

A Synopsis of the Conference
Shaping Our Future: Toward a Pan-Canadian E-learning
Research Agenda

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Quote from Terry Anderson (2008)

"It is a common complaint in our field about the amount of research that could be summarized as "here is what I am doing, isn't it wonderful"! Often it is wonderful but too often the practitioners don't have the time or skill to effectively research their interventions - thus the need for partnerships with professional researchers."

Conference Archive: <http://scope.bccampus.ca/course/view.php?id=56>

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Shaping our Future: Toward a Pan-Canadian E-Learning Research Agenda

1.0 Executive summary

This online conference brought together two hundred thirty-five educators, researchers, and government staff with an interest in educational research, e-learning, and the advance of technology into the academic environment. It brought Canadians, North Americans and others from far across the world together to discuss the absence of a plan and strategy for e-learning research in Canada. Some had specific ideas and suggestions, others had examples from their own academic environments, and all brought an interest and concern for the topic at hand. In the end, suggestions were made, ideas were offered, and the commitment for continued ongoing planning and collaborative work was elicited from many who attended.

Major foci of the conference were the current state of Canadian e-learning research, the definition of an need for e-learning, appropriate methodologies to address both theoretical and basic research questions, appropriate participants and funding of this research and most pressing questions needing to be answered. The intent of conference organizers was to use the event as a catalyst for conversation around the value of a national research agenda and to identify stakeholders in the process as well as potential steps forward.

This document is a compilation of the materials created, discussed, and critiqued during that conference. The material belongs to those who contributed, shared, and participated. The ideas, comments, and opinions are those of the conference participants and the writer has attempted to put order into the vast amounts of material collected and to summarize the points made and decisions promoted. In many cases references were made to previous materials and those are listed in the last section of this document in the hope that some reading it may find them useful in their personal and professional search for and development of an effective e-learning agenda for Canada.

2.0 Overview of the Conference

The conference took place online over a period of three weeks in May, 2008 and included weekly asynchronous discussions using Moodle and eight synchronous (real time) sessions using Elluminate. The conference was organized and facilitated by four Canadian educators with the addition of six invited presenters. Overall, the participants were asked to share their opinions, outlook, examples and enthusiasm. The final conference activity was the creation of a wiki that was designed to actually construct a Pan Canadian Research Agenda.

The premise for the conference was clearly stated in the flyer information distributed to all potential attendees:

“Canada is one of the only countries in the developed world without a national strategic plan to research, develop and harness new technologies for teaching and learning. E-learning, in combination with other forms of delivery, affords potential to increase not only accessibility, but effectiveness and enjoyment of both formal and lifelong learning for Canadians of all ages. This three week online conference is designed to inform, inspire

and lead to actions that insure that Canadians maximize the opportunities presented by new technologies and associated pedagogies.”

The conference grew from a vision by Terry Anderson to explore the opportunities to discuss and potentially contribute to building a Pan-Canadian elearning research agenda. Included in the planned topics were:

- determine what is a research agenda and it’s components
- create that agenda and a plan to take it forward
- create some form of document to inform and keep the development plan alive

A secondary goal of the conference was to demonstrate how a small group of distributed colleagues could organize and facilitate an online conference with minimal lead time (two months) and minimal funding (all time, tools and presentations were volunteered by the presenters and the employers of the organizers and participants). The manner in which the conference was organized and conducted serves as a model of the attainability of a national conversation and the viability of development of a national strategy if appropriate conceptual guidance and support can be found with stakeholder agencies.

3.0 Participants

3.1 Organizers and Facilitators

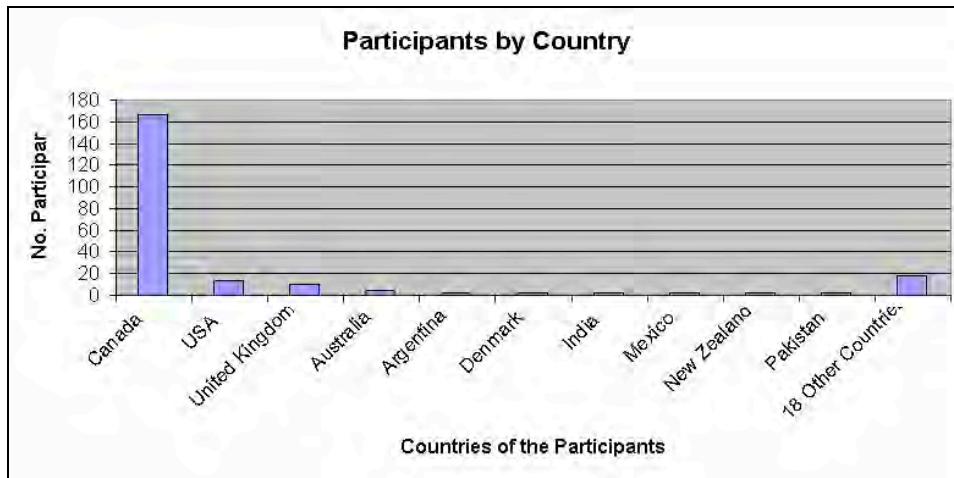
Terry Anderson	Research Chair at Athabasca University, Alberta, Canada
Sylvia Currie	Conference Co-ordinator for BCcampus, Vancouver, Canada
Paul Stacey	Director of Development for BCcampus, Vancouver, Canada
George Siemens	Associate Director, Research and Development with the Learning Technologies Centre at University of Manitoba, Winnipeg, Canada

3.2 Registration

The conference covered a period of three weeks and included two hundred thirty-five registered individuals in varying levels of participation. Some logged on often and joined asynchronous conference discussions, some participated synchronously in Eluminate discussions with speakers and earphones to get the face-to-face conference feel, and many others simply read what they could and participated haphazardly when the material provided was of interest to them. All conference materials, discussions, and presentations were available to the public without the need to register. The log files show over 37,000-page views using “Guest” access for the duration of the conference. In other words there were a large but unknown number of participants who accessed the conference without logging in.

Canadians were 74.22% of those enrolled in the conference, Americans were 5.78%, UK 4.44% and Australians 2.22%. Argentina, Denmark, India, Mexico, New Zealand, and Pakistan all were .89% and fourteen other countries each shared .44% of the participants.

Range of Participant Countries

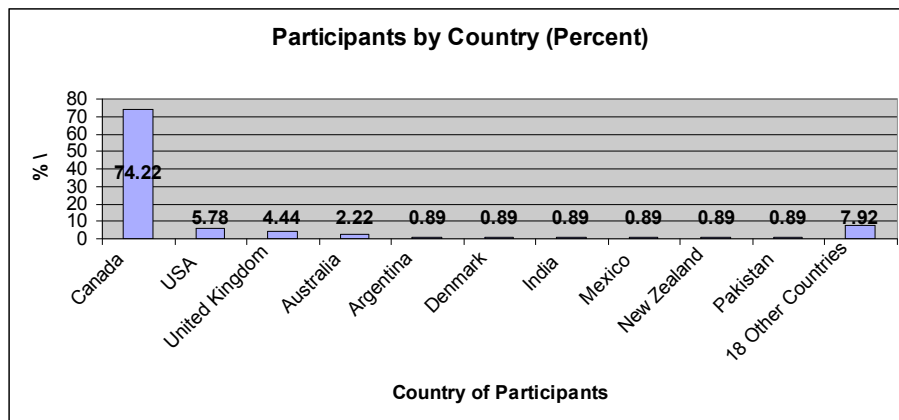


Total Registered in Conference = 225

Country	#	% of Total	Country	#	% of Total
Canada	167	74.22	Egypt	1	0.44
USA	13	5.78	Hong Kong	1	0.44
United Kingdom	10	4.44	Israel	1	0.44
Australia	5	2.22	Italy	1	0.44
Argentina	2	0.89	Japan	1	0.44
Denmark	2	0.89	Morocco	1	0.44
India	2	0.89	Puerto Rico	1	0.44
Mexico	2	0.89	South Africa	1	0.44
New Zealand	2	0.89	Spain	1	0.44
Pakistan	2	0.89	Sudan	1	0.44
Armenia	1	0.44	Sri Lanka	1	0.44
Austria	1	0.44	Tunisia	1	0.44
Botswana	1	0.44	United Arab Emirates	1	0.44
Brazil	1	0.44	Wales	1	0.44

*Note: registrants providing a country are included, some did not provide one

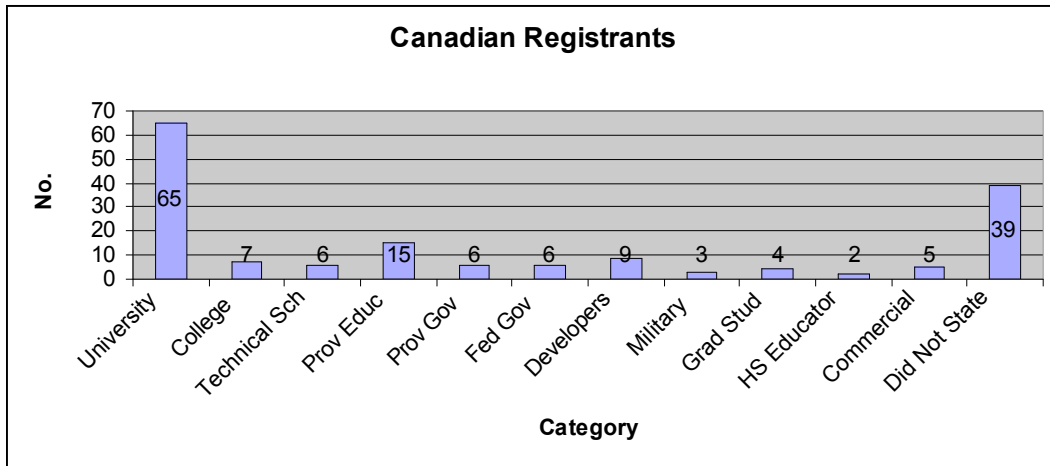
Participant Countries by Percentage



3.3 Canadians Enrolled

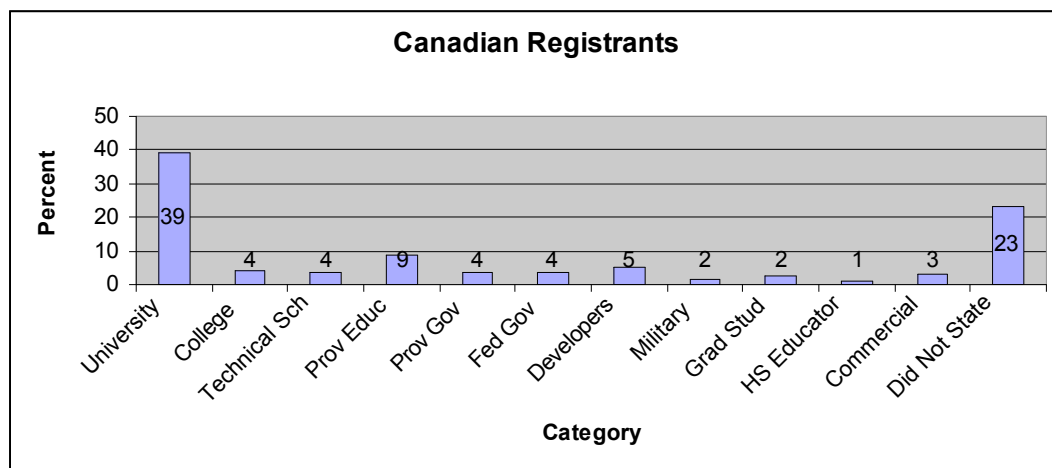
The one hundred and sixty-seven Canadians enrolled in the conference came from universities, colleges, federal and provincial governments as well as other smaller groups such as commercial entities. The breakdown is shown in the graph below.

Canadians by Number



Of the Canadian participants, 39% were related to a university, 4% to each of college or technical school, 9% to provincial education programs, and 4% each to the federal and provincial governments. Five percent of the Canadians attending could be considered developers or designers of educational programs. Keep in mind the designations are only derived from the information provided by the participant. Twenty-three percent didn't provide any information about themselves.

Canadians by Percent



3.4 Non-Canadians Enrolled

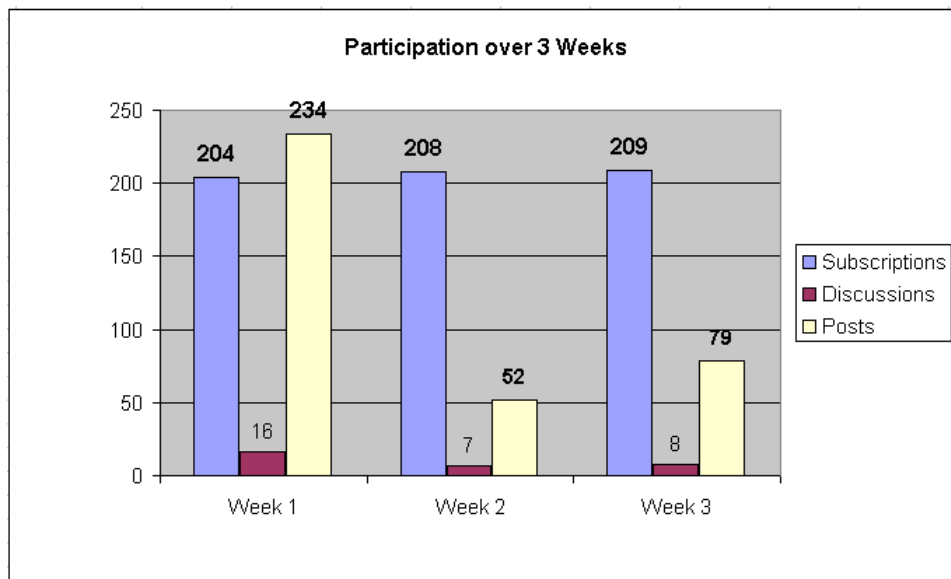
Non-Canadian North Americans came from the United States (13) and Mexico (2) and Brazil and Puerto Rico both had one each. Others enrolled included a professional from Delhi, India who has been working on using e-learning for capacity development of professionals and a university teacher in Open University Pakistan who realized after travelling that the concept of distance education varies from country to country.

4.0 Summary of Conference Participation

Over the three weeks of the conference, participants viewed eight presentations and had numerous opportunities to contribute to discussion groups focused on a wide variety of topics. They also had the opportunity to introduce their own topics in the asynchronous discussions and all synchronous sessions features active side channel discussion using text chat during the presentation and allowed for extended discussion after the formal presentation. All synchronous sessions were recorded and posted for those unable to attend in real time within 60 minutes of the real time activity. Throughout the conference, and particularly the final week, participants contributed to a conference wiki to share resources and collaborate around the key considerations of a national e-learning strategy.

The number of participants subscribed, the number of discussions initiated, and the number of posts, are shown below.

Participation During Conference



The number of participants involved in discussions is shown below.

Conference Participation

Week	Subscriptions	Discussions	Posts
SOF2008: Week 1 Discussions	204	16	234
SOF2008: Week 2 Discussions	208	7	52
SOF2008: Week 3 Discussions and creating our action plan	209	8	79

Delegates were invited to post personal introductions prior to the conference launch. Therefore, some of the postings tallied for week one actually occurred prior to the official commencement of the conference. In total the 365 messages were posted over 25 days producing an average of 14 messages per day.

