Creating a sustainable infrastructure for online learning

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Welcome to Vancouver

- Our knowledge grows daily about
  - Online learning
  - Communities of practice
  - Performance support
  - Knowledge management

Conferences such as E-Learn05 provide us a gauge against which to measure our knowledge in the learning and training domains.

E-Learn05 also allows us to see how learning and training strategies develop in different contexts and climates.
Welcome to British Columbia

- Canada’s Pacific Rim province
- Home to 26 autonomous, public post-secondary institutions, widely separated by severe geography
- Universities, colleges, technical institutes, art schools
- Institutions that are all active in the use of e-learning as a program and course delivery strategy
Vibrant knowledge community

- E-Learning is high on the technology agenda of government
- History of high-tech success stories
- We have proactive and supportive marketing agencies and associations
  - Leading Edge BC
  - NewMedia BC
  - eLearningBC
E-Learning research abounds

- Research agenda
  - Use, reuse, and reengineering of digital knowledge resources
- National projects
  - LORNET

[Diagram showing various components related to e-learning research]
Online learning is Up here too

- There is phenomenal growth worldwide
- US higher education statistics show an upward trend of 20% growth per year (Sloan-C data for 2003, 2004)
- In Canada, the statistics are similar or higher in British Columbia (Advanced Education data, 2004)
- Growth brings increasing pressure for performance gains

Learner expectations are also up

- The Net has produced expectations for
  - choice
  - flexibility
  - immediacy
  - responsiveness
  - service

http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/isue_distance.pdf
Is there a need to retune our instructional practices?

- By observing the habits and practices of youth and relating them to the needs of learners within our organizations
- By rethinking content use, reuse, and reengineering practices

Particularly with the net gen
Lessons from the web gen

“... his program does everything a Web application is supposed to do: it builds community, it breaks down barriers, it’s viral, it’s scalable, it disintermediates ...”

TIME Magazine, October 2, 2000

What began as a threat to intellectual property has spawned a multimillion dollar business based upon packaging and micro-commerce models that work for the websters

THE CHRONICLE OF HIGHER EDUCATION

Today's News

Friday, October 21, 2005

Stanford U. Makes Podcasts of Lectures, Games, and Music Available Through Apple's iTunes
Think differently - expansively

Other lessons from the web generation

- Peer-to-peer computing
  - Users like to try before they buy
- Interoperability
  - Users like to buy by the piece
- Collaborative tools
  - Users like mix and match
- Self-publishing
  - Users like to reshape and repurpose materials
- Self-managed collections
  - Users want to share
  - Users like to publish their own “mixes”
Millennial habits to note

- Howe & Strauss (2000)

- Learners of this generation are more web savvy than their parents (supervisors or instructors)

- Learners of this generation are more social learners than their parents’ (managers’ or instructors’) generation

- Statistics on Internet use map out these trends
And, there’s more to know

- New social and cultural trends related to technology, communication, learning, and knowledge management are also emerging
  - Open Source thinking
  - Open Access thinking
  - Community Source thinking
Sustainability is a looming issue

- As online education becomes mainstream
- Support requirements are increasing and becoming more sophisticated
- Support systems may also be pushing institutions into areas beyond their core competencies

IMPLICATIONS FOR

- Faculty
- Instructors
- Developers
- Student services
- Technical systems
- Libraries
- Policy
- Governance
BCcampus is a service aggregator

An “Expedia” for learners across 26 institutions

Access and mobility

Choice and flexibility

Single, system-wide sign-on for program information, advising, course delivery, and library services
BCcampus ecosystem

- Public
- Learners
- Institutions
- Faculty
- Administrators
- IT staff
- Policy makers
- Governance bodies

KEY TASK
Identify, communicate, implement, and measure a value proposition that resonates with each stakeholder group.
We facilitate access to services

How Does BCcampus Work?

You, the learner, will register with your home institution. Through BCcampus, you can access services, resources, and (most importantly) online courses from any number of participating institutions. Easy access to online courses will get you through your chosen program quickly and efficiently.

Currently BCcampus uses WebCT as its primary course management software. As BCcampus develops, we will integrate other course management software programs in the future. There are numerous quality resources to help students use the WebCT course platform and become better online students. The WebCT orientation will provide you with the information you will need to get started.

In addition, you have access to the Online Learner Community. This is an online community that offers you and other students a rich environment for collaboration, general interest, and special event use. Tools such as calendars, discussions, live two-way voice and video chat, as well as instant messaging are all available.

