

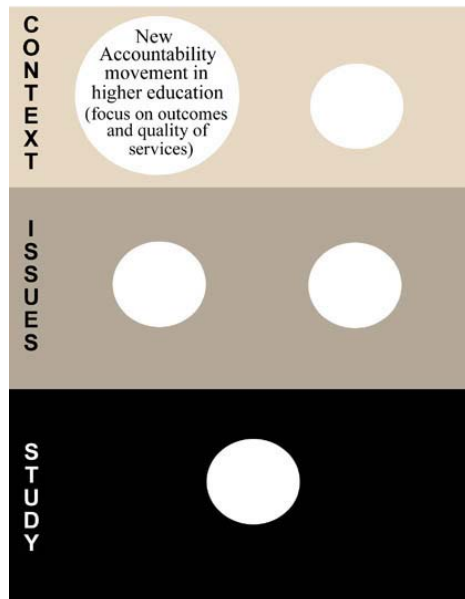
Assessing Online Education: Applying Principles from the Learning Communities Movement to Internet Learning

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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

C O N T E X T	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid #ccc; border-radius: 50%; padding: 5px; width: 40%;">New Accountability movement in higher education (focus on outcomes and quality of services)</div> <div style="border: 1px solid #ccc; border-radius: 50%; padding: 5px; width: 40%;">Emergence of online higher education and learning via the Internet</div> </div>
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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

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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

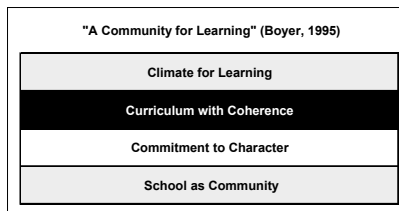
The Study: Development of a Measure / Survey Instrument



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

Our group is conducting research about learning communities and online distance education. Specifically, we are interested in finding out if principles associated with "best" on-campus learning communities can be used to reduce attrition in online classes. Please take a moment to consider the 8 LC/OT items listed below. Your feedback is greatly appreciated. Thank you for your assistance in this project!

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Please rate a list of ideas generally associated with learning communities. Please consider each for applicability in online teaching and learning to reduce attrition. Please comment in the space provided.

	Little Applicability (1)	(2)	(3)	High Applicability (4)	
1. Cluster two online classes around an interdisciplinary theme.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
2. Use group projects to promote collaborative learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
4. Encourage students to take responsibility for their own learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
5. Use instructor-guided peer questioning to encourage student-to-student interaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
6. Incorporate reflective writing exercises, including student self-evaluation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
7. Encourage students to share their own experiences and ideas in online discussions and/or postings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?
8. Instructor shares own internal processes (ways of thinking) with students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Comment?

Please rate only one (1) item.
Example: 1, 2, 3

The Study: Results

Mean scores

Table 1. Survey results: Mean applicability scores for Learning for Learning Community principles.

Learning Community Principle	Mean Applicability Score (4.0 scale)
Q7. Encourage students to share their own experiences and ideas in online discussions and/or postings.	3.55 (sd=0.73) (n=44)
Q4. Encourage students to take responsibility for their own learning.	3.54 (sd=0.75) (n=41)
Q6. Incorporate reflective writing exercises, including student self-evaluation.	3.50 (sd=0.87) (n=44)
Q5. Use instructor-guided peer questioning to encourage student-to-student interaction.	3.43 (sd=0.59) (n=44)
Q2. Use group projects to promote collaborative learning.	3.41 (sd=0.82) (n=44)
Q8. Instructor shares own internal processes (ways of thinking) with students.	3.41 (sd=0.78) (n=44)
Q1. Cluster two online classes around an interdisciplinary theme.	3.00 (sd=0.99) (n=44)
Q3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).	2.91 (sd=1.04) (n=43)

Rank order

Table 2. Results from rankings of most applicable Learning Community principles.

Summary Rankings (1st+2nd+3rd)		n(freq)
(1)	Q2. Use group projects to promote collaborative learning.	24
(2)	Q7. Encourage students to share their own experiences and ideas in online discussions and/or postings.	22
(3)	Q4. Encourage students to take responsibility for their own learning.	18
(4)	Q6. Incorporate reflective writing exercises, including student self-evaluation.	17
(5)	Q1. Cluster two online classes around an interdisciplinary theme.	16
(6)	Q5. Use instructor-guided peer questioning to encourage student-to-student interaction.	14
(7)	Q3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).	11
(8)	Q8. Instructor shares own internal processes (ways of thinking) with students.	10

The Study: Results

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

Pilot Survey, N = 44
Factor analysis component matrix (Varimax rotation).

Survey Question	Connections	Experience	Responsibility
Q1. Cluster two online classes around an interdisciplinary theme.	0.745	-0.071	-0.148
Q2. Use group projects to promote collaborative learning.	0.757	-0.037	0.216
Q3. Integrate an extra-curricular, student affairs component into the online class (i.e. social activity).	-0.093	0.759	-0.230
Q7. Encourage students to share their own experiences and ideas in online discussions and/or postings.	-0.05	0.833	0.177
Q4. Encourage students to take responsibility for their own learning.	0.114	-0.021	0.829
Q6. Incorporate reflective writing exercises, including student self-evaluation.	-0.066	-0.020	0.888

Q5 and Q8 did not factor

- Use exploratory factor analysis to help establish correlative connections between complex sets of data.
- Procedure yielded **three-component construct**.
- One-word indicator selected to best characterize theme for each group of clustered questions

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
<p>Students:</p> <ol style="list-style-type: none"> 1. Actively engage in group assignments. 2. Work to see the common themes across courses. 3. Seek to help other students. <p>Faculty:</p> <ol style="list-style-type: none"> 1. Coordinate, design, and plan with other faculty across disciplines. 2. Help guide group projects and supervise progress. 3. Emphasize commonalities between clustered courses.

Responsibility
<p>Students:</p> <ol style="list-style-type: none"> 1. View themselves as responsible and self-motivated learners. 2. Engage in reflective writing and self-evaluation. 3. Communicate regularly with the instructor. <p>Faculty:</p> <ol style="list-style-type: none"> 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.

Experience
<p>Students:</p> <ol style="list-style-type: none"> 1. Share their experience, knowledge, and inspiration with others. 2. Participate in scheduled extra-curricular activity. 3. React, respond, and critique others' ideas in discussion postings. <p>Faculty:</p> <ol style="list-style-type: none"> 1. Design extra-curricular activity for students. 2. Ask students to share ideas and experiences. 3. Incorporate real-world application into the curriculum.



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.”*



The Study: Comments / Feedback from Participants

- **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 \cong 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!