5.0 Key Themes That Emerged

1. Appropriate theories of e-learning
2. Hard science used to support old theories or design new theories
3. Researcher/faculty relationships
4. Researcher to researcher or practitioner relationships
5. Re-using other researcher literature/findings/theories
6. Affect of real-world knowledge as in computers and technology
7. Policy level changes/input/organizations
8. Teaching Communities of Practice versus general Communities of Practice
9. Distance Education or just Education
10. Appropriate size of a collaborative research project or the number of projects
11. Cultural issues of adoption/diffusion
12. Connect with like-minded people so they can tailor an agenda for themselves that they use to re-connect to the larger agenda
13. Sharing information
14. Access to funding

6.0 E-Learning Definition Refined

The conference began with a discussion of many current definitions of e-learning and over the course of time some were adopted, promoted, and generally accepted while others were discarded or refined. There was some level of agreement with ten statements originally coming from Mark Nichols and a combination of the CCL definition of e-learning. Mark Nichols definition included defining e-learning as "pedagogy empowered by digital technology" and follows:

1. E-learning is a means of implementing education that can be applied within varying education models (for example, on-campus or distance education) and educational philosophies of practice (for example behaviourism and constructivism).
2. E-learning enables unique forms of education that combine the existing paradigms of on-campus and distance education.
3. Whenever possible, the choice of e-learning tools should reflect rather than determine the pedagogy of a course. However, as a general rule how technology is used is more important than which technology is used.
4. E-learning advances primarily through the successful implementation of pedagogical innovation.
5. E-learning can be applied in two major ways: presenting education content, and facilitating education processes.
6. E-learning tools are best made to operate within a carefully selected and optimally integrated course design model.
7. E-learning tools and techniques should be used only after consideration has been given to online versus offline trade-offs.

8. Effective e-learning practice considers the ways in which end-users will engage with the learning opportunities provided to them.
9. The essential process of education (that is, enabling the learner to achieve instructional goals and performance objectives) doesn't change when e-learning is applied.
10. Only pedagogical advantages will provide a lasting rationale for implementing e-learning approaches.

[reference http://www.flinz.ac.nz/file.php/20/01_E-learning_in_context_27-08-07_kh.pdf]

In his presentation, John Biss shared Canadian Council on Learning's definition of e-learning as:

- “development of knowledge and skills through the use of information and communication technologies (ICTs)
- particularly to support interactions for learning—interactions with content, with learning activities and tools, and with other people”. [1]

[reference [1] J. Rossiter, 2002; also 2005 in an address at the CCL Workshop on e-learning]

Group discussions favored this definition as it applies to both formal and informal and non formal modes of learning. It captures the importance of interaction, but acknowledges that interaction can take place among and between both humans and non-human agents or content. Finally, it includes planned classroom, blended and distance education applications as well as spontaneous and even serendipitous use of these tools that result in learning.

Mark Bullen's Continuum (*highlighting added*)



Suggested alteration:



(Source: book co-edited by Mark Bullen and Diane Janes, "Making the Transition to E-Learning: Strategies and Issues", 2007).

Mark Bullen offered a version of an e-learning continuum he had worked on and Susan Lister, another participant, suggested a slight change to it to include video conferencing, audio cassettes and TV under e-learning and 'print' was moved under just distance education. Both versions are

included above.

According to the group wiki page on Methodologies, it was suggested:

- There is no single best method of researching all of the diverse problems and contexts associated with e-learning implementations and theory development
- Meaningful collaboration with practitioners is imperative both for the quality of the research and the likelihood that the research will make a difference in real contexts
- Evidence for decision making should be drawn from many sources and is richest when informed by both interpretive and positivist perspectives

7.0 Key Stakeholders

The key stakeholders of a pan Canadian e-learning research agenda included:

1. key personnel in each of the Government Ministries/Committees/ and various government agencies like Industry Canada, Canadian Council for Learning
2. colleagues in provincial Education and Advanced Education Ministries
3. Academic chairs, faculty members and research students interested in learning about the efficacy and appropriateness of a variety of e-learning interventions currently in use or planned by educational and training organizations
4. Literacy groups, libraries and others focused on informal learning provision and opportunity
5. VP Academics and other administrators in higher education
6. Organizations, for profit companies with recent major learning and training initiatives
7. Participants in professional organizations like AUCC, ACCC, CMEC,
8. various federal and provincial educational government offices
9. professional organizations that help to shape the various requirements for professional and specialized education and/or have an influence on licensing requirements
10. National Defense and the Canadian Forces DND/CF

The absence of a number of these organizations from participation underlined the need for ongoing and multifaceted efforts to engage many more Canadians in this strategically important area.

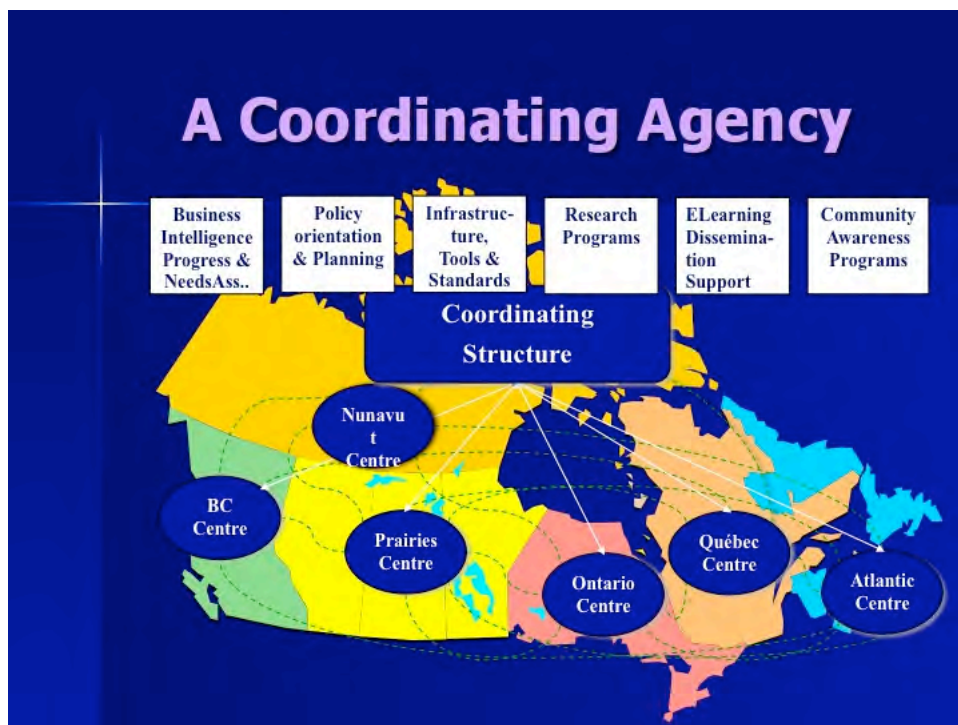
8.0 Funding and Support

Most of this section came from the material created in the conference wiki asking for a funding strategy to support a rigorous e-learning research agenda. The responses included:

- unique political arrangement of Canada creates challenges in developing effective ways to garner, administrate and account for this type of investment.
- Engage with the Canadian Military to their use e-learning and solicit opportunities for the Military to fund the research
- provincial ministers of education, under CMEC (Council of Ministers of Education, Canada)
- Canadian researchers publish in open journals and newsletters available to all educators
- support for open content and open archiving a free and open repository of learning resources.

Possible sources of new funding include:

1. New federal research funds could be allocated through traditional research councils or as recommended by the CMEC/Industry Canada Advisory Committee for Online Learning, for the creation of a new funding council focused on e-learning research.
2. The Council of Ministers of Education could allocate funding and develop administrative support for a strategic e-learning research agenda. This option has the advantage of making the provinces stakeholders in the venture.
3. The Canadian Council on Learning could be funded to coordinate an effort. They have a research mandate and e-learning is one of their 'cross cutting' themes.
4. The development of a new pan Canadian organization, jointly funded by the provinces and the federal government, with a mandate to support and coordinate both basic and applied research, awareness dissemination and knowledge transfer in a regional e-learning network. This coordinating network was illustrated by Gilbert Paquette in his presentation [presentation slides are found at <http://www.slideshare.net/BCcampus/the-case-for-an-e-learning-research-and-innovation-strategy/>] to this conference (see below). This is model for development currently supported by Australian and UK governments). Consideration needs to be given to partnering with existing organizations – such as CIDER – that have already begun work in this area. A potential approach is to focus on coordinating existing agencies and developing new agencies where gaps exist.



A number of other opportunities may include:

5. Various provincial initiatives such as the BCcampus Online Program Development Fund (OPDF) and applied research dissemination grants [http://www.bccampus.ca/EducatorServices/Applied_Research.htm].

6. A number of training and education applications have been, or are being, developed to support our Canadian Forces Individual Training and Education System (CFITES). The point of contact for these initiatives is Senior Staff Officer, Mr. Bill Railer.
7. Royal Military College (RMC) has a significant amount of design, development and delivery of DL/e-Learning for undergraduate/ graduate programmes, but also an internal Professional Development Programme [<http://www.opme.forces.gc.ca/>]. Canadian Defence Academy [<http://www.cda-acd.forces.gc.ca/>] is responsible for training and education of military support occupations, has an interim Learning Management System (LMS) solution called DNDLearn [<http://www.dndlearn.forces.gc.ca/>]. The point of contact is Senior Staff Officer, Mr. Bill Railer (cell railer.wg@forces.gc.ca).
8. Army E-Learning and ALSC [http://www.armyelearning.ca/army_portal/main.html] and Army Learning Support Centre (ALSC) [http://www.armyelearning.ca/army_portal/ALSC.html] Working quite closely with external e-Learning agencies within Learn NB [<http://www.learnnb.ca/>].
9. The privately funded Inukshuk fund has small grants for multi-media and e-learning content development, but very little for evaluation and more basic research
10. Federal or other organizations (Industry Canada, etc.) could help contribute to the communication/network/travel funding part or to help cover shortages in a given province/territory.

9.0 Tools to Support Conference Activities

Moodle was used to support the main conference activities. A separate forum was created for each week/focus and for posting daily updates. The conference space (a “course” in Moodle) served as the main information page, with links to live session descriptions and subsequent archives and materials. The Moodle wiki tool was used for the Week 3 collaborative writing activities: 1) the design of the conference survey and 2) a pan-Canadian research agenda. The quiz tool was used for the survey that delegates completed at the end of the conference. While this wiki and quiz tools are not the most robust tools available they did allow the convenience of a single sign on for conference participants.

Illuminate was used for all synchronous sessions. The sessions were recorded and will remain available to the public for an indefinite period of time. The text chats, which were very active during each session for posting questions to the moderator and for backchannel commentary, were also saved separately for easy referral without having to launch Illuminate.

In addition to Moodle and Illuminate to support the core conference activities, the participatory nature of the conference inspired a number of participants to use various Web 2.0 tools to share resources and to diagram activities or ideas that arose during the conference. In addition the eight keynote presenters created and posted slides of their talks. The conference tag was sof2008. The conference tag enabled organizers to track participant comments made on blogs, open mailing lists, and other sites. Through the use of search engines such as Technorati or Google Alerts, information posted outside of the conference Moodle platform could still be discovered when appropriately tagged. Pageflakes was used to aggregate posts in different forums and platforms (such as Twitter).

A tag cloud was created using TagCrowd.com to visualize the main issues discussed during week 1. [<http://scope.bccampus.ca/mod/resource/view.php?id=1013>] Similarly, Many Eyes provided a means to search on any term to visualize its context during the week 1 discussion. [http://services.alphaworks.ibm.com/manyeyes/view/SP9G~OsOtha6d6Uf0W3_O2~] and an image created using Wordle.com produces another view of popularity of word usage based on all conference discussions. [http://wordle.net/gallery/wrdl/59622/SOF2008_Conference]

MindMeister was used to collaboratively construct a mind map to summarize the main points of the discussions. Conference participant Susan Lister volunteered to create and manage the mind map.

[<http://www.mindmeister.com/maps/pass/6697902>].

Presentation slides were shared through Slideshare where they can be viewed online or downloaded.

[<http://www.slideshare.net/search/slideshow?q=sof2008>]

Shaping Our Future: Toward a Pan Canadian Research Agenda

Modeling Collaboration: Researching Professional and Learner Needs

Practicing What We Preach: Research into E-Learning

The Case for an e-learning Research and Innovation Strategy

E-learning: The Promise and the Potential

International Perspectives on E-Learning

Web resources were shared using Delicious. An RSS feed from the bookmarks tagged SOF2008 appeared on the main conference page [<http://delicious.com/tag/SOF2008>]

Pageflakes provided another view of the conference activities, as well as a metaview that included commentary through blogs and twitter. [<http://www.pageflakes.com/SOF2008/>]

Twitter was used primarily for posting reminders about the conference and announcements about scheduled events. Use of the hashtag #sof2008 generated a page in Twemes, which also shows Delicious bookmarks and the mind map image posted to Flickr.com [<http://twemes.com/SOF2008>]

10.0 Next Steps

This section offers suggestions and a plan for next steps in this process to gain a Pan-Canadian Research Agenda. Suggestions include:

- align with CNIE or CCL and others like BC Campus and Alberta Campus to use them to gather momentum
- use Canadian Institute for Distance Education Research's (CIDER cider.athabascau.ca) biweekly sessions to continue discussions through special interest groups
- focus on learning not e-learning
- build a wiki journal
- keep the relationships developed in conference flourishing by ongoing organized contact
- use ideas of produsage [<http://produsage.org/>] to continue agenda building and collaborative research activities together

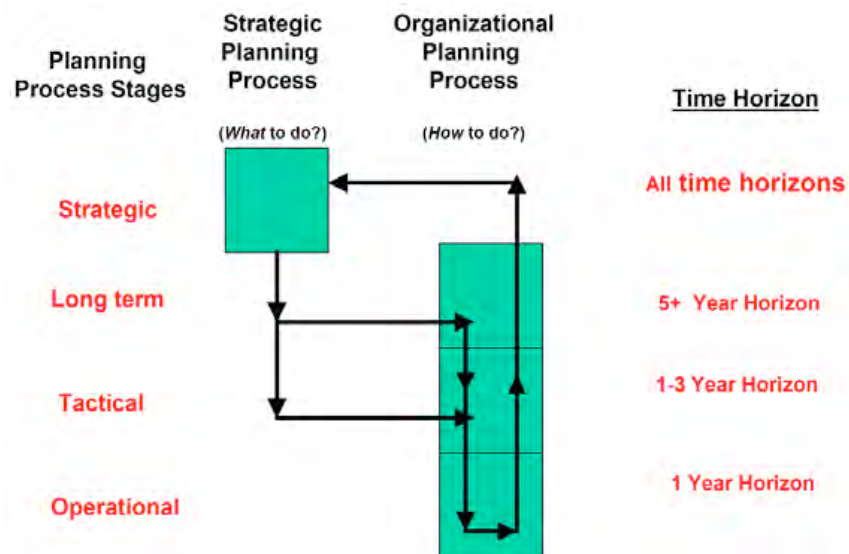
A timeline in the wiki requested participants consider a schedule for moving from theoretical discussion. No one offered to set more of a plan than those suggested by the conference organizers but some suggestions have been made by the writer incorporating ideas found above.

