynote speaker at the University of New Brunswick's #DisruptED2013 conference on November 12. Dr. Smith brings an alternative perspective, from his experience with Kaplan, a for-profit US-based group of institutions that provide online programs to more than 65,000 students. His broad experience includes being the founding president of California State University at Monterey Bay (CSUMB), as well as serving as the first president of the statewide Community College of Vermont.

In addition to Dr. Smith, the half-day conference will include speakers from UNB's Fredericton and Saint John campuses, as well massive open online course (MOOC) developer, Dr. Rosie Redfield from the University of British Columbia via Skype.

#DisruptED2013 is organized by the President's Steering Committee on Disruptive Technologies as a way to build awareness, highlight existing UNB projects, and encourage innovative thinking around these issues that affect the university environment.

For more information about the conference, or to arrange an interview with Dr. Peter Smith, please contact Ken Reimer.

Conference details

#DisruptED2013: How innovative forces are changing higher education

This conference is a bi-campus event, with videoconference sessions from both campuses, taking advantage of the two-campus infrastructure and communications technology we have at UNB.

This is also a chance to hear from UNB Faculty on how technology is changing how they teach:

Greg Fleet, Business, UNB (Saint John)
Barbara Dowding, Biology, UNB (Saint John)
Martin Wielemaker, Business, UNB (Fredericton)
Sasha Mullally, History, UNB (Fredericton)

Register now and join the conversation on Twitter using #DisruptED2013.

Timing and logistics

Date: Tuesday, November 12 (UNB Fall Reading Day)
Time: 9 a.m. to 1 p.m.
Location: MacLaggan 053 (UNB – Fredericton) | Oland Hall 206 (UNB – Saint John)

Cost: Free

Keynote Speaker: Peter Smith

Topic: “Why there will not be a new normal in higher education”

Dr. Peter P. Smith is senior vice president of academic strategies and development for Kaplan Higher Education. In this role, he is responsible for the development of mid-term strategies and program development. Dr. Smith is the former assistant director general of the United Nations Educational, Scientific, and Cultural Organization and served as the founding president of California State University at Monterey Bay where he oversaw all aspects of leadership and development of the institution.

Dr. Smith served as the first president of the statewide Community College of Vermont from 1970-1978, and was named president emeritus upon resigning. He served as Vermont’s Lieutenant Governor from 1982-1986. In 1989, he was elected as a representative from Vermont to the U.S. House of Representatives. From 1991-1994 he served as dean of the graduate school of education and human development for George Washington University.

Dr. Smith holds a doctor of education from Harvard University. He is the author of *The Quiet Crisis: How Higher Education Is Failing America* (Anker Publications, Bolton MA, 2004) and *Harnessing America’s Wasted Talent: A New Ecology of Learning* (Jossey-Bass, A Wiley Imprint, San Francisco, CA, 2010).

Appendix IV

Proposal to Encourage the Adoption of Open Educational Resources: Improving Student Outcomes Through Open Textbooks

March 2014

Karen Keiller, Director of Information Services and Systems, UNB Saint John

John Teskey, Director of Libraries, UNB Fredericton

Introduction

The high cost of textbooks is a major concern for students. Some students make their course selections based on the cost of required textbooks; many others choose not to purchase textbooks and are at a disadvantage; would-be students find the combined cost of tuition and textbooks an obstacle to university access altogether (The Chronicle of Higher Education, Aug. 23, 2011).

Open educational resources (OER) offer the best alternative. A prime example is “open textbooks” -- learning materials freely available and accessible online, which are also adaptable to specific educational needs and contexts. Important initial drivers for students and educators include reduced cost, but also dependable quality and ease of use (Petrides, Jimes, Middleton-Detzner, Walling, & Weiss, 2011).

OER defined: OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. (The Hewlett Foundation)

Considerations

While cost reduction for students is the most significant factor influencing adoption of open textbooks for students and faculty, access is equally important: “on day one of the class everyone has the book” (Petrides, et al., 2011). No more dithering about the decision to buy, worrying about the expense and spending time looking for the most economical option, or awaiting student loans to arrive before buying texts; rather than falling behind or failing to catch up entirely, all students have the same resources from the outset.

Flexibility is key to ease of use: open textbooks can be adapted for technical proficiency and access to technology. Students who use a laptop everyday use the textbook online, whereas

others download a copy to their mobile device; those with infrequent access to computers or the internet, print the section required for that week's class.

Open textbooks are well suited to the current habits and learning practices of students. Students expect to interact with content--to act as consumer and a producer--and to find resources online. In turn, the layers of open textbook features can be accessed progressively as faculty become more sophisticated in their use and incorporation into course and lesson planning.

Educators and learners tend to use open textbooks in ways that reflect existing teaching and learning practices. However, OER presents an opportunity to try new ways of teaching and learning that are more collaborative and participatory. Educators are using OER to engage students and collaborate in the creation of new content. This interactivity extends the limits of learning and sharing knowledge beyond the class; it enhances student learning and facilitates faculty development (Petrides, et al., 2011).

UNB Libraries are prepared to support the adoption and use of open textbooks. Its services and resources are ideally placed to meet the challenges for the sustainability of the open textbook model, namely the technological literacy of faculty and the professional development that supports the use of open textbooks (Petrides, et al., 2011). These could include technical training and support, train-the-trainer workshops, one-on-one consultations with department Liaison Librarians, and a comprehensive subject guide to OER.

