Odegaard Library’s Active Learning Classrooms: Research & Practice

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Special thanks to:
Janice Fournier, Louise Richards, Jill McKinstry
OUTLINE

1. About Odegaard Library & the Active Learning Classrooms
2. Active Learning Classroom research 2013-14 and 2014-15: methods & findings
3. Active Learning Classroom programming
4. Questions & discussion
ABOUT ODEGAARD LIBRARY & THE ACTIVE LEARNING CLASSROOMS
ODEGAARD ACTIVE LEARNING CLASSROOMS

Need for active learning spaces

Teaching & learning orientation of Odegaard Library

24/5 Flex space

Photo: Miller Hull
ODEGAARD ACTIVE LEARNING CLASSROOMS

90 & 63-person classrooms; tables of 9; no central lecture podium

132 courses and ~ 8,000 students taught since 2013

Photo: UW-IT
ALC COURSES

Education
Environmental Studies
Chinese
Public Health
Biology
Comparative Literature
Psychology
Film Studies

Photos: Elizabeth Wheat & Sara Lopez
ALCs IN ACTION: CHIN 101

Chinese 101
Nyan-Ping Bi
ALC class at 3:13
mark
https://www.youtube.com/watch?v=xBBZ_O-5K9s
ACTIVE LEARNING
CLASSROOM RESEARCH
RESEARCH ON ACTIVE LEARNING CLASSROOMS


- active learning raises average student exam grades by half a letter
- student failure rates are 55% higher under traditional lecturing


- student behavior is shaped by instructor behavior, classroom activities and space
COLLABORATIVE RESEARCH TEAM

Odegaard Library
UW-IT Academic & Collaborative Applications
UW-IT Learning Technologies

Support from UW-IT Classroom Technology & Events
ODEGAARD ALC RESEARCH: YEAR 1

• What classroom features are effective in supporting active learning?

• What can we learn that could inform best practices for active learning strategies, appropriate support plans, and future classroom designs?
YEAR 1 RESEARCH METHODS

• Observations
• Faculty & student surveys
• Faculty focus groups

Photos: Odegaard Library
FINDINGS

• Instructors need support before and during their quarter teaching in the ALC
• Learning to teach in an ALC takes time, motivates reflection on practice
• Instructors and students report greater engagement, participation, interaction with peers and with instructor
FINDINGS

• Students report greater gains in learning than instructors when comparing experience in ALC to traditional classroom
• Some features of the room were valued more highly than others by instructors and students
• Design of ALC makes some aspects of teaching and learning challenging
## Essential Features for Teaching

<table>
<thead>
<tr>
<th>Feature</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movable chairs</td>
<td>87%</td>
</tr>
<tr>
<td>Digital display at table</td>
<td>83%</td>
</tr>
<tr>
<td>Ability to send content to table displays</td>
<td>83%</td>
</tr>
<tr>
<td>Podium laptop hookup</td>
<td>73%</td>
</tr>
<tr>
<td>Student table microphone</td>
<td>72%</td>
</tr>
<tr>
<td>Round tables</td>
<td>63%</td>
</tr>
<tr>
<td>Student laptop hookup to display</td>
<td>63%</td>
</tr>
<tr>
<td>Podium microphone</td>
<td>60%</td>
</tr>
<tr>
<td>Open floor plan</td>
<td>57%</td>
</tr>
<tr>
<td>Writable surfaces</td>
<td>53%</td>
</tr>
<tr>
<td>Podium audio control</td>
<td>50%</td>
</tr>
</tbody>
</table>
ESSENTIAL FEATURES FOR LEARNING

**ALC features that enhanced student learning:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power outlets</td>
<td>82%</td>
</tr>
<tr>
<td>Digital displays at table</td>
<td>75%</td>
</tr>
<tr>
<td>Round tables/movable chairs</td>
<td>71%</td>
</tr>
<tr>
<td>Audio/microphones</td>
<td>71%</td>
</tr>
<tr>
<td>Laptop hookup to displays</td>
<td>68%</td>
</tr>
<tr>
<td>Overall appearance/design</td>
<td>63%</td>
</tr>
<tr>
<td>Writable surfaces</td>
<td>61%</td>
</tr>
<tr>
<td>Open floor plan</td>
<td>59%</td>
</tr>
</tbody>
</table>
INSTRUCTORS RATE STUDENT PERFORMANCE: ALCs vs. TRADITIONAL

Winter quarter: Students taught in the ALC performed better or about the same in ALC: 47%

- I did not teach this course previously; 29.41%
- Students taught in ALC learned more/performed better than students taught in traditional classroom; 29.41%
- Students taught in ALC learned less/performed worse than students taught in traditional classroom; 0%
- Students taught in ALC learned/performed about the same as students taught in traditional classroom; 17.65%
- Don't know; 23.53%

Spring quarter: Students taught in the ALC performed better or about the same in ALC: 46%