Proposed Pan Canadian Research Agenda Timeline

Time	What	Who
September 2008	Review of first conference	Terry, Sylvia, George and Paul
December 2008	Review of the ongoing connections between conference participants	Perhaps a focus group – volunteers along with four above
February 2009	Begin discussions with CNIE and CCL Enter into discussions with CIDER to form a special users group and make use of bi-weekly online sessions	
March 2009	Review potential Mission, Objectives and Strategies of SOF for discussion in May at CNIE conference	
May 2009	Start of SOF 2009 Conference – introduce Missions, Objectives and Strategies for acceptance and discussion Participation in CNIE Conference	
September 2009	1 Year Horizon	
September 2011	3 Year Horizon	
September 2013	5 Year Horizon	

The planning process could incorporate ideas from this source:

Figure: Strategic and Operational Planning for Education Technology. Source: Kowch, E. (2005). Do we plan the journey or read the compass? An argument for preparing educational technologists to lead organisational change. *British Journal of Education Technology*, 36 (60, 1067-1071).



(Chart was brought forward for review by Minhaaj Ur Rehman)

11.0 Summary from Wiki

The main task for conference participants in the third week was to create a Pan Canadian Research Agenda WIKI. This section provides some details of the results. Some sections were not completed and it is not clear if participants simply ran out of time to contribute or were missing ideas to add.

The Wiki may be accessed at [<http://scope.bccampus.ca/mod/wiki/view.php?id=885>] and looks like the graphic below.



The screenshot shows a web page titled "Pan Canadian Research Agenda" with a "Table of Contents" section. The table of contents lists several sections with brief descriptions:

- Description of the conference and associated events**
- Definitions of e-learning**
- Vision for a Learning Centric Canada**
This section provides a compelling case for the development of much expanded e-learning research activity
- The Canadian E-Learning Landscape**
A "map" of the current landscape
- Change Pressures**
This section addresses the pressures of change influencing the formation of a national agenda.
- Research Problems we should be addressing**
This section overviews some of the major issues that the research agenda should focus on.
- E-learning Methodologies that work**
In this section we overview the discussion on appropriate methodologies for e-learning research.
- Funding and Support of pan-Canadian e-learning Research**
This section details recommendations for a funding strategy to support a rigorous e-learning research agenda.
- Organization and Coordination Models and Recommendations**
In this section we outline the need for both a large pan Canadian strategy that allows for both small and large research projects and networks to emerge and thrive.
- From Theory to Policy and Practice**
This section maps out potential scenarios for moving from theoretical discussion to something that makes an impact.
- List of delegates and contributors to this document** (update your info!)

11.1 The Canadian E-Learning Landscape

This section collected stories of successful e-learning activities in Canada. The results are included below.

Private Industry: Elluminate, RIM, WebCT, Desire2Learn, FirstClass, KnowledgeForum, Flickr, Marratech (not clear if this is a Canadian company), Skype and Youtubes (same question), cohort of edubloggers have world wide reputations, portfolio's roots in human development, recognition of prior learning, academic and workforce development.

Public Organizations/Institutes or Individuals:

Smartboard "PDtoGo" Podcasts [<http://pdtogo.com/>] by Ben Hazzard & Joan Badger, Ontario Learn - a consortium of Ontario Colleges Online, BCcampus, Keewatinook Virtual High School, Athabasca University, SCoPE, Hot Potatoes, Tom Carey's Research, Edubridges/Edtechtalk, University of Lethbridge, and Laval University.

National Organizations/Institutes/Associations of note included:

Canadian Network for Innovation in Education (CNIE- RCIÉ) <http://www.cade-aced.ca/>, Canadian Virtual University (CVU) (consortium of Canadian Distance and Online Education universities) [<http://www.cvu-uvc.ca/>], and Canada's Collaboration for Online Higher Education and Research (COHERE) [http://ltc.umanitoba.ca:83/cohere/index.php?title=Main_Page].

Provincial Organizations/Institutes/Associations mentioned:

BCcampus

Saskatchewan TEL

ONTARIO - ABEL (York University) [<http://www.abelearn.ca/>], Education Computer Organization of Ontario [<http://www.ecoo.org/>]

MANITOBA - University of Manitoba - Learning Technology Centre

[http://umanitoba.ca/academic_support/uts/] and Distance and Online Education

[<http://umanitoba.ca/distance/>], Campus Manitoba [<http://www.campusmanitoba.com/>],

Manitoba Association for Distributed Learning and Training (MADLaT)

[<http://www.madlat.ca/>].

University of Toronto Library – eBooks User Experience Study

Canadian Edubloggers. Many are listed within the Canadian Blogger Awards - Education Category [<http://cdnba.wordpress.com/2008/02/06/best-education-blog-of-2007/>].

Canadian Educational Bloggers Wiki [<http://couros.wikispaces.com/canadianedublogs>].

Intel/Microsoft/HP/ recognized teachers

Intel Teach Program / Microsoft Innovative Teacher's Network / HP? / IEARN

11.2 Research Problems to Address

In this section participants were asked to name some of the major issues that the research agenda should focus on.

It was suggested Ernest Boyer and the Carnegie foundation have developed a taxonomy of research that may help us go beyond a 'shopping list' of pet projects. This taxonomy describes four levels of scholarship - all of which are necessary for an effective and meaningful research agenda.

These are:

1. Scholarship of Discovery is most familiar to academic researchers and focuses on the discovery of new and fundamental facts and understandings. It is most often associated with 'basic' research that may or may not have any direct application or consequence.
2. Scholarship of Integration links insights from one area of study or discipline to those of another resulting in rapid progress by building on the efforts and often diverse viewpoints of others.
3. Scholarship of Teaching focuses on the way that knowledge can be developed and shared effectively and efficiently and is most often associated with e-learning, but often the type least acknowledged by traditional researchers.
4. Scholarship of Application or more recently of Engagement takes knowledge and applies it to real problems in authentic contexts.

11.3 E-Learning Methodologies

Participants were asked to discuss the appropriate methodologies for e-learning research.

This question occurs as it is necessary to become successful with funding programs, web sites and major research projects that stress "evidence based" decision-making. For the purposes of

this research agenda, the group decided to affirm the following principles related to methodology:

- There is no single best method of researching all of the diverse problems and contexts associated with e-learning implementations and theory development.
- Meaningful collaboration with practitioners is imperative both for the quality of the research and the likelihood that the research will make a difference in real contexts.
- Evidence for decision making should be drawn from many sources and is richest when informed by both interpretive and positivist perspectives.

Appendix A - Presentations

1. *The Value, Form, and Function of Large Scale Research Agenda*

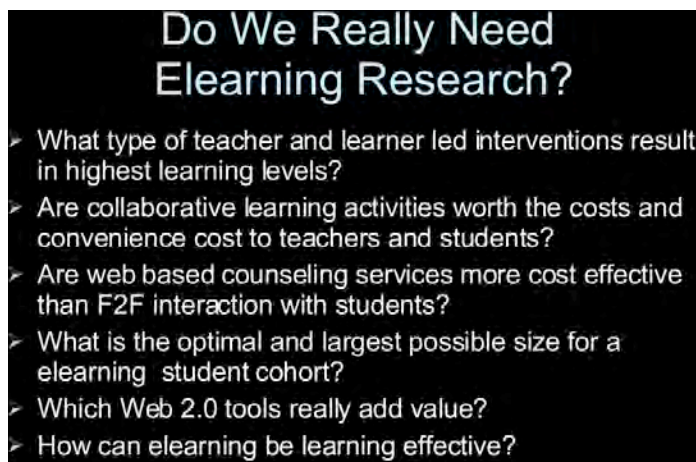
Presenter: Terry Anderson - Canada Research Chair in Distance Education

[Presentation slides are found at <http://www.slideshare.net/BCcampus/pan-canadian-research-agenda-2008/>]

This session introduced the conference and:

- overviewed the nature and practice of research in emerging and strategically important domains
- explored how other nations and other disciplines organized funding and priority shaping and asked what is gained and what lost from national research agendas
- questioned the effectiveness of collaborative research and how to decide the important issues and ones most likely to lead to effective results?
- looked at defining the need for and terms of effective pan Canadian e-learning research.

(sample screens from the presentation follow)



Do We Really Need Elearning Research?

- What type of teacher and learner led interventions result in highest learning levels?
- Are collaborative learning activities worth the costs and convenience cost to teachers and students?
- Are web based counseling services more cost effective than F2F interaction with students?
- What is the optimal and largest possible size for a elearning student cohort?
- Which Web 2.0 tools really add value?
- How can elearning be learning effective?



Components of a Research Agenda

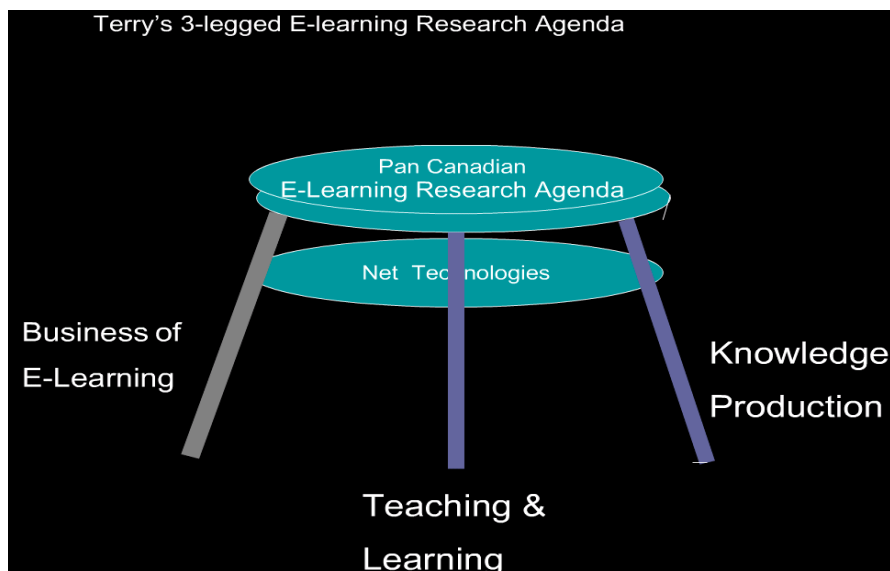
“research agenda” must:

- contain background on the need for the agenda;
- have a rationale for inclusion of the agenda items;
- have some implementation planning;
- contain an evaluative component, and;
- carry a message beyond a simple descriptive list that connotes a methodology, theoretical orientation and even an ideology of the agenda. (Buell and Anderson, 2006)

Why Develop a Pan-Canadian Research Agenda

- Catalyst and motivator for action
- Creates shared sense of community
- Focuses and hones ideas
- Provides direction
- Creates evaluation criteria
- Necessary to attract sufficient funding
- Allows for collaboration and coordination, reducing redundancy and enhancing validation in multiple contexts

The slide below demonstrates Terry's three-pronged approach including Business of E-learning, Teaching and Learning, and Knowledge Production as each of the legs.



The following slides continue to examine Terry's 3-legged approach:

Common Features of each Leg

- Mediated, therefore profoundly effected by Net Technologies
- Room for both basic and applied research
- Cross disciplinary
- Intervention based
- Multi methodological research required
- Interventions should be field tested in multiple contexts
- Focus on dissemination and innovation in practice

Business Of E-Learning

Major Questions:

- Effectiveness
 - (All 5 Kirkpatrick's levels)
- Organizational Models
- Content Development and project management
- Collaboration/partnership
- Value Chain
- Copyright and ownership
- Globalization

Disciplines Involved:

- Economists
- Business
- Labour Studies
- Organizational Behaviour
- Innovation Studies
- Law

Teaching and Learning

Major Questions:

- Individual, cooperative and collaborative learning models
- Innovative learning designs
- Competency based learning, PLAR
- Approaches to teaching and learning
- Automated versus human interventions
- Social determinants of learning

Disciplines Involved:

- Education
- Psychology
- Sociology
- Communications
- Linguistics

Comments of participants included:

- What constitutes 'collective' and is it more than just researchers, hard science proceeds from a theoretical basis, -do we have adequate theories that explain what is happening in e-learning that can be used to direct "hard science" research, how can it be "collected"?

➤ Funding to attract and energize professional researchers as well as academics and action/practitioner researchers

➤ Social software applications to create and sustain linkages and community

Consensus building via national survey on issues and methodologies???

Output of research in Journals, popular press, blogosphere, and Web 2.0 apps

Testing in multiple contexts, national, funded field trails.

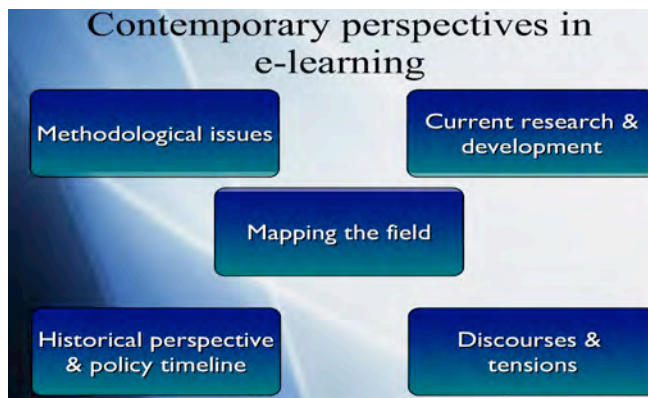
Terry's slide looks at some of his 'wish-list' for a Pan-Canadian Research Agenda.

2. Connecting E-learning Research, Policy and Practice

Presenter: Gráinne Conole - Chair, Institute of Educational Technology, The Open University
[Presentation slides are found at <http://www.slideshare.net/BCCampus/international-perspectives-on-elearning/>]

This session:

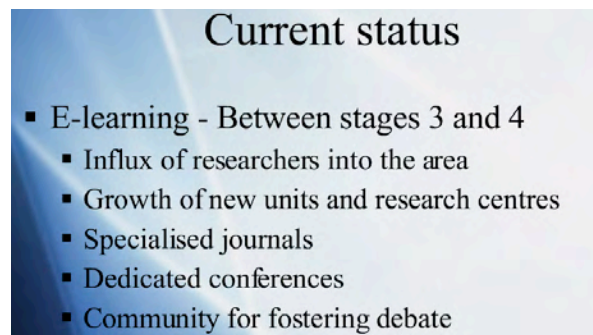
- Began with a review of the origins of e-learning as a research area, highlighting the different research areas and multiple discourses
- Compared international policy perspectives showing how these impact on research and practice in different countries
- Considered current areas of interests and speculated on future directions for e-learning research. (sample screens from the presentation follow)



Where are we at the e-learning stage?