This provides students in online academic programs with a more fully online "campus" experience. Give it a try by selecting BCcampus Online Learner Community on the right hand side! Just remember to sign up using the email address given to you by your school.

Course and Program Information
Advising
Admission
Registration
Financial Aid
Library
Course Delivery
In harmony with key principles

- Learners have service interactions in real-time with teaching institutions
- Institutions manage their own admission, registration, and academic processes
- Institutions manage their own branding
We work with system partners
We enable real-time services
Members drive key processes

- **Students** become authenticated as learners *in good standing* with BC post-secondary institutions.

- **Educators** are authenticated for access to community of practice services.
Members initiate activities

- Search for courses using the Course Directory
- Speak with an advisor
- Find out about financial aid
- Register for courses
- Take courses
Join communities of interest

An initial student community has been created by co-op students.

It operates in a manner similar to the BCcampus educator online community.

The community offers study groups and other student-directed support services.
We link educators with services

In the context of sustaining the development and sharing of high-quality online resources, we enable...

- Program development funding
- Resource reuse licensing models
- Community-based tools and resources
- Forums for participatory support systems
Help make sense of technologies

- Technical systems
- Specifications
- Standards

LMS
LCMS
KMS
XML
DRM
SOAP
WSDL

W3C World Wide Web Consortium

SCORM Shareable Content Object Reference Model
IMS
IEEE
Harnessing network power

“A network in general behaves in such a way that the more nodes that are added to it, the whole thing gets more valuable for everyone on it because all of a sudden there's all this new stuff that wasn't there before...you see it on the Internet all the time. Every new node, every new server, every new user expands the possibilities for everyone else who's already there.”

Marc Andreesen, one of the founders of the web

Metcalf’s Law

The value or power of a network increases in proportion to the square of the number of nodes on the network
Enabling reuse as a strategy

How do we enable systemic reuse of valuable instructional resources?

- Media
- Lessons
- Units
- Courses
Funding program development

- **The Fund**
  - $4.5M fund provided by AVED
  - Rounds of $1.5M each in 2003, 2004, and 2005
  - Online programs, courses, virtual labs, and technologies
  - Inter-institutional collaboration and partnerships
  - Requiring a sharing and reuse licensing agreement from faculty and developers
What are the tools and what are the practices that will allow us to harness community effectively?

Utilize participatory design models

Model the use of collaborative tools

Webcasts, telepresence

Experiment with the newest tools

Podcasts, videocasts
Providing community services

- Providing online support for communities of interest and practice
- Supporting training and dissemination of best practices for learning and technology
- Promoting and supporting collaborative program development models
- Making libraries of licensed reusable academic resources accessible
Establishing licensing models

- Intellectual property (IP) held by developers – faculty, institution, or both
- Copyright and distribution via Creative Commons or BC Commons licenses
- BC Commons is a regional consortia derivative of Creative Commons
- Up-front system for Open Source-like sharing, reuse, modification and distribution
Providing a resource repository
Emphasizing value in the approach

- Exemplary public policy - optimizes utilization of public funds
- A model for collaboration among public post-secondary institutions
- Open source model generates quality online learning resources
- Differentiation is based on bundled services rather than content
- Builds reputation of developers
- Middle ground between free and commercial
Identifying sustainability factors

- Identify, communicate, implement, and measure value propositions for all members of the learning ecosystem
- Involve key reference groups to set the goals for system development, evaluation, and implementation
- Conduct active, small-scale pilots with all systems and processes
- Evaluate and acknowledge all successes and shortcomings, and quickly move successful implementations into wide-scale production
- Acknowledge that members of the ecosystem are ultimately responsible for systemic success and sustainability, not you
Overall online learning trends

http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/issue_distance.pdf
Growth continues

http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/issue_distance.pdf
We’re learning to work in new ways

- Community source
  - uPortal
  - Creative Commons
  - BC Commons
  - OKI
  - OSPI
  - Open Source Portfolio Initiative
  - SAKAI
Building an agenda for sustainability

- Balance the needs of learners and educators
  - And, administrators

- Build on a foundation of community and communication

- Adopt Open Source and Open Access technologies
  - Give back as good as you get

- Pay attention to techno culture and the context of learning

- Support the innovators in your community
Contact and coordinates

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These presentation slides are available from

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