A framework for evaluating online learning in an ecology of sustainable innovation

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Develop your framework in 3 steps

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The Questions

- How does an organization know their practice of online teaching and learning is innovative?

- And, is innovation sustainable?

- Context is very pertinent (Allen & Seaman, 2010):
  - Large (and growing) number of institutions consider online teaching and learning to be strategic
  - In the US from 2009 to 2010, 1 million more students took a course online
  - Nearly 30% of all students take at least one course online
  - Institutional support requires “heavy lifting”: course / program development + material conversion and testing + academic readiness and support + student support = high resource requirements
  - High stakes future: Competition for students between institutions is no longer restricted by
    - Geography
    - Traditions
The sub questions

In context of online teaching and learning,

- What is *innovation*?
- What is to be evaluated?
Evaluating implies a minimum of two reference points
Comparative data may be... well, anything!
Institutions will be different, implying difficulty with “between subjects” analysis

Framework for evaluation must...
Answer “my” institution’s questions
Reflect “my” institution’s vision, mission, values, and... organizational reality
Perspectives on innovative practice

- “Balance the projected costs against future value”
  (Dr. Joel Hartman, Vice Provost for Information Technologies and Resources, University of Central Florida)

- “Open up instructional design practices... Try the unconventional”
  (Dr. Larry Ragan, Director– Instructional Design & Development Continuing and Distance Education/World Campus, Penn State University)

- “Look to internal resources who experiment”
  (Dr. William Patterson, eLearning Innovations and Entrepreneurial Partnerships, University of South Florida)

- “Develop collaborative environments, let students own and innovate while you facilitate”
  (Dr. Howard Rheingold, Berkley & Stanford Universities, author of: Tools for Thought
Reducing... two principal targets

- Characterize innovative practices of online teaching and learning
- Examine the organization that sustains innovative practices
Characterizing innovative practices

Context of online learning and teaching
“Variety” complicates characterizing innovation when you need to identify when innovation is taking place in “your” institution...whether it is...

- A “new” technology
- An “old” technology used differently
- A “new” pedagogy
- An “established” pedagogy used differently

Innovation can be one of the above, some of the above, all of the above, or even none of the above.
Useful strategy to consider

- Time-based model of teaching and learning
  (Norberg, Dziuban, & Moskal, 2011: 
  http://www.emeraldinsight.com/journals.htm?articleid=1947845&show=abstract)
  - Two categories only: courses taught completely online and courses that blend
  - From a student’s experience, any course can be fully described by its synchronous and asynchronous activities
Innovation may be...

We move activities from here to here

SYNCHRONOUS

to here

One-way lectures, demos, discussions, peer-to-peer work, etc?

...and from here

ASYNCHRONOUS

Norberg: A Time-Based Blended Learning Model
16th Annual Sloan-C Conference, November 5, 2010
Innovation opportunities

- **Support**
  - for asynchronous type work, look to using Learning Management Systems (LMS), blogs, drop-boxes, forums, twitter, and other Web2.0 technologies

- **Migration**
  - typical course designs tend to group activities as taking place during the meetings (i.e., synchronous sessions) or on the student’s own time (i.e., asynchronous sessions). With a time-based model and leveraging TEL or online infrastructures, traditional course elements offer an opportunity to innovate: sessions can be translated from one format to another to better advantage of resource use (e.g. the flipped classroom)

- **Synchronous location**
  - traditional course designs tend to assume co-location as a requirement. However, co-location should be thought of as an opportunity for innovation: co-location should not always be a requirement of synchronous meetings, as ICT can be used to provide access to distant students

- **Flow**
  - between instructional strategies. Examine flow to recognize and manage how activities are connected and supported

- **Learner empowerment**
  - students are most effective when they can access all course content anywhere and at anytime. Also, their social networks can be useful for enhancing their studying or for clarifying directions from synchronous meetings (e.g. Lectures) or interactions during those meetings
In the context of your institution, describe **innovation**

- Identify / articulate characteristics of innovative practice
- Consider connecting practices with – institutional / division / school – target goals / objectives
- Set a suitable timeframe for the study
- Identify suitable study opportunities – specific courses or programs
Examine the organization

What are the key influences that support innovative practice?
Useful strategy to consider

- Unbundling conceptually a social focus on ecology requires identifying key actors and recognizing the relationships between them.

- Consider Activity Theory
  (Leont’ev (1932), Luria (1928, 1932), and Vygotsky (1929) in the cultural-historical school of psychology; see Cole & Engeström (1993))

- The Actors:
  - subject, mediating artefacts, object, division of labour (or the different roles that exercise an influence on the subject), community, and rules.
An Activity Theory Representation

Artefacts:
Media, Tools, & Systems

Student Learner

Learning

Rules & Policies

Community

Roles
Breaking it down

- **Roles**
  - Students, teachers, designers, tutors, administrators, leaders, ...

- **Community**
  - Peers in the course(s) currently engaged, as well as study groups, or other clubs, family, culture, ...

- **Rules & Policies**
  - Course requirements, moral and ethical obligations associated with study and research, institutional policies, ...

- **Media, Tools, & Systems**
  - Books, paper articles, audio and video materials, a myriad of technologies, such as learning management systems, both synchronous and asynchronous, computer programs, and...pedagogy*

* For simplicity, pedagogy can be considered a mediator for learning.
Framework construction – Step 2: Examine your organization

- Match which organizational actors have strongest influence on innovative practice
  - Short term
  - Longer term

- Identifying the actors and examining their influence on practice over time permits opportunities for improvement / refinement
Evaluating

Formalize study plan
Framework construction – Step 3: Select suitable study methodology

- Consider methodology – What will be your end goal?
  - Collect data
  - Conduct analysis
  - Detail findings
  - Suggest interpretative explanations
  - Disseminate results
  - Discuss suggested improvements / next steps
  - Act – Implement improvements
  - Repeat steps

- Some formal approaches...
  - Design and Development Research (Richey & Klein, 2007)
  - Formative Research (Reigeluth & Frick, 1999)
  - Action Research

- Or an informal approach...
  - Check lists, scored spreadsheet, ...
  - Simple qualitative strategies
In a nutshell

- Characterize innovation
- Review the organization that will sustain innovation
- Select targets and timeframe for study
- Conduct data collection and analysis
- Report the findings within the context of effectiveness and sustainability
  - Does innovation yield desired results?
  - What will be required to sustain innovation?
- Act on the knowledge
Questions

- Let’s collaborate:

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References

Course Elements and Communication Environments (Norberg 2010)

- **Synchronous (Not Co-located)**
  - Communication Possible

- **Asynchronous Work/Communication Possible On/Off Line**
  - All 3 forms possible
  - Any of the two possible
  - Any of the two possible

- **Synchronous + Collocated Possible**
  - Videoconference, chat, e-meeting, telepresence—meeting in time only
  - Any of the two possible
  - All 3 forms possible
  - Any of the two possible

- Activities that need a special space AND time: meeting in a room
  - Mutually Dependent?

- Ordinary student study work, individually or in self-organized groups
  - VLE or similar

- Mutually Dependent?