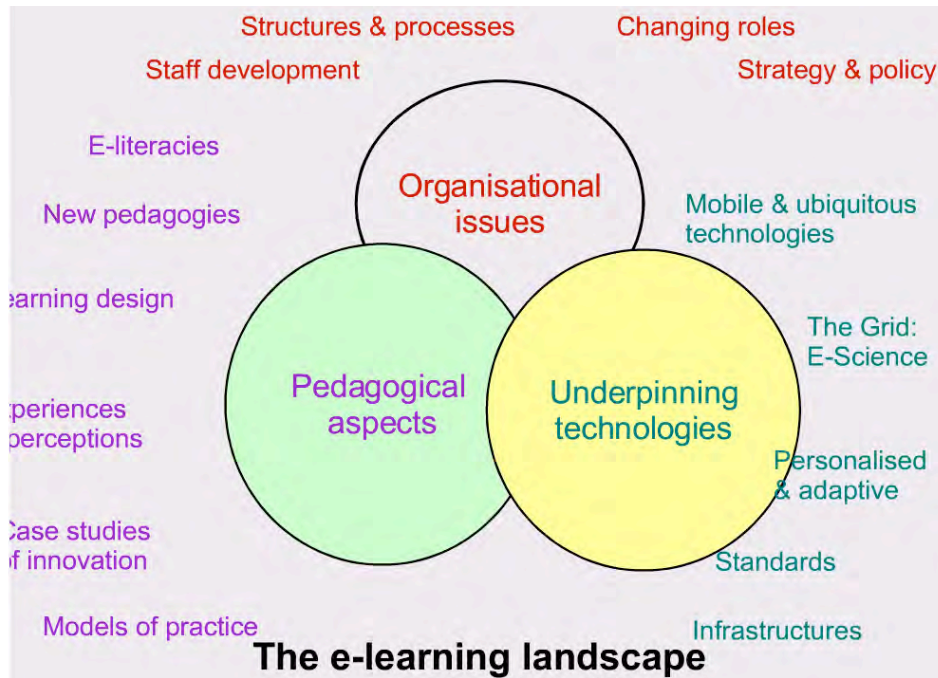


Most attending the presentation agreed about current location in the Emergence stage.



Gráinne felt there were interrelated issues:

1. Organizational issues
2. Pedagogical aspects
3. Underpinning technologies

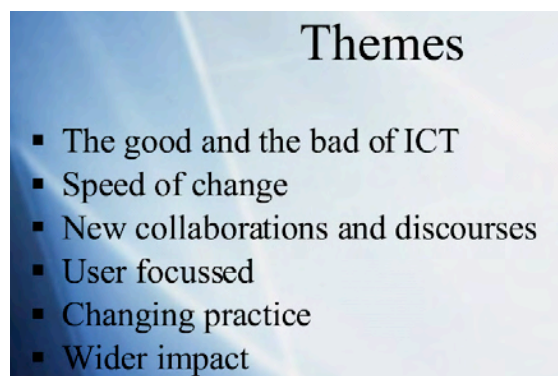


Also set within contextual factors (and political)

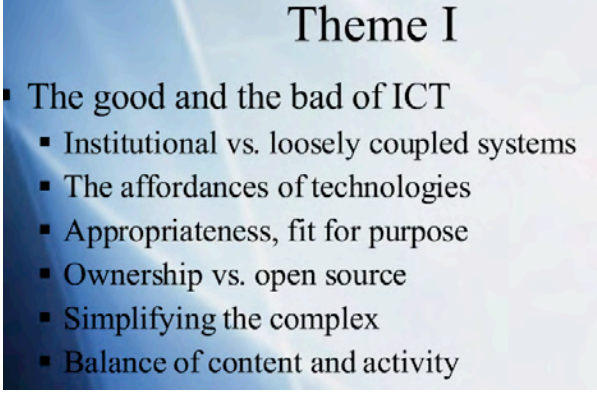
- Funding and policy drivers, cultural dimensions, subject-specific aspects, issues about access to information, pedagogical aspects, looking at the 'Student Voice' or 'Learner Voice', organizational issues including the slower pace of change in academic structures, problem of how to make them work together, how to change the structure of the organization to fit change outside.

E-learning research –includes common characteristics, change agent, students pick and mix methods of technology to fit their needs, it is personalized and distributed, used in ways to fit their requirements, technology seems to attach and we need to deal with it and adapt, students continue to need scaffolding and support, facilitation and guidance.

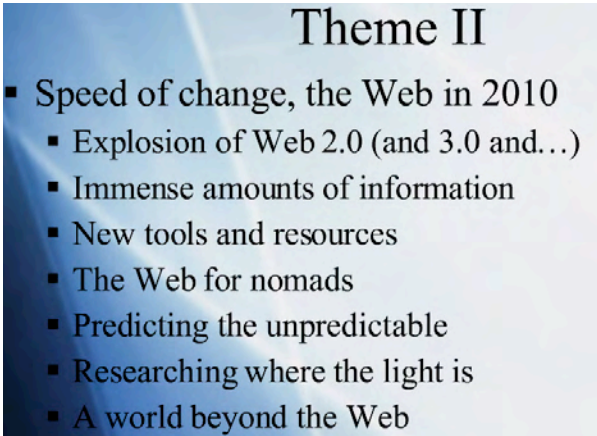
Organizational issues included the problem of ownership vs open source



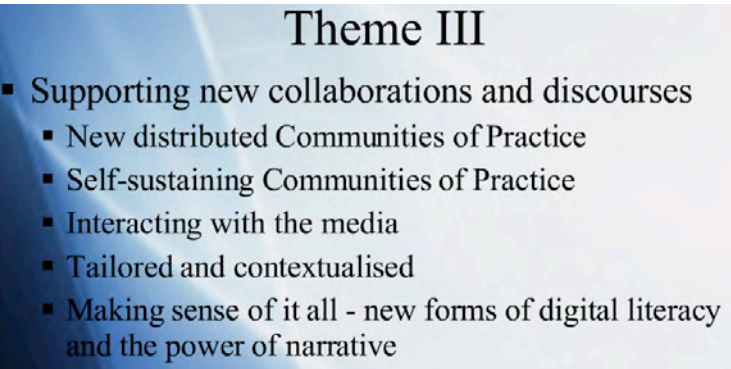
Simplifying the complex-so complex, too much to make sense of
Theme I

- 
- A slide titled "Theme I" with a blue and white background. It contains a bulleted list of six items.
- The good and the bad of ICT
 - Institutional vs. loosely coupled systems
 - The affordances of technologies
 - Appropriateness, fit for purpose
 - Ownership vs. open source
 - Simplifying the complex
 - Balance of content and activity

Theme II - Speed of web change in 2010
How do we do research when we don't know what's coming along?

- 
- A slide titled "Theme II" with a blue and white background. It contains a bulleted list of seven items.
- Speed of change, the Web in 2010
 - Explosion of Web 2.0 (and 3.0 and...)
 - Immense amounts of information
 - New tools and resources
 - The Web for nomads
 - Predicting the unpredictable
 - Researching where the light is
 - A world beyond the Web

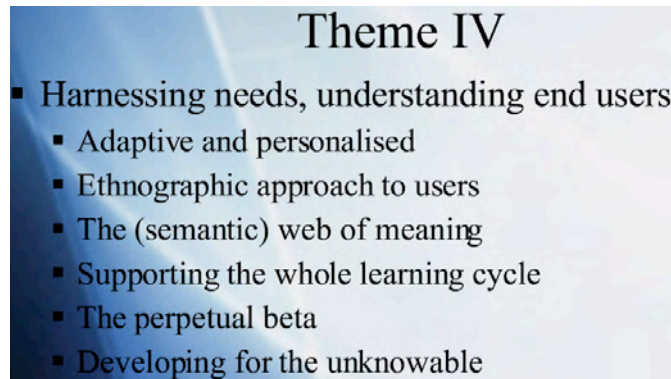
Theme III

- 
- A slide titled "Theme III" with a blue and white background. It contains a bulleted list of six items.
- Supporting new collaborations and discourses
 - New distributed Communities of Practice
 - Self-sustaining Communities of Practice
 - Interacting with the media
 - Tailored and contextualised
 - Making sense of it all - new forms of digital literacy and the power of narrative

- New distributed and self-sustaining Communities of Practice

- Making sense of new forms of communication

Theme IV

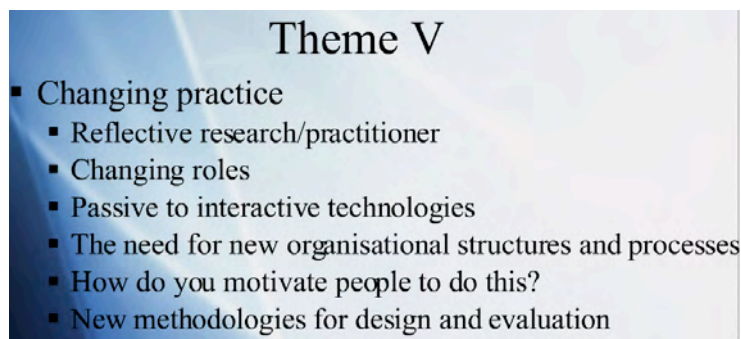


Theme IV

- Harnessing needs, understanding end users
 - Adaptive and personalised
 - Ethnographic approach to users
 - The (semantic) web of meaning
 - Supporting the whole learning cycle
 - The perpetual beta
 - Developing for the unknowable

- Adaptive and personalized, need to think outside the box, design and concept

Theme V

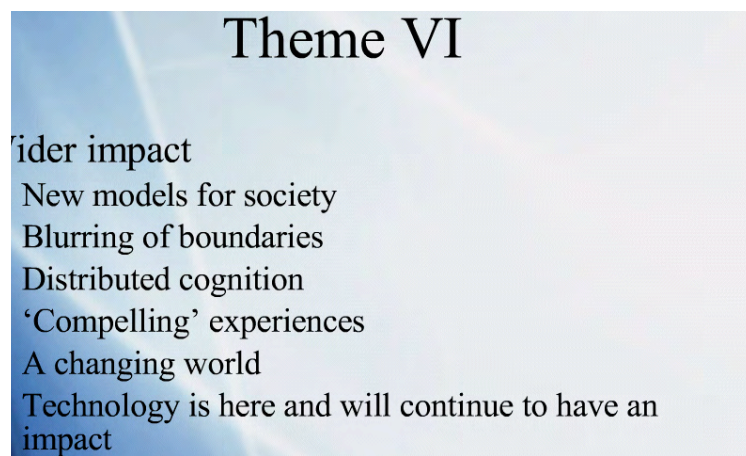


Theme V

- Changing practice
 - Reflective research/practitioner
 - Changing roles
 - Passive to interactive technologies
 - The need for new organisational structures and processes
 - How do you motivate people to do this?
 - New methodologies for design and evaluation

- Changing academic practices, have to understand how things are used in wider life experience

Theme VI

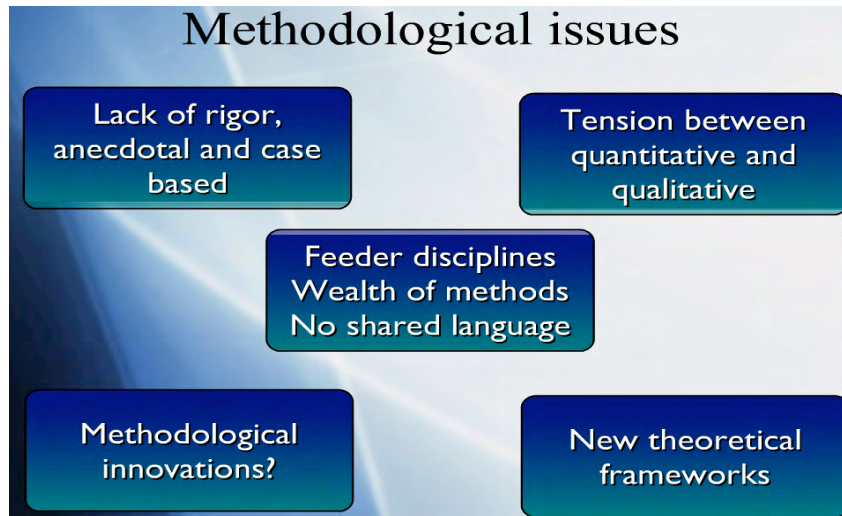


Theme VI

Wider impact

- New models for society
- Blurring of boundaries
- Distributed cognition
- 'Compelling' experiences
- A changing world
- Technology is here and will continue to have an impact

- Wider impact, blurred boundaries, technology will continue to have impact
- A perceived discipline issue, there is no shared language between the researcher and the practitioner, and there is a conflict between the quantitative and qualitative research methods
- Methodological issues that include a lack of rigour and theoretical basis
- Tensions between policy makers and practitioners, and stakeholders with conflicting agendas



- Policy makers may think they have all the answers, they may run to a focus field without understanding the implications of policy,
- Research speak needs to communicate with political speak, and need staff to support the technology

Some comments of the 41 participants included:

- Increasing impact of technology, technology is now critical to things we can do, home life has incorporated gadgets more than education and now has an impact across the board”
- Drop e-learning it evokes a problematic connection to distance ed, the red headed step child of institutional education
- Learners and their choices becoming drivers of policy, pedagogy, technology, organization, etc.
- Isn't clear evidence that e-learning is more cost effective, especially if government subsidies are removed - question of why some governments think e-learning should not be subsidized
- In favour of "evidence-based" research (a motherhood issue) if the evidence is, say, archival analysis, reviews of blogs/wikis after the fact etc.
- Because we are still at the "C" emergent stage, we are losing track of our methodological rigorous practices w/out yet having found or identified our context-specific tools & techniques
- Web 2.0 changes from month to month. current research practices take way too long
- With Open Access publishing online the peer review, production and distribution process is sped up quite considerably
- It is hard to name a virtual space with a major donor's name

3. E-Learning: The Promise and the Potential

Presenters: John Biss - Assistant Director, Strategic Initiatives & Knowledge Exchange, Canadian Council on Learning, Erin Mills - Senior Researcher, Canadian Council on Learning [Presentation slides are found at <http://www.slideshare.net/BCCampus/elearning-the-promise-and-the-potential/>]

This report looks at the current state of material that is already out there in Canada and the idea that effective collaboration between public and private providers is essential so adoption of e-learning needs to be considered as a valued resource.



Definition of E-learning

The Canadian Council on Learning (CCL) defines e-learning as the :

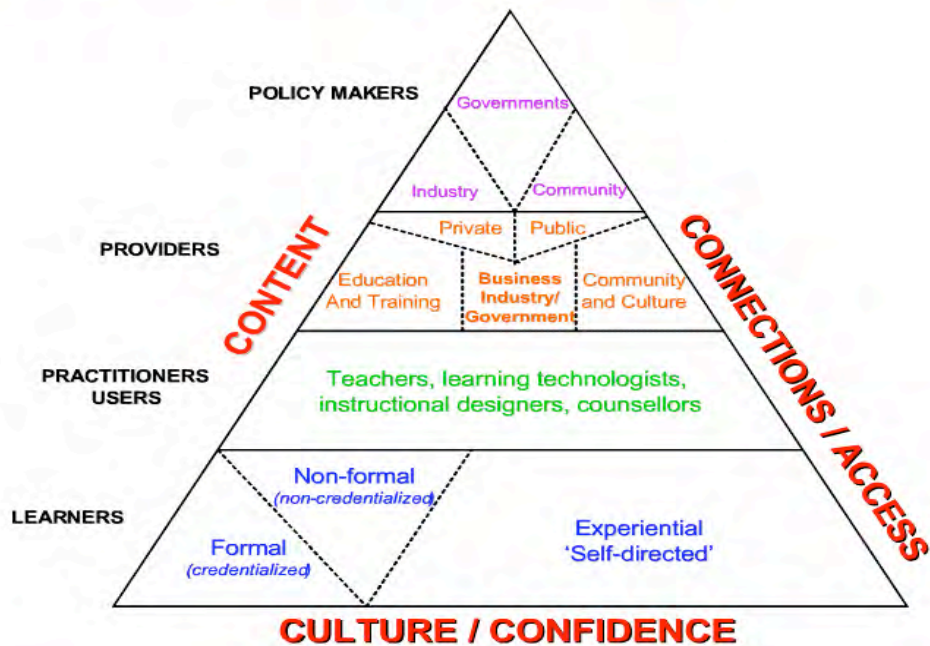
- "development of knowledge and skills through the use of information and communication technologies (ICTs)
- particularly to support interactions for learning—interactions with content, with learning activities and tools, and with other people". [1]

[1] J. Rossiter, 2002; also 2005 in an address at the CCL Workshop on e-learning 4

E-learning thematic review:

1. overview of the scope and complexity and capabilities
2. current state of policy
3. challenges to be addressed

Policy Dimensions of E-Learning



CCL currently focusing on policy side (from the policy dimension in the pyramid)

Scope of the report

Three Elements:

4. National/International Literature Survey
6. Synthesis of findings from existing CCL studies and initiatives
3. Survey of Current Policies

ICTs as integral part of development and implementation process
 Policy Makers don't seem to grasp the value e-learning has.