Faculty adoption of OER will be influenced by the perceived quality of the content. Perceptions are derived from various sources, yet UNB Libraries can offer timely professional guidance and resources in identifying and selecting material suited to the needs of faculty and learners.

Proposal

The UNB Open Education Initiative is a faculty incentive program that encourages the use of existing low-cost or free information resources to support student learning. To help encourage faculty to adopt open resources, we propose a grant to faculty for adopting open resources¹⁰.

- 10 grants of \$1000 for each course (3 at UNBSJ, 7 at UNBF)
- \$10,000 investment has the potential to save students \$50,000¹¹

The grants would be used by faculty interested in adopting a new strategy for curricular resources using easily identified digital resources. Under the UNB Open Education Initiative, faculty would develop a variety of alternatives to traditional textbooks, from creating new online open access content to taking a hybrid approach and combining available course materials, streaming video, the UNB Libraries reference collections, plus self-tests.

¹⁰ This proposal is modeled on a similar program at the [University of Massachusetts Amherst](#).

¹¹ Average of 50 students per course, \$100 per textbooks for 10 courses.

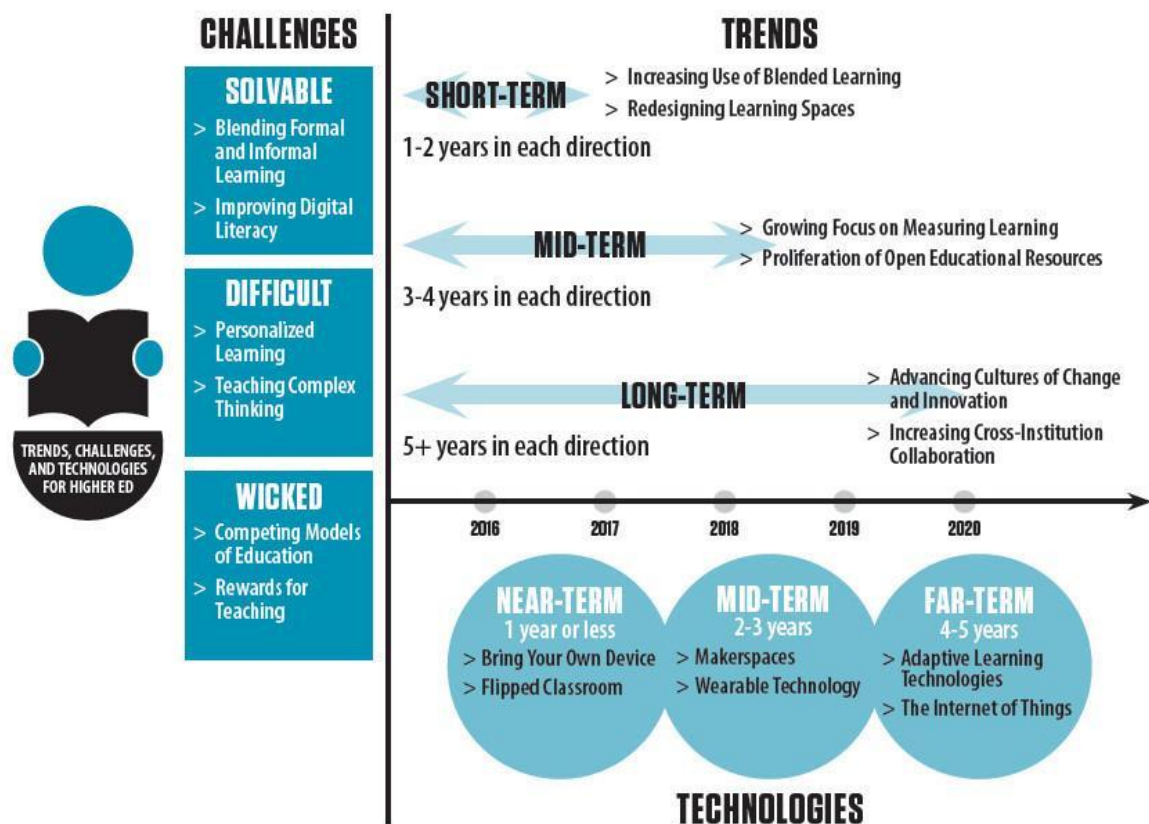
Appendix V Horizon Report

Since the drafting of the terms of reference for the DT Committee in the Fall of 2012 much has changed:

- MOOCs have gone from hype to the slope of enlightenment
- Tablets and other mobile devices are nearly ubiquitous
- Online learning has reached a tipping point.¹²

The New Media Consortium’s Horizon Report predicts that: “Bring Your Own Device (BYOD) and the flipped classroom are expected to be increasingly adopted by institutions in one year’s time or less to make use of mobile and online learning. The time-to-adoption for makerspaces and wearable technology are estimated within two to three years, while adaptive learning technologies and the Internet of Things is expected to be mainstream in universities and colleges within four to five years.”¹³

Topics from the NMC Horizon Report > 2015 Higher Education Edition



An infographic summarizing the HR2015 findings Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2015). NMC Horizon Report: 2015 Higher Education Edition. Austin, Texas: The New Media Consortium

¹² At a Tipping Point: Education, Learning and Libraries. Retrieved July 17, 2014, from <http://www.oclc.org/reports/tipping-point.en.html>

¹³ NMC Horizon Report > 2015 Higher Education Edition. (2015). Retrieved from <http://www.nmc.org/publication/nmc-horizon-report-2015-higher-education-edition/>