Assessing Online Education: Applying Principles from the Learning Communities Movement to Internet Learning

David C. DiRamio and Mimi Wolverton
Higher Education Leadership
University of Nevada, Las Vegas

2004 AAHE Assessment Conference, Denver, CO
June 13-15, 2004

Context

- New Accountability: Shift in focus in HE to achieving results, measuring outcomes, outputs, and products.
- Measures of quality are based on school mission and objectives.
- Most of the campus is now focusing on “outputs” (outcomes). What about… ?
Context

- Internet as an unprecedented communication tool (and the possibilities for delivering college courses)
- Students now demanding alternate pathways to higher learning
- “Virtual” universities, global competition, online and for-profit alternatives

Issues

- Online higher education... Administrator emphasis on enrollment growth, less attention paid to quality issues?
- Review of the literature reveals only limited measures for evaluation and assessment exist
**Issues**

- Higher than average drop out rates for online courses
- Due to old model (correspondence) of distance learning?
- Research shows students' sense of isolation and remoteness are significant barriers to online distance education!

---

**The Study**

- “Online Learning Community” may help overcome barriers to an successful online learning
- Learning Communities shown to help ameliorate attrition problems and improve drop out rates
- Online course structured so that both the professor and students show interest, share insights, and express ideas
The Study: Development of a Measure / Survey Instrument

The Study: Review of the Literature

- Lots of K-12 literature, teachers forming professional **Learning Communities of Practice**
  - Also, Ernest Boyer’s model

- **Higher Education**
  - Gabelnick, MacGregor, Matthews, & Smith's "Learning Communities: Creating Connections among Students, Faculty, and Disciplines" [Jossey-Bass New Directions in 1990]
  - Vincent Tinto
  - Shapiro & Levine's "Creating Learning Communities" [1999]

- **Online Education**
  - Palloff & Pratt's "Building Learning Communities in Cyberspace" [1999]
The Study: Seeking Expert Knowledge

- Attendees of the 8th Annual Conference on Learning Communities and Collaboration: Student Learning and Engagement (November 2003)

- Sample N = 245
  Forty-four responses (18%)

- Rate each of 8 statements (LC principles) on 1-to-4 Likert scale
  - and -

- Provide Qualitative comments-feedback for each of the 8 statements

The Study: Results

- Mean scores

<table>
<thead>
<tr>
<th>Learning Community Principle</th>
<th>Mean Applicability Score (on 1-to-4 scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7. Encourage students to share their own experiences and ideas in online discussions and/or postings.</td>
<td>3.55 (sd=0.73) (n=44)</td>
</tr>
<tr>
<td>Q4. Encourage students to take responsibility for their own learning.</td>
<td>3.54 (sd=0.75) (n=41)</td>
</tr>
<tr>
<td>Q6. Incorporate reflective writing exercises, including student self-evaluation.</td>
<td>3.50 (sd=0.67) (n=44)</td>
</tr>
<tr>
<td>Q5. Use instructor-guided peer questioning to encourage student-to-student interaction.</td>
<td>3.43 (sd=0.59) (n=44)</td>
</tr>
<tr>
<td>Q2. Use group projects to promote collaborative learning.</td>
<td>3.41 (sd=0.82) (n=44)</td>
</tr>
<tr>
<td>Q8. Instructor shares own internal processes (ways of thinking) with students.</td>
<td>3.41 (sd=0.76) (n=44)</td>
</tr>
<tr>
<td>Q1. Cluster two online classes around an interdisciplinary theme.</td>
<td>3.00 (sd=0.99) (n=44)</td>
</tr>
<tr>
<td>Q3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).</td>
<td>2.91 (sd=1.04) (n=43)</td>
</tr>
</tbody>
</table>

- Rank order

<table>
<thead>
<tr>
<th>Summary Rankings</th>
<th>Learning Community principles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Q2. Use group projects to promote collaborative learning.</td>
</tr>
<tr>
<td>(2)</td>
<td>Q7. Encourage students to share their own experiences and ideas in online discussions and/or postings.</td>
</tr>
<tr>
<td>(3)</td>
<td>Q4. Encourage students to take responsibility for their own learning.</td>
</tr>
<tr>
<td>(4)</td>
<td>Q6. Incorporate reflective writing exercises, including student self-evaluation.</td>
</tr>
<tr>
<td>(5)</td>
<td>Q5. Use instructor-guided peer questioning to encourage student-to-student interaction.</td>
</tr>
<tr>
<td>(6)</td>
<td>Q1. Cluster two online classes around an interdisciplinary theme.</td>
</tr>
<tr>
<td>(7)</td>
<td>Q3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).</td>
</tr>
<tr>
<td>(8)</td>
<td>Q8. Instructor shares own internal processes (ways of thinking) with students.</td>
</tr>
</tbody>
</table>
The Study: Results

Table 3. Exploratory factor analysis results for Learning Communities principles.