Overarching Observations from the Literature

- Shift of focus and emphasis away from technology and more on users and learning approaches.
- Recognition of learning as a social/collaborative process involving interaction between users, the content with guidance from facilitators.

‘Knowledge construction’ not simply ‘Knowledge transfer’

Observations (cont'd)

- E-Learning viewed more in terms of ‘Knowledge construction’ not simply ‘Knowledge transfer’.
- Shift from concerns regarding ‘access’ to ‘impacts’.
- Growing support to develop understandings based on research that can guide policy formation.

Overarching Observations:

- focus away from technology and more on users and learning approaches
- recognize e-learning as a social/collaborative process involving interaction between users, the content with guidance from facilitators

These are Key Observations made by others in the past but mentioned in this presentation:

1. Canada is starting to trail behind other countries
2. E-learning is fundamental tool for lifelong learning
3. E-learning adaptable to diversity of learner needs and styles
4. Lack of National strategy
5. Need multi-jurisdictional cooperation and collaboration
6. Need for relevant empirical and longitudinal research
7. Lack of a portrait of e-learning in provincial and federal policies
8. Mechanism needed to disseminate research to policy makers and practioners
9. Require coordinating body that respects provinces authority and responsibilities regarding education
10. Need organizational change issues as e-learning is incorporated into traditional practice
11. E-learning needs to be user-learner centred and results driven

Question asked: How does Research fit into e-learning strategy?

Pathways Worth Exploring

Developing a common framework

- Articulating a shared vision
- Nurturing shared leadership focused on creating mechanisms for effective policy and program coordination
- Establishing partnerships between government, institutions, private sector and community groups
- Development of a joint action plan

Findings 2006:

1. policy makers view the benefits of e-learning primarily in terms of: flexibility/accessibility, meeting social demand, interactivity/communications and learner achievement
2. lack of attention to using e-learning to teach basic skills
3. attention to connectivity to remote learners
4. type of learners (special needs, gifted, aboriginal) were address only minimally
5. support for implementation received good attention
6. use of research to support implementation was limited
7. intra-jurisdictional cooperation amongst providers emphasized
8. minimum attention paid to collaboration among provinces and federal level
9. little attention paid to regulation
10. little systematic data gathered on users and non-users
11. e-learning just beginning to be seen in strategic terms within institutions

Comments by the 30 participants included:

- Who was interviewed, how were they selected, random sampling, or convenient, who prescribed the codes for the analysis
- Questions the role of CCL in working with the federal government to convert their recommendations in these documents into action?
- Seems that online learning has been one of the biggest silos due to funding disconnected with their mother institutions.
- What research is needed to show that providing free access to an open source LMS for all institutions in the country would be / not be useful
- Using a continuum for Evidence (evidence-aware --> evidenced-informed --> evidence-based)
- Who are the leaders that need to be convinced to spend their dollars on e-learning

3.1 CCL Associated Discussion

The associated discussion participants made these comments regarding the role of CCL in the Pan Canadian e-learning Research Agenda:

- CCL does have a 'pan Canadian mandate', has a vision of "To be a catalyst for lifelong learning across Canada', has some funds and is developing a national network through their 5 "knowledge

centres.

- Best utilize the support of CCL to enhance pan Canadian e-learning research by working more closely with them and by creating a powerful, multidisciplinary research (and practice) network
- CCL could also link with HRDC and Economic Development agencies in Canada, as well as Foreign Policy agencies to understand (perhaps even in terms of human capital and GDP) what e-learning is doing for Canadians (and how good research is essential in both describing and predicting that reality).
- Talking about nearly a hundred million and perhaps in the Billions of \$ when we consider the investment of provinces and governments in e-learning across this great country
- Provincial education jurisdictions are more constrained in scope than say industrial e-learning systems but perhaps a new way of disaggregating the thinking to aggregate vision on e-learning uniquely is possible now

George Siemens takes some ideas of others and suggests a multi-prong approach:

1. loose coordination between groups who have a stake in research in learning/technology field
2. formal coordination with groups such as HRDC or other governmental stakeholders
3. engage in conversations/focus groups with groups that have a loose mandate nationally
4. we are also trying to create awareness (and as a result, policy changes) of the value of an agenda to funding partners

4. The Case for an E-Learning Research and Innovation Strategy

Presenter: Gilbert Paquette - Canada Research Chair in Tele-learning Cognitive Engineering
[Presentation slides are found at <http://www.slideshare.net/BCCampus/the-case-for-an-elearning-research-and-innovation-strategy/>]

Description:

What are the obstacles to an e-learning strategy in Canada? What can we learn from international and past Canadian initiatives?

Obstacles to E-learning Strategy in Canada

- Education is not a federal competency ?
- Too many provincial jurisdictions with tight budgets ?
- E-learning is already sufficiently disseminated ?
- Insufficient awareness on the importance of eLearning in the knowledge society ?
- No need for sustained, coordinated programs and initiatives; no need for a eLearning strategy ?

Points made on slides included:

Found elsewhere:

- E-learning productive part of new economy
- Strategies /actions government initiated
- Wide scope of activities and stakeholders

- Public funding
- Research, fundamental dimension in e-learning strategy
- Jurisdictional competencies and cultural diversity are not constraints to collaboration

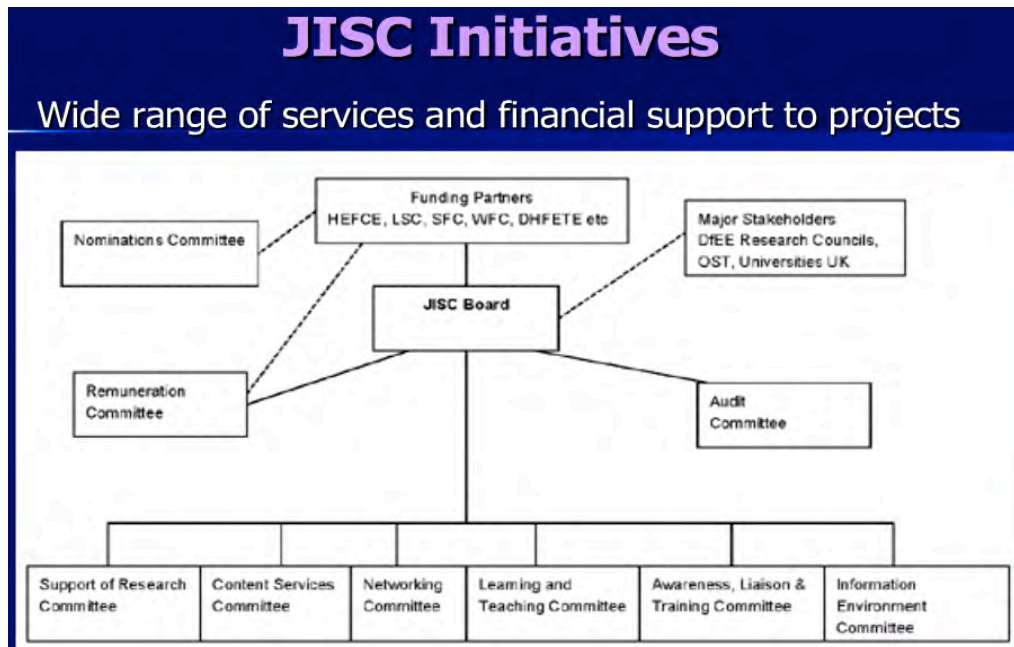
Canadian Initiatives:

- ICT infrastructure
- CANARIE ended after 5 years
- Industry Canada participated in IMS and IEEE, now absent
- SchoolNet ended
- LORNET research network – lacking funding

Increasing Social Network

1. Information web
2. Social web
3. Semantic web
4. Intelligent web

JISK in the UK, as an example



Why are we behind?

- Discontinuity of major initiatives
- Short-term financing of small projects
- Duplication and waste of efforts
- Separation of research and innovations projects from implementation and deployment initiatives
- Multiplicity of centers of decision
- Lack of strategy, long-term vision, determination and continuity
- Funding totally insufficient

Megatrends - The Future is Here

1. New communication means and interfaces
2. Collective creation and sharing of knowledge
3. Prosumerism: Content production by users
4. New forms of socialization
5. Augmented and Virtual Reality Environments
6. Personal mobile multimedia assistant
7. Internet as the unique and ubiquitous educational platform

The discussion by participants included:

- How can we use the grassroots initiatives as a springboard?
- Need to work across jurisdictions in our federation, but the EU has the EU government that appreciates education, whereas the central system in Canada is afraid to even think about education.
- Common standards and quality assurance across Europe is a key imperative of the EU
- Could be critical of JISC, but the amount of resource has certainly supported a delivery and a research agenda here in Wales.
- An initiative like schoolnet which was successful, gets cancelled... is it a financial decision or lack of marketing skills
- Learner-centered approach=espoused theory
- OECD presentations that counsel defocusing on infrastructure and up-focusing on learning and training
- Likely need to see researchers in a broader manner than currently often conceived
- Effective research in this field happens when both academics AND practitioners are involved.
- Strategy for a pan-Canadian agenda shouldn't be more about creating individual centres...rather than one large strategy
- Why not use learners as researchers ... and focus on finding ways for these centres to connection/network
- Academics publish in journals that are not easily accessible to policy and management types
- Main goal is to create policy to increase access to funding...or to contribute to quality research outside of funding agencies

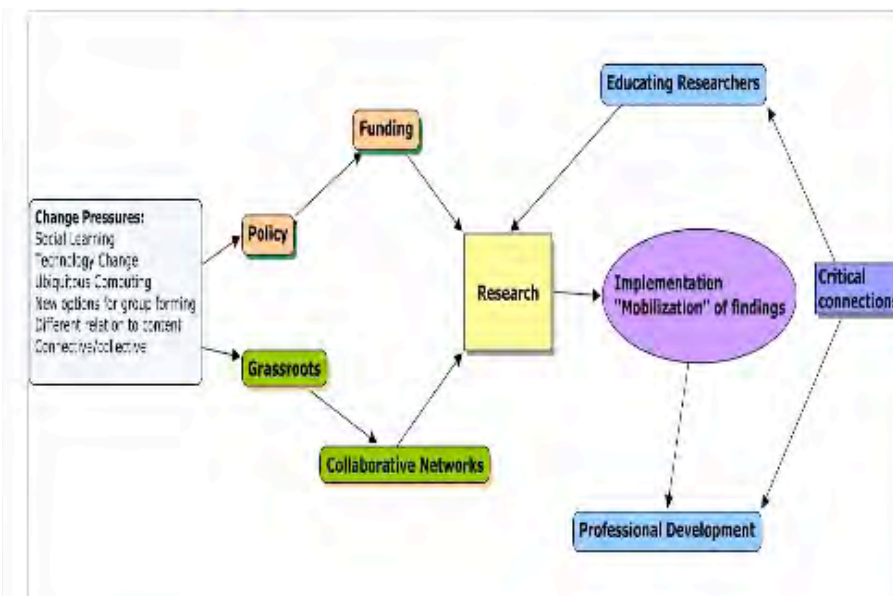
- Policy/management types just read soundbites
- Research money needs to be put into evolving technological e-learning --blogs, wikis, etc.
- Policy makers are often more reactionary to trends than to proactive opportunities
- We need some real tactics on influencing policy makers - talking notes.
- It is easier to engage practitioners and learners with action learning not by telling them but by allowing them to do it
- Most policy makers are also politicians and the skills of that profession
- When we design tools that are too complex we loose adoption. RSS is simple. and works. We could be much more complex...but why bother?
- Knowledge as process + knowledge as content
- Moving outside of gov't and business models to models that we create/shape/form/govern
- Like to see more investigation between the learning-focused + learner-focused

5. Modeling Collaboration: Researching Professional Development and Learner Needs from a National Perspective

Presenters: George Siemens - Associate Director, Research and Development with the Learning Technologies Centre at University of Manitoba, Heather Kanuka - Academic Director, University Teaching Services, University of Alberta

[Presentation slides are found at <http://www.slideshare.net/BCcampus/modeling-collaboration-researching-professional-development-and-learner-needs-from-a-national-perspective/>]

This presentation considers the interaction between higher education and the development of technology. It also focuses on the need to interact with those making policy decisions and colleagues outside the normal research process and the importance of collaboration with colleagues and opportunities in non-standard places. One might want to start research based on a need and let policy develop after the collaboration occurs and the presenter asks if academics and administrators have the information needed to make decisions? He also suggests that rather than an end, research practices should be seen as a continuum for educating researchers through both networks and communities.



Challenges:

- Tension between technologically driven vs being pedagogically driven
- Competing for time
- What do we really know?