- I did not teach this course previously; 23.08%
- Students taught in ALC learned more/performed better than students taught in traditional classroom; 38.46%
- Students taught in ALC learned less/performed worse than students taught in traditional classroom; 0%
- Students taught in ALC learned/performed about the same as students taught in traditional classroom; 7.69%
- Don't know; 30.77%
STUDENTS RATE THEIR LEARNING: ALCs vs. TRADITIONAL

Winter quarter: Students would have learned less in a traditional classroom or the same than in the ALC, 83%

- 1: I would have learned less in a traditional classroom than in the ALC; 60.80%
- 2: I would have learned more in a traditional classroom than in the ALC; 16.80%
- 3: I would have learned about the same in a traditional classroom as in the ALC; 22.40%

Spring quarter: Students would have learned less in a traditional classroom or the same than in the ALC, 84%

- 1: I would have learned less in a traditional classroom than in the ALC; 46.83%
- 2: I would have learned more in a traditional classroom than in the ALC; 15.87%
- 3: I would have learned about the same in a traditional classroom as in the ALC; 37.30%
INSTRUCTOR & STUDENT COMMENTS: STUDENT ENGAGEMENT

_Instructor:_ “I would say that [students] feel more engaged... This environment opens students up more for this type of engagement.”

_Student:_ “Much more interactive. It motivated me greatly”
INSTRUCTOR & STUDENT COMMENTS: GROUP WORK

_Instructor_: “There’s no corners on a round table, as a student said ‘you can see everybody’ -- they felt more engaged, democratic.”
INSTRUCTOR & STUDENT COMMENTS: GROUP WORK

_Student:_ “I was much more involved with my peers than in other classrooms, and I spent less time asking the teacher for answers and more time discussing it with my peers.”

_Student:_ “Amazing set up for group work.”
CHALLENGES

“I actually found the room actually [sic] very frustrating. I consistently felt as if I was trying to get comfortable in room, either because I couldn't see the screen when the professor was lecturing, or I couldn't hear someone because the mics weren't working or people forgot to use them, etc.” - Student
ACTIVE LEARNING
CLASSROOM RESEARCH,
YEAR 2
2014-15
Investigate the extent to which ALCs promote educational alliances (Baepler & Walker), including:

- Mutual Respect
- Shared Responsibility for Learning
- Effective Communication and Feedback
- Cooperation
- Trust and Security

COURSE PROFILES IN ACTIVE LEARNING

CHIN 102 Active Learning Profile, Nyan-Ping Bi

BIOL 401 Active Learning Profile, Dr. Alison Crowe

PSYCH 445 Active Learning Profile, Dr. Nicole McNichols

C LIT 397 Active Learning Profile, Dr. Stephen Groening

Photos: Courtesy of instructors
YEAR 2 RESEARCH METHODS

- Observations
- Student surveys
- Faculty interviews
- Student focus groups

Photo: UW TV
RESEARCH THEMES

• ALCs and instructor pedagogy encourage student preparation
• ALCs and instructor pedagogy encourage student accountability to instructors and peers
• ALCs and instructor pedagogy encourage classroom community
STUDENT PARTICIPATION & ACCOUNTABILITY

“In general when I don’t come prepared to class I don’t participate in discussion as much… I feel like I let my group down.” - Student

“The peer-learning based format of the class enhanced my learning by making me more thoughtful about what I needed to do to be prepared and be able to contribute to the peers in my learning group.”

- Student
“Accountability is huge in this classroom. Students evaluate each other. Part of their grade is based on how much the group participation happens. In past quarters, attendance in lecture was low. In the ALC, attendance was always good, since they were graded on group participation.”

- Instructor
STUDENT PARTICIPATION & ACCOUNTABILITY

Teaching practices:

• Clearly (and frequently) communicating how instructors expect students to take a role in their own learning
  (e.g. active participation; completing homework in preparation for class; self-assessment)

• Designing group learning activities that require student cooperation and ensure both group and individual student accountability.
"Many students have trouble speaking up in a traditional classroom when all the focus is on them. They feel that they have to get something completely right before they speak up, so it hinders the sharing of ‘half-baked’ ideas… Having small groups fostered trust and friendship that allowed students to feel comfortable and share more freely."

- Instructor
CLASSROOM COMMUNITY

“Students get to know each other better, and learning is done together.” - Student

“Not as much isolation… realizing other people are going through the same motions when struggling with [the] topic too.” - Student

“[Having class in the ALC] made it easier to learn because we always worked in groups and the teacher was always available to help.” - Student
CLASSROOM COMMUNITY

Teaching practices:

• Creating opportunities for students to deepen group collaboration skills, giving them enough time throughout the quarter to practice and improve group work skills.

• Greeting students by name, treating students with respect, taking a posture on same level as students (sitting, kneeling) when joining a group discussion.

• Encouraging self-organization in groups and self-