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Connections</th>
<th>Experience</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Cluster two online classes around an interdisciplinary theme.</td>
<td>0.745</td>
<td>-0.071</td>
<td>-0.148</td>
</tr>
<tr>
<td>Q2. Use group projects to promote student collaboration.</td>
<td>0.757</td>
<td>-0.037</td>
<td>0.216</td>
</tr>
<tr>
<td>Q3. Integrate an extra-curricular student component into on-line discussions and/or postings.</td>
<td>0.055</td>
<td>0.759</td>
<td>-0.230</td>
</tr>
<tr>
<td>Q7. Encourage students to share their own experiences and ideas in on-line discussions and/or postings.</td>
<td>-0.024</td>
<td>0.833</td>
<td>0.177</td>
</tr>
<tr>
<td>Q8. Incorporate reflective writing exercises, including student self-evaluation.</td>
<td>0.114</td>
<td>0.021</td>
<td>0.879</td>
</tr>
</tbody>
</table>

Q5 and Q8 did not factor

Connections, Experience, and Responsibility (C-E-R) pilot framework

The Study: Towards Developing a Diagnostic Tool

- Develop 3 statements (both students and faculty) for each element of pilot C-E-R framework

Connections

Students:
1. Actively engage in group assignments.
2. Work to see the common themes across courses.
3. Seek to help other students.

Faculty:
1. Coordinates, design, and plan with other faculty across disciplines.
2. Help guide group projects and supervise progress.
3. Emphasize commonalities between clustered courses.

Experience

Students:
1. Share their experience, knowledge, and inspiration with others.
2. Participate in scheduled extra-curricular activity.
3. Reflect, respond, and critique others’ ideas in discussion postings.

Faculty:
1. Design extra-curricular activity for students.
2. Ask students to share ideas and experiences.
3. Incorporate real-world applications into the curriculum.

Responsibility

Students:
1. View themselves as responsible and self-motivated learners.
2. Engage in reflective writing and self-evaluation.
3. Communicate regularly with the instructor.

Faculty:
1. Provide a model for expectations and responsible learning behavior.
2. Reward self-evaluative exercises such as reflective writing.
3. Encourage self-motivation and student-led exercises.
The Study: Comments / Feedback from Participants

- **Connections**: Clustered-connected classes, Group work/projects

  “You have to be quite **intentional about clustering**: the designers of the two courses should consult each other at the very least. If students see overt connections (that don’t contradict or confuse) there’s more of a likelihood to continue on in both subjects.”

  “This should **improve retention** in both classes (across disciplines) since the **faculty have co-designed** their courses and the students have **peer relationships** in both courses. This may spawn online learning clusters among those with similar learning skills. This should be suggested and encouraged by faculty.”

- **Experience**: Extra-curricular activity, Post/share ideas & experiences

  “This is tough in online learning since one of the key advantages is flexibility with regard to time to engage the course during a day. I have offered field trips for online classes and have never gotten beyond 20% (attendance) because of scheduling and the reality that many students are geographically remote.”

  **Virtual museum tour**

  “Many students are **more willing to share** in an online environment than in a class setting.”
The Study: Comments / Feedback from Participants

- **Responsibility:** For own learning, Reflective writing

  "Student learning contracts may be useful. But I have little experience with them since I am teaching at the 100 level."

  "There needs to be support, however, for students asking the instructors questions. What might serve this best would be online discussion."

  "Students have to be invested in the learning process to take something away from each class. Making classes or learning styles specific to students’ needs will engage them in the process of learning."

  "This (reflective writing) would be a good assessment piece as well for the class."

  "Reflection will not be diminished online and as the online context is written, it should enhance written reflection if students guided to understand reflections vs. response in the online mode."

  "While this is intimidating for most students, it has a high pay-off value."

Concluding Thoughts: Next Step

- Increase the number of respondents for initial survey (N ≅ 100)

- Substantiate the exploratory factor analysis

- If factor analysis "holds," move towards confirmatory factor analysis of C-E-R framework. Test a survey instrument

- All information available:
  - (Slides) http://highereddata.org/aahe/lc-slides.pdf
  - (Paper) http://highereddata.org/aahe/lc-paper.pdf

Thank You!