Comments by participants included:

- Students/learners are the main unheard voice in e-learning.
- Research is just one aspect of critical thinking, ...get away from thinking that it can be only conducted under special circumstances
- Can policy ...start with grassroots then through collaborative networks connect to policy as well as the research?
- Participatory action research involves the "subjects" from the outset
- Need to lose the practitioner / academic labeling
- Would think that school boards...would encourage an action research approach from their teachers to help them make good decisions.
- Action research is an obligation of practice for practitioners as professionals-ideas, activating them, implementing and funding all mutually dependent. If absence of one, the others usually fail
- Faculty like to learn from other faculty and an informal mentoring sharing model via online community provides some level of support.
- Also keeps the need for F2F so people can build relationships and understanding.
- I train the professors in e-learning models and software... TIME, and fear
- An expanded sense of self online. You have to be constantly reflecting about how any seemingly non-costic phrase will be taken by others.
- How much of technology adoption by faculty is being driven by students?
- Many faculty perceive technology as adding time/effort to their workload rather than reducing it.
- The fear may be rooted in professional identity and how competency is perceived by colleagues and students
- Value-driven motivation (preferred) vs. assessment-driven motivation, champion-stimulated (preferred) vs. evidence-based rationale

6. Practicing What We Preach - Research Into E-Learning Tools for Faculty Learning and Knowledge Mobilization

Presenter: Tom Carey - Professor of Management Sciences, University of Waterloo and Visiting Senior Scholar, California State University

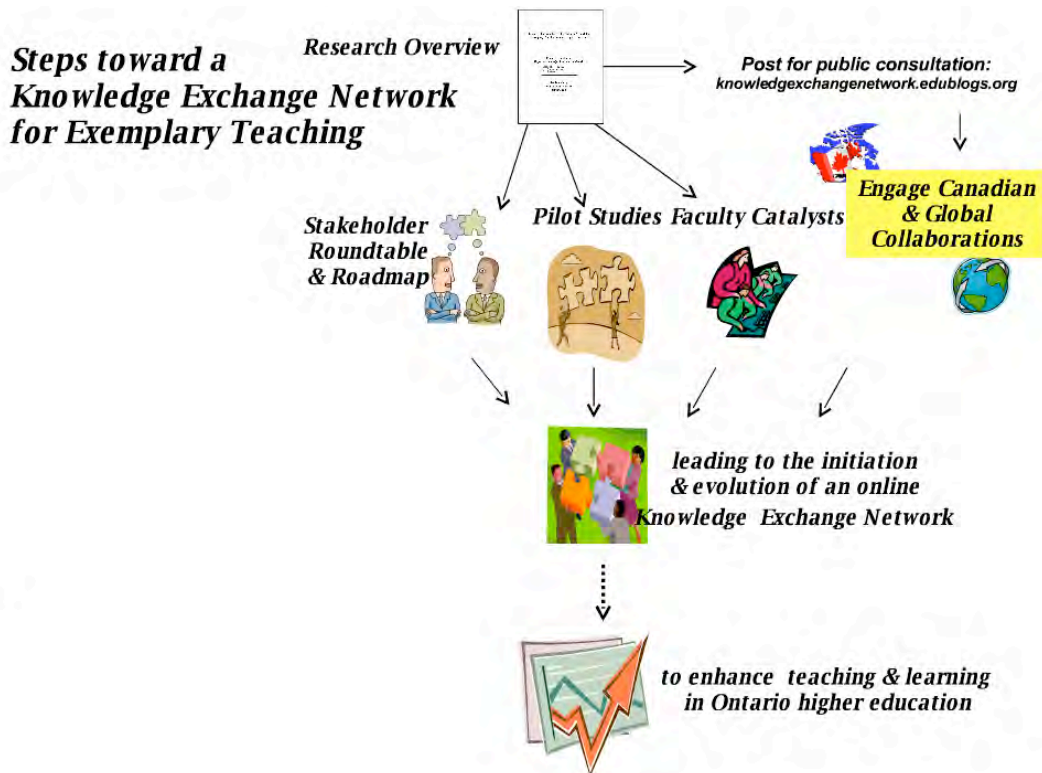
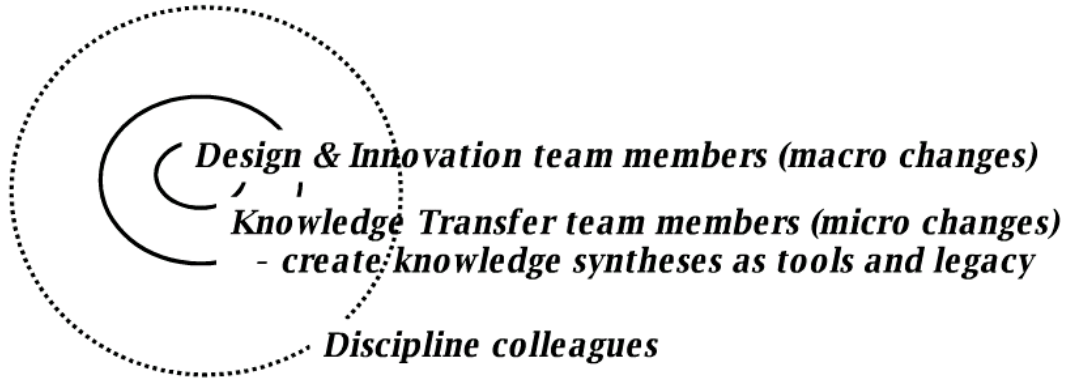
[Presentation slides are found at <http://www.slideshare.net/BCcampus/carey-practicing-what-we-preach-21-may2008>]

Description:

- We can demonstrate the value of e-learning resources and processes to our colleagues by developing cost-effective ways for them to learn innovative teaching methods through the use of open educational resources, collaborative inquiry and shared knowledge spaces.

(samples of Tom's slides follow)

Cooperative Team Structure to Integrate Design and Knowledge Transfer



Comments made by participants:

- Idea of professional peers collaborating on teaching/learning activity
- Difference between faculty is about logistics vs. pedagogy vs. content
- This type collaboration could mean to the development of their courses?

- Need for at least some small incentives
- Joint researcher/practitioner design from the start.... s-t-r-o-n-g!
- Speculate how these type of grass roots innovation can (or should?) expand to large national initiatives.
- Synthesis to practice is what is needed for e-learning right now
- Context at the micro level that I believe is also helpful in getting the buy in from faculty in the process.
- Focus is on the pedagogy, and just assumes tools are there for use... as more and more e-learning resources/objects become available.

7. Week 3 Kick-off Planning Session

Presenter: Terry Anderson

The session offered a quick review of work from the past two weeks and set the stage for the conference outcome document.

How to continue: sustain this grassroots network somehow, get most important things we've got and take further in small groups, have a follow-on conference, generate grassroots initiatives, attract media attention

Suggestions from Stephen Downes:

1. concern that main point is lobbying for money (vs network, infrastructure)
 - a. concern about built-in boias toward institutions
 - b. concern about creationing 'one more group' over & abopve CNIE, CELEA, CATA, CSTD
2. would prefer focus on communication, networking, infrastructure
 - a. Who are we? is there even an OPML listing Canadian e-learning people & their sites?-
 - b. How do we talk? Why can we talk directly to each other? How can we make this happen?
3. focus should be, not on what we can get, but rather, on what service we can provide-
 - a. What is each person, group, willing to do to create the network?
4. community is not a collective... mistake to think we should all 'unite' to create 'one thing'
 - a. focus should be on ways to enable diversity, autonomy (and emergence)
 - b. mechanism to connect people within that diversity

8. Week 3 Wrap-up: SOF2008 Review and Next Steps

Presenter: Terry Anderson

This presentation wraps up the last week of the conference and looks at the key principles of produsage. [There are no slides available for this presentation].

Comments of the 16 participants included:

create alignments (CNIE or CCL) so those stakeholders can help define how to interact and how the next process could develop, should be looking at research paradigms and business and also others, underlying instructional imperatives, look at effect of e-learning on life, we tend to forget how people interact online....remember how they interact in face-to-face groups as well.

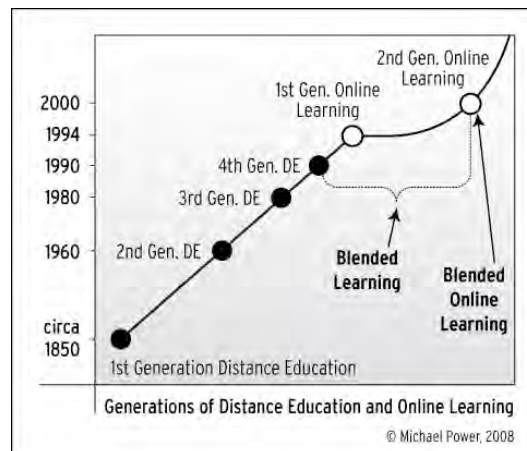
Appendix B - Discussions

The heart of the conference was the interaction that occurred over the three weeks in the threaded discussions. Most of the topics were introduced by the conference organizers, but moderation could be described as “very light”. Thus, participants were invited and did begin their own discussions and branch the discussions in directions that met their individual and collective needs. We have summarized the discussion below, as we believe that many of the key issues that inspire and constrain us as e-learning researchers, are identified in the following discussion. This first conference did not resolve many of these issues, nor have they led to direct actions, however they raise our individual and collective consciousness of the need for and opportunity available for pan Canadian e-learning research.

1. Definitions

Definitions of e-learning from a variety of sources were offered for discussion. Only some were selected for this section as they also appear earlier in this document. Others ran from learning facilitated by the use of digital tools and content, to some form of interactivity between the learner and their teacher or peers, some added the infrastructure for the purposes of delivering education, and considered it a process created by interaction with digitally delivered content, services and support. Others mention the use of computer devices and communications technology or any virtual act or process used to acquire data, information, skills or knowledge.

Michael Power sees e-learning derived from distance education, and puts DE and OL on a continuum, emphasizing the role technology has always played in the way instruction has been designed, developed, and delivered.



Mark Bullen suggests: typically learning technology is used initially at a very basic level to enhance an existing mode of teaching. Three different distinctions are:

1. E-learning as distance education. This refers to courses that are delivered entirely, or almost entirely, on the Internet.
2. E-learning as electronically-mediated learning. This category includes any teaching or learning that is mediated by technology.

3. E-learning as facilitated transactions software...includes the software to manage teaching and learning.

Wikipedia lists a number of "perspectives" in their entry on e-learning as follows:

1. instructional design - the traditional pedagogy of instruction which is curriculum focused, and is developed by a centralized educating group or a single teacher.
2. social-constructivist - this pedagogy is particularly well afforded by the use of discussion forums, blogs, wiki and on-line collaborative activities. It is a collaborative approach that opens educational content creation to a wider group including the students themselves.
3. Laurillard's Conversational Model[5] is also particularly relevant to e-learning, and Gilly Salmon's Five-Stage Model is a pedagogical approach to the use of discussion boards [6].
4. Cognitive perspective focuses on the cognitive processes involved in learning as well as how the brain works.[7]
5. Emotional perspective focuses on the emotional aspects of learning, like motivation, engagement, fun, etc.[8]
6. Behavioural perspective focuses on the skills and behavioural outcomes of the learning process. Role-playing and application to on-the-job settings.[9]
7. Contextual perspective focuses on the environmental and social aspects which can stimulate learning. Interaction with other people, collaborative discovery and the importance of peer support as well as pressure.[10]

Source: [http://en.wikipedia.org/wiki/E-learning#cite_note-6]

2. Need for E-Learning and Related E-Learning Research

- Provides the scaffolding and skills for participation in contemporary societal approaches to inquiry, investigation, reflection, knowledge construction, communications and virtual work.
- Education prepares individuals to be productive members of society should keep up with changes
- Students who move out of rural communities for university often don't return. So the investment is lost -one of the reasons that e-learning research doesn't have the status it perhaps deserves is that it has not been well-integrated into the broader educational research agendas of our research institutions.
- Missing at both the community college and the university was a process of faculty development about good teaching and content design in this type of environment.
- If faculty don't use innovative methods of teaching, how can you do useful research into that innovation.
- If you don't have valid research, how can you argue for particular models of course development.

Michael Power found the faculty he interviewed...

1. didn't have time to develop full web courses
2. didn't have time to learn to use an CMS that requires training
3. didn't have much of any intrinsic incentive to develop online courses
4. tended to constantly add and subtract materials to their courses, thereby requiring constant updating, if not redesign;
5. had set habits and practices linked to a long academic tradition such as setting aside time for weekly classes and meeting students

6. were not used to a student-centered approach

Summary by Paul Stacey

- Scaffolding and skills for participation in a knowledge society - including inquiry, virtual work, knowledge construction, communication, investigation, ...
- Access to education - equalized participation, overcoming geography limitations and isolation, financial affordances, reduced stress, extend educational opportunities to the 90% of Canadians in a rural, low density or remote area of Canada. Canada's a big country e-learning overcomes distance.
- Lifelong learning for working professionals - physicians, teachers, ...

Paul Stacey reflected on his own personal experiences as an e-learner and found:

1. E-learning as a means of global citizenship. E-learning connects us to the world bringing the lives of others (students and teachers) into our lives.
2. E-learning as a means of personal and professional growth with societal benefits. E-learning is a choice each of us can make to better ourselves.

- e-learning is "boring, not interactive and does not engage students." How prevalent is the perception that was unapologetically articulated by one who professes to know a lot about e-learning?

- Realization that a large portion of the e-learning in higher education is performed by adjunct professors.

- The class status of e-learning... e-learning ranked a poor second to the rigors of day school classes

Stephen Downes refers to Virginia Yonkers who suggests that any good research agenda

1. looks at past, present, and future (potential)
2. includes theory and practice
3. looks at the macro and the micro levels

- National research agenda would coordinate who is going to do what and makes sure that there are no gaps (are most researchers only looking at the past or only looking at the potential, for example

- Monitor research and point out where there might be opportunities, broker research partnerships, and identify where there are holes in the research.

- Form of the mechanism (for creating the knowledge economy) did not matter as long as it fit the culture of the country (i.e private or public led, loosely structured or very formal, driven by the government or locally driven).

3. What's This Conference About?

This section begins with problems, issues or opportunities that should be high on research agenda and noted in the Wiki:

- Why don't educators like re-using other people's materials, unless it comes in a book?
- How can we develop research ethics consensus specifically for e-learning?
- What are the avenues of funding existing for research on e-learning?
- How to get the competitive advantage of e-learning?

- How can we ensure that e-learning research is student-centred?
- Understanding the best technology to use/when to use it to encourage student learning.
- Formation processes of learning communities
- Interplay of different kinds of educational media and semantic web
- Impact of cultural and linguistic differences on e-learning
- Issues regarding copyrights of digital materials
- The future of e-learning network in the global context
- Learners' perceptions of e-learning
- Faculty and HE resistance to e-learning
- Quality assurance of e-learning
- Effective instructional design of mixing traditional and e-learning (blended learning)

The discussions on these topics highlighted the following ideas and questions:

- E-Learning recognized for lifelong learning, professional development, re-training of immigrants and creating opportunity those who are deprived of access to traditional forms of education and learning
- Canada has yet to recognize and support specific e-learning initiatives
- Researchers must compete with all the other disciplines for meager available funds.
- Have many people engaged in providing, teaching, organizing the delivery of online learning
- Each new project is almost like re-inventing the wheel and there are few resources, standards models, or simply support networks to draw from.
- The more we include blended instruction in face-to-face courses, the more influence we have with the e-research agenda - making the invisible, visible through shared vision
- Put together some collaborative initiatives that would have a much stronger voice and greater impact than any one or small groups of us could do otherwise.
- Key importance of interaction for online learners
- Get faculty to agree to accept designs based on research results easier than I can get them to agree to designs based on best practice.
- Participants outside of direct research can benefit from participating.

Paul Stacey suggests interest in this is more around “action research” or “applied research and historically at a national level Canada’s investment in e-learning has largely been in infrastructure and the technology aspect of e-learning

Ulrich Rauch suggests that the principles supported be these:

1. Co-creation
2. Expression of self in participation
3. Multimodal interaction
4. Affinity-based self-organization
5. Distributed cognition

Terry Anderson suggested these:

1. conscious raising and wisdom sharing effort among researchers, policy makers, educators and learners
2. produce better plans and more compelling cases for e-learning research and development support.

3. sharing interest and perspective to help us create the community necessary
4. as Ulrich Rauch noted we need new approaches, new ways to collaborate and new ways to manage our collective efforts
5. Dave Porter and Paul Stacey also note that our efforts demand some type of coordination

Peter Rawsthorne suggests the reason is the lack of clarity to a national agenda and why don't we have a dedicated national shared service based on open source software / infrastructure to allow every Canadian a place to learn, create their own "ePortfolios", collaborate, co-create, blog, wiki, etc.?

Roger Levesque sees e-learning's potential as an effective means of communication between two bodies.

Mark Bullen suggests producing practical outcomes without squandering resources and research that investigates how we learn and teach with technology, research that investigates how educational institutions adapt to technology, how they are organized to support learners and instructors.

Raymond Guy wants to look at the pedagogical research and suggests research agenda must look at the transverse application of e-learning, distance education and the use of technologies across the institution. It should ensure these facets of teaching and learning do not get relegated to continuing education or a Distance education department.

- Politics do not only lie at the federal/provincial level but within the institutions in many cases

Michael Hotrum

- Need to find ways to have our funding agencies and politicians recognize that e-learning is more than educationally related

- Should address major themes relevant to how we teach, collaborate or learn in different e-learning contexts, and foster theoretical developments as well as more applied research

Haydn Blackey suggests the need to move beyond the early stage of research, to one which provides a open framework against which research can be funded assessed and evaluated

4. Best Methodology or Best Strategy?

Terry Anderson suggests methodologies provide the tools and guidance for their effective employment. Methodologies employed reflect and affect the mindset of the researcher and the research process.

Concern for the breadth of a collaborative research project- Should a relatively few (one?) research project be undertaken that would allow for combining/comparing results from many contexts - or should as wide a range of questions as possible be addressed. Seems this group opted for the narrower approach. Much food for thought!

- No one tool set is the best choice to use in every context and to understand every problem but there may be methodologies that are more (or less) in line with those of a funding source or a political meme.

Should a Pan Canadian Research Agenda recommend (or reflect):

- a particular research approach?
- a radically 'neutral' stance?
- or just play down specific approaches claiming value in maximum diversity in the approach recommended.

Valerie Irvine

- If we can get pan-Canadian commitment to an "accord" of sorts -then we can decide to work together to chose that first question/project in year 1, then next one in year 2, or some fashion. If someone's interest isn't captured in year 1, then we might still get their commitment if there is a promise that their interest is captured in a later year. We need commitment per province of various potential "torch holders" so if one falls out, then another can fill the spot.

I like your idea of the sample email to provincial education reps. However, I think it's important to be very systematic in this - how do we know which ministers are being contacted in which province/territory? it would be good to at least have a point of contact to map out who is being brought in so as to ensure that no one is left out.

I like the idea of a funding proposal that we can come together on - so we can all sign off on - and each provincial group of co-

- Including a) funding to support the network and b) funding to complete the research on i) its part in a pan-Canadian study and perhaps ii) a provincially-focused study or study on a different question.

Each provincial/territory group of researchers would submit the proposal within the same time frame. If Minister of Ed/Advanced Ed/etc. and you received such a proposal - showing that this group got their act together and had all of these academic players pulled together and you were asked to contribute your 1/13 to the pot, wouldn't you feel inspired to do so

- We would want depth per province/territory in case someone puts down the torch, another needs to follow. I think personally that it would be important that these folks be in the status to be eligible for tri-council funding, so they could continue the "attack" on that front. Targeted email invitations would be important.

- We should have the primary discipline studies/topics (by DE researchers), but also secondary discipline studies - to serve the stakeholders in other fields (nursing, health, etc.) that may be doing their dedicated programs online or in blended mode. So, this is more about some of the "special populations" being served. These research streams might allow for additional funding targets to be included - funded by their parent funding agencies outside of education.

Michael Hotrum

- We have to be in the forefront of redefining what went before us to accommodate the differences that lie ahead.

- Need to question the design and delivery paradigms now represented by formal learning institutions, the need to expand our offerings and our services beyond schooled events

- To capture the informal learning, the connections that are made in the learning process, actions require that we look at future research efforts as different than past practices.

Haydn Blackey suggests for funding and for industry/Government then we need to be able to research and articulate in a language that is understood in their context.

- The primacy of positivism with its emphasis on proof as repeatability and ability to count is so pervasive that politicians, journalists, academic managers and society in general find it hard to value or evaluate research which is not based on this approach. For a research agenda to challenge these views will involve challenging embedded cultural norms.

Caroline Park suggests if we work with one stakeholder and develop the steps toward the goal, we will probably be able to tweak the strategy for another stakeholder

Kelly Edmonds looks for a cohesive approach to research methods in order to move forward. The challenge will be to create harmony, connection and understanding among the research field in order to take e-learning and its research to another level.

Glen Gatin suggests that collaborative application of a Grounded Theory method could be used to develop explanatory theory from a wide variety of data sources, qualitative and quantitative. Emergent theory could be validated by quantitative analysis. Once validated the theory could be used as a basis for action. Any research will have to be able to be "rapidly deployed" to be relevant in any prescriptive way.

5. Is a Baseline Needed

Rory McGreal suggested a discussion of the type of research and/or other e-learning initiatives being undertaken across Canada be helpful in establishing a base line for a pan-Canadian research agenda.

Elizabeth Murphy is presently doing a SSHRC-funded (extension of a standard research grant) study of e-teachers across Canada (using an Activity Theory lens). I'm PI on a project funded by SSHRC and the Department of Canadian Heritage looking at use of synchronous tools to strengthen students' second-language communication skills (using a theoretical framework of negotiation of meaning).

Michael Barbour has been researching virtual schooling for much of this decade. Most of my work has been exploratory, as virtual schooling is relatively new (circa 1995) with my focus on rural K-12 students learning in virtual school environments - the only way they can access this curriculum is in an online format.

Mark Bullen notes that BCIT is engaged in several small scale applied/action research type projects, entirely self-funded working collaboratively with graduate students from Athabasca, Royal Roads and Concordia to allow them to use BCIT for data collection and investigating:

1. our learners and their technological readiness, use of technology and ways of communicating
2. how new technologies are diffusing and what factors affect this
3. how the institution should respond to the emergence of Web 2.0 technologies and what the role is for institutionally-supported technologies

6. Including Non-formal Learning Environments

Glen Gatin suggests formal learning should support "non-formal" learning rather than the other way around. Non-formal learning would be viewed as the real learning and it be elevated from the bush league status that the paternalistic term "non-formal" seems to imply. Canada has a tradition of research in non-formal learning.

Annemarieke Hoekstra found that informal learning is 'how we usually learn', need to know how people 'usually' learn online, on facebook, through gaming, so that we can learn which strategies are successful and which are not AND which factors enhance or inhibit such 'informal' learning

Peter Ball added a number of learning definitions:

- How e-learning is part of or supports organizationa learning, knowledge management, etc.
- There is so-called formal learning (much current focus academically and in business - education or training), and non-formal learning

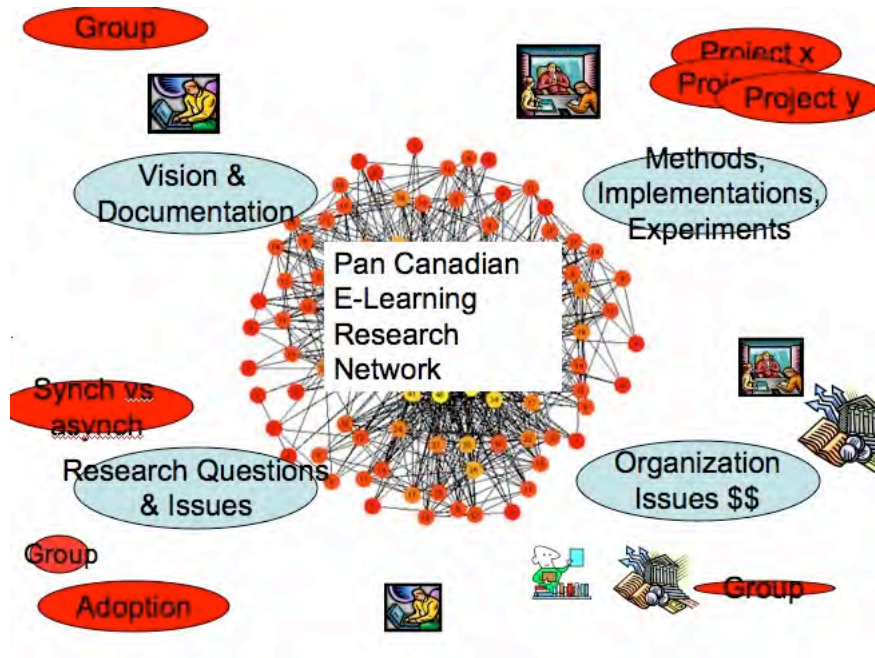
7. Components of a Pan Canadian Research Agenda

A discussion began on the components of a research agenda:

- Pedagogical/institutional level for the effective and sustainable adoption within and between institutions and linguistic/cultural level for access and adaptation of resources to create a critical mass of accessible, usable and adaptable resources for all
- Intercultural aspects of pegagogical design & learning process as we increasingly interact with and teach learners in and from other countries and cultures
- Issue of "predictive" evidence-based research: i.e. what trends and directions can we collectively detect or imagine from what we are seeing and finding now
 - (difference) between only applying for funding for research projects that confirm/ disconfirm the status quo & current practice, or funders' agendas, and research that helps us think forward

Terry's illustration of a prosumer type model of a research agenda where the agenda itself is a network of e-learning researchers and practitioners.

- Four critical areas connected in a network, each one of which spans and connects many specific groups...documentation area where results, vision for the network, celebrations etc take place...the research question and theory area, where we investigate, appraise and synthesize current ideas and directions...the projects area where different groups tackle projects, develop and share methodologies, tools etc. ...the administration area is where the network itself focuses on funding and relates to the various research teams, schools, institutes, private companies etc



The diagram is rough but it has the advantages of:

- Allowing us to focus in our document construction on an ongoing network versus a static document
- Allows focus on each of the four areas that has most interest to participants
- Reflects the way that we actually operate in real life
- Allows and supports development of new groups of researchers to spin off the generalized framework of the network agenda
- Gives us a structure for a final report

Disadvantages are that:

- May seem too 'spacey' to attract support and funding
- Network structure may not be tight enough to maintain a coherent set of actions
- May seem more like a social support system than a means to galvanize collaborative efforts and effective dissemination.

8. Adoption/Diffusion

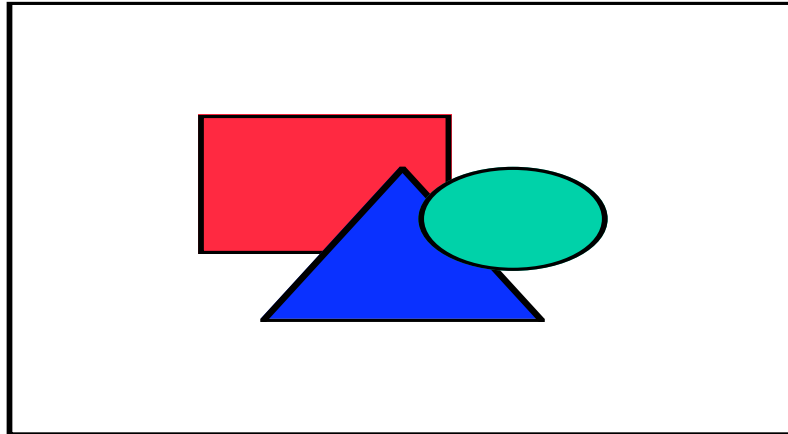
Vivian Forssman proposed one research/practice topic be focused on policy and cultural issues of adoption/diffusion of technology-enabled learning (distance, online and blended models) in educational institutions.

Most still in the very early stages of diffusion, often in old-fashioned worlds of top-down management cultures, just past the stage of experimenting and documenting action research made interesting through the energies and creativity of our early adopter communities

- Engaging with the wider community is required.

- What other theoretical frameworks and research methods might we consider?

-Mark Bullen noted surveys and interviews with faculty around their perceptions of factors that affect adoption and diffusion. Rogers diffusion of innovations framework has been used primarily to guide the research (diagram shown below).



- One of the challenges (BCIT) was getting access to instructor e-mail addresses so that we could contact them.

Raymond Guy interviewed upper administration (Presidents and Vice-presidents) of post-secondary institutions, attribute a high level of importance to the planning and vision, teaching and learning with technology, supporting learners and faculty and infrastructure

- Once the hardware is in place (is) there a broad assumption that the institutional culture for e-learning will diffuse and/or adopt?

- How would we measure 'success' in diffusion? As I mentioned earlier, this is dependent on a definition of e-learning

- Early adopters are not the best candidates for responsibility of diffusion as they tend to be the radicals and also tend not to do anything that is scalable

- Better to have some institutional conversations that consider organisational mission and a comprehensive proposal for how e-learning can be leveraged to contribute to it.

Vivian Forssman found that using "pandemic planning" gave them the opportunity that if all courses were in the LMS, even at a very rudimentary level, then faculty could continue to easily communicate with students.

- discussion was spurred due to financial implications, concern about the investment in eCampus Alberta as a single system shared service model, and risk management.

Mark Bullen

- Diffusion happens at both an individual and an institutional level.

- Diffusion process at the individual and the institutional level are not in sync and we often overlook the importance of institutional support for diffusion.

- Institutional processes and culture has to change.

Vivian Forssman

- SAIT Polytechnic developed a curriculum philosophy, a framework, a measurement rubric and are in the process of implementing various improved curriculum development processes and methods.
- Expect a teaching and learning plan that maps to the program learning outcomes and in most cases identifies learning activities that are technology-mediated.

9. Learner Centered Pedagogy

It was suggested that the most important contribution of E-Learning is the ability to transform from teacher centered to learner centered mode of pedagogy

- senior instructional staff change their fundamental approach, addressing the needs of the "Class" to the individual learner
- helpful is not focusing on the delivery means at first in the ISD process, thus focusing-in on the learner target population, learner assessment, then instructional strategy, instructional methods and learning/training activities
- helps the instructional team consider the learner first, sound instruction second, and then the integration of technology when required based on the delivery means of instruction.

10. SOF Declaration

This discussion considered writing a formal declaration from this conference.

George Siemens suggested some type of agreement, preferably consensus, has been reached, the ideas included would be what people are "signing on" to endorse, focus and scope, should be on Canada, a declaration in the sense of a commitment... a start and a formation for others to join, needs to be couched as an invite and an opportunity for all to join. This idea was not acted upon, instead participants were urged to contribute text and ideas to the end of conference WIKI

11. Practitioners and Academics

- action research by and for practitioners is one model noted by a number of text messages
- design based research that usually engages both professional researchers and those active in a specific education context
- should have a place for both, but also mechanisms to increased the effectiveness of their knowledge development, sharing and 'mobilization'
- two main issues that have come up: sharing of information (and) access to funding
- promote both academics and the people in the industry for the research
- academics work in universities and colleges...practitioners work is in public and private schools
- involved in training from industry and professional organizations
- practitioner category I would include all those educators who do not have research as part of their core responsibilities, e.g., most college & institute instructors
- (BCIT) most faculty were not hired for research expertise and their teaching load is such that conducting research is very difficult

12. Knowledge Mobilization

According to Stephen Downes, "Knowledge mobilization addresses how external knowledge (outside of the organization) is sought out and combined with internal knowledge to create new knowledge that meets the needs of target users/clients".

The International Development Research Centre defines knowledge translation as "the exchange, synthesis and ethically-sound application of research findings within a complex set of interactions among researchers and knowledge users" [http://www.idrc.ca/research-matters/ev-90105-201-1-DO_TOPIC.html].

- It is clear that there is an interaction expected, that knowledge is not simply applied or transferred.
 - People thought that knowledge could be simply 'captured' and stored in 'knowledge bases' that people would search in to find what they needed to know.
 - If knowledge is incorporated into practice, then there is, in a sense, a mechanism whereby the person generating the knowledge obtains a significant degree of input into the practice.
- Current research is aimed mostly at decision-makers and practitioners. Knowledge translation, by contrast, considers the sector as a whole.

There is similarly a source of tension in the research model inherent in knowledge translation. Despite its emphasis on holism and interactivity, it represents the domain as linear and causal, as seen by the model that "works in closing the gap between evidence and practice," usually through an 'intervention' and measurement of results.

Another factor is important when one speaks of knowledge mobilization, he who controls the knowledge controls the mobilization.

- clear distinction between an academically oriented knowledge regime and a business-oriented knowledge regime.

13. CCL Report on International E-Learning Strategies

The Abstract of the report states: "while Canada has played a leadership role and gained international recognition for several initiatives and achievements in e-learning over the last decade ...it is starting to trail behind in these very important sectors." It continues with "an e-learning strategy is urgently needed, together with a coordinating body ...to support the new skills development agenda for the knowledge society and economy."

David Porter suggests a qualitative change: the revised Lisbon Agenda

A new policy approach to education and training:

- As a core policy for innovation
- As an essential instrument for social inclusion
- As a driver of economic and social development

A new policy approach to ICT for education and training:

- From infrastructure and equipment to adoption and use
- From a skills gap to an innovation potential
- From tests and pilots to generalisation and integration

- From technological issues to pedagogical impact
- For more efficiency and equity in education and training systems

- Most of the research that was produced in Saskatchewan was the result of individual initiatives and dissemination, therefore, depends on that individual's connections

Appendix C - Conference Feedback

During the final Elluminate session, those present were asked to reply to a number of questions regarding their conference experience. The results were captured globally and this section includes the questions and the breakdown of responses. As the questions were only answered by fifteen respondents attending that particular conference, it is not expected that the results should be used for further decision making however they do provide a useful ‘flavour’ of the conference.

1. Final Thoughts

A number of participants provided their thoughts about the entire conference. They are not the only comments but some are included here.

Susan Lister mentioned this conference was:

- a chance to gather and discuss topical issues with others who have a passion for e-learning
- an opportunity to become more aware of what is happening on the ‘pan-Canadian’ e-learning scene
- a way to gain a greater appreciation of the breadth and depth of organizing a pan-Canadian educational topic when there are so many tiers and sectors to education in Canada

A further review of the conference conversations, provides additional indications of priorities for e-learning or research:

- positive impact on classrooms and learners
- the ability to move quickly on innovative ideas
- faster adoption of innovations into learning environments
- more innovation
- more open research

Moderator, George Siemens, found the conference interesting for several reasons:

1. high level of interest with regard to discussing edtech research
2. low level of interest from academics in education departments
3. affirmed value of individuals collaborating
4. need a research agenda...coupled with the significant systemic/policy related challenges
5. strong underlying theme of bringing practitioners into the research process
6. need to structure activities in decentralized, networked manner to address local interests
7. lack of existing and ongoing forums for edtech researchers to connect

2. Polls

This chart shows questions and responses related to developing an e-learning research agenda gathered the last week of the conference.

Question	Options	Count	Percent
Three weeks for this conference was:	Too long	1	6
	About right	9	60
	Too short	3	20
	None	2	13
The Elluminate presentations were:	Terrific	10	66
	OK	2	13
	Boring	0	0
	None	3	20
The forum moderation was:	Too laissez fair-where were they?	2	13
	About right	10	66
	Too strict	0	0
	None	3	20
I would participate in another online conference:	Only if I have nothing else to do	0	0
	Probably	1	6
	Definitely	10	66
	None	4	26
The next step in creating an e-learning research agenda should be to:	Lets just give this topic a rest	0	0
	Continue creatively working online	11	73
	Convening a face-to-face summit	1	6
	None	3	20
The Value of having a Canadian e-learning research agenda:	Still eludes me	3	20
	Makes some sense	3	20
	Seems critically important	7	46
	None	2	13

* Note that numbers of participants varied and percentages are rounded and may not equal 100%.

3. Survey

Participants were asked to design and complete a survey during the final week. It was divided into sections. Section 1 asks delegates to report on what they feel is important content in e-learning research. The questions and results follow. The remaining sections ask delegates to report on the Shaping Our Future conference experience and interest in working together in the future. Those results are summarized in a separate document: The Shaping Our Future Online Conference Experience.

Thirty-three respondents started the questionnaire and 22 completed most of the questions. This is not unexpected as with any online conference, the participants have their 'day' jobs and often continue with their daily schedules and attempt to fit conference participation in between.

Viewed in comparison to the 225 registered participants, the response rate is only 14.7% started the survey and only 9.8% and the size of the number responding should be kept in mind.

3.1 What do you want to know about elearning? List your top 3 research questions/topics

- Systems that need to be changed.
- Best practices in online course development in different disciplines.
- Questions around best practices for faculty development.
- How can e-learning help teach 21st century, flat-world skills?
- How can we move from belief mode epistemology to include more work in design mode?
- How can we overcome the traditional fear of sharing to move towards a more open culture?
- Why is it crucial?
- How we can demonstrate why it is crucial?
- What evidence supports practice?
- How are instructors preparing themselves for elearning teaching?
- How can a community of practice be formed for elearning instructors?
- Most effective methodologies for effective pedagogical design.
- Learner satisfaction with a variety of different experiences.
- Effective, efficient, accessibility friendly, courses and why.
- What does it take to engage faculty in e-learning?
- I am most interested in content delivery which I believe is just as important as the content itself because without good.
- Instructional design, the program has a high probably of failure.
- Process: Best practice when designing online programs/courses from planning to delivery.
- Theory: Team Based Learning integrated with online learning. Could be based on the work by Larry K. Michaelsen et al in the book Team-Based Learning for Health Professionals Education.
- Practical: What constitutes excellent learning object design.
- How to best articulate how educators can integrate syndicated content (in any form) into their instructional toolkit without miring them in complexity.
- How to convince instructors and content developers that flexible licensing (e.g. Creative Commons) will work both directly and indirectly to their benefit.
- Is e-learning more or less successful than face-to-face? Why or why not, and how can this be addressed if need be?
- How best to change the educational culture (dealing with digital immigrants in particular) so that e-learning is accepted as a valid means of education?
- How to get research about the construction of research aggregates in Canada and internationally, financial backing in Canada and internationally for research, and research about on-going feeds and what is current and changing.
- How does it affect learning?
- What are ways it can stretch existing boundaries?
- How does it shift ownership of knowing, learning and creating?
- Is that affordable?
- Is that universal?
- Is that biased?
- Why e-learning than face to face?
- How we can do e-learning ?

- What are the advantages of e-learning for schools, universities, private sector and government?
- What resources are available?
- How to embed certain resources into web technologies and visa-versa?
- How to assess in an online environment
- The development of e-learning course materials requires more academic and support staff time than developing courses for a contiguous environment. How much more?
- The development of e-learning course materials costs more than developing courses for a contiguous environment. How much more?
- The data centre (power, air conditioning, servers, management hardware/software) and communications infrastructure (fibre, copper, switching fabric) requirements for e-learning are considerable. What is the cost per e-learning course to
- create this environment as compared to the cost of bricks and mortar per contiguous course?
- Can we / how do we apply social constructivist theory to e-learning (Vygotsky, Situated cognition)? What is the importance of social interaction in e-learning / what learning strategies afford social interaction?
- How do we foster higher order thinking (decision-making, critical thinking, problem-solving) in an e-learning context?
- How does mobile learning fit within an e-learning context? is it possible to make e-learning an "anywhere, anytime" activity?
- How can e-learning technologies be used to free the communication of knowledge?
- How can e-learning technologies be used to develop variety in Canadian education?
- How can the human essence of learning be promoted against the commodifying forces of the market place?
- What are the security, privacy and data issues preventing HE Institutions from using non-institutional technologies to deliver distance learning and e-learning?
- What is the evidence that students that participate in HE programmes that actively encourage use of non-institutional technologies enjoy their learning more and that they learn more or get better assessment results?
- What is the evidence that teachers/ lecturers that use non-institutional technologies to manage their learners and to deliver teaching and learning activities are happier and more motivated in their job?
- Which instructional designs are most appropriate for which situations (environments)?
- What role does culture play on elearning effectiveness? (including language, understanding of "knowledge", and role of authority...it would be interesting in the Canadian context to compare French Canadians, Indigenous, Anglo-Canadians, and immigrant populations and e-learning)?
- The influence of different levels of authority on elearning acceptance and formats (i.e. Federal, provincial, local, academic discipline, etc...)
- Assessing student engagement
- Evaluating student expectations of on-line versus face to face delivery

Theoretic perspectives of e-learning

3.2 What Counts as Evidence in Making Educational Technology Decisions?

- I don't start with technology, but rather with the course objectives, the challenges faced in teaching a particular subject area, and the learner access.
- I look at if am I able to use the technology. Next I analyze what functions or abilities the technology amplifies or dampens for me or others. So mostly applied nature of the technology and how it affects human social behaviour and understanding.
- Research reports demonstrating favourable use with a similar cohort.
- Personal trial and error.
- Word of mouth, by experts (those I deem expert)
- The ease of use
- Observed or documentation of observation of:
 - able to do the job at hand, meeting the needs of a variety of learners with a variety of learning preferences, access
 - issues, etc.
 - interact/integrate/compatible nicely with other technologies
 - accessibility, does it require lots of extras to make it work for all?
 - easy of use 'inhouse' and end user
- Cost
 - ease of maintenance
 - reputation of provider
- Experience
- Assuming this question relates to learning management systems and online collaboration systems, I believe that those systems that have all current learning technologies including web 2.0 capabilities and excellent performance would be only the entry point. The deciding factors include capabilities that are intuitive, easy of use by learners, instructors and administrative staff and flexible enough to add any new developments. They must be inexpensive (considering total cost of ownership) including ongoing support and maintenance costs. Open source, social constructionist based products seem best suited to many educational environments.
- Reports of multiple instances of successful implementations of technology/techniques in varied contexts.
- Personal trial of technology
- Case study of the technology in a similar institution
- Degree of adoption by the educational community
- Evidence can be established in many ways that are scientific, reliable, and valid within the form of research employed, either a qualitative study, a quantitative, or mixed.
- Evidence or proof is in the pudding. That is to say with regards to e-learning --what works is important and if it works it will be wanted by more people.
- Evidence of 'utility' for masses of people is evidence from application and because something works people will continue to use it -- sometimes even if there were other choice of almost equal value.
- Evidence can be based on qualitatively and quantitatively demonstrating "value qualities in the use of the technology", not just the technology for its own sake.
- Learner feedback and satisfaction

- Effectiveness, seamlessness and intuitiveness of technology
- Its support of the greater goals of education and institution
- The universality and affordability
- Resources
- Degree of awareness on e-learning
- Interest on the subject
- Infrastructure
- Human expertise
- Motivation
- Policy making
- This is an IT training perspective
 - copies of work performed
 - letters signed off by the employer
 - work performed in their off work time
 - other professional qualifications
 - work completed in class as a simulated environment
- Cost to access the medium. Accessibility and usability.
- This depends of the research question and the level of certainty desired. I would accept quantitative, qualitative and evaluation evidence (but I *do* like the word "evidence"...). I think it is the quality of / believability of the argument presented that counts. As a former journal editor, I would qualify my acceptance of qualitative research by saying this type of research has to be quality work and based on an established methodologies (grounded theory, ethnography, phenomenology), i.e., well done. I ran into far too many reports claiming to have done "qualitative" research and having no real depth. I like "situated" or "grounded" studies in the form of case studies or evaluation studies as long as they are (again) done in some depth. I am less certain about action research, which strikes me as perhaps too specific to particular contexts.
- Student Feedback
- Staff and Student Morale
- Cost effectiveness
- If students' learning outcomes and satisfactions and inner growths can be gained
- I feel a mixed methods approach is the strongest "evidence". It is not enough to know survey results or numbers, but there needs to be some understanding of why (qualitative) from both a theoretical and practitioner's perspective.
- Learner satisfaction
- Cost effectiveness
- Ability to deliver course outcomes and objectives
- Adherence to standards

3.3 Compare SOF with Face-2-Face Conference

Making a comparison between the styles of conferences, the responses included:

“more input and sharing of expertise, much more intense experience, advantage is the flexible schedule, this is a much broader community, useful approach in my opinion, found this venue superior in many ways to a f-f, difficult to keep the focus, people were all over, I like online conferences, I prefer this format as it allows me to move forward, not bad, but a little mismanaged, felt more involved that I would have felt, more efficient, forum provided a much

longer time frame, potential for diversity and expertise is huge, asynchronicity, synchronous aspect of the conference is similar, it was the better, conference was live, jump in and have a voice if I wanted to, engaged... seems to be able to hear many voices, felt connected to the conference.”

3.4 How Connected Did You Feel to the People and Activities?

Of the 22 people who completed, 22% felt very connected, 64% were somewhat connected. The remaining 14% were either indifferent, not very connected.

3.5 Interest in Continuing This E-research Network?

Of the 22 people who completed 91% were interested or very interested, and the remaining 9% were indifferent or possibly interested.

3.6 Value of Conference Content and Relevance to a Major Concern?

Of the 22 people who completed 91% thought it was very or somewhat relevant, and the remaining 9% were indifferent or thought it not very relevant.

3.7 Usefulness of Conference

Of the 22 people who completed 64% thought it was very useful, 32% thought it was somewhat useful, and 4% thought it was not very useful.

3.8 Perceived Value of Conference

Of the 22 people who completed 91% thought it was very or somewhat valuable, and the remaining 9% were indifferent or thought it not very valuable.

3.9 Contributions to Forum Discussions

Of the 22 people who completed the question, 55% contributed to forum discussions while 45% did not.

3.10 Live Session Participation

Of the 13 people who responded, 31% participated in live sessions while 69% did not participate.

3.11 Read Forum Posts

Of the 21 people who responded, 86% read 60-100% of the forum posts while 14% read only 20-40%.

3.12 Time Spent on Conference

All the activities in the conference from reading, promotion, blogging, editing wikis, creating summaries and diagrams, participating in live sessions and forum discussions were considered when answering this question. Of the 22 people who responded, 5% spent 70-99 hours, 27 % spent 40-69 hours, 36% spent 10-39 hours and 32% spent less than 10 hours on the conference.

3.13 Wiki Editing

Of the 22 people who completed the question, 27% edited the wiki while 73% said they did not.

3.14 Employment

Work or studies for those completing the survey included:

“am a doctoral student, Associate Professor Centre for Distance Education, an Online Learning Systems Specialist, Senior Instructional Designer Distance Education, University of Saskatchewan Faculty Developer, e-Learning Coordinator with the Center for Teaching, university faculty (part-time) and researcher, teacher in pakistan, coming towards the end of a masters, work for government of Canada in training, Athabasca University Professor in Health Studies, manage the technical support and network services, currently studying Critical Theory, University professor, Sessional instructor, a lecturer, studying for a Masters in Learning Inovation”

3.15 Age

Of the 19 people who responded to this question, 74% were between 40-59 years of age, 21% were between 30-39 while only 5% were under 30 years of age.

3.16 Canadian

Of the 21 people who responded, 71% were Canadian and 29% were not.

3.17 What is Your Highest Degree?

Of the 22 people who responded, 27% hold Doctorates, 50% hold Masters degrees and 23% hold Bachelors degrees.

3.18 Percentage time on e-learning research

Of the 22 people who responded, 36% spend more than 50% of their time on e-learning research, while the remaining 64% do not.

Appendix D - Resources

1. Background Reading

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English Second Language on Mobile Devices project [<http://eslau.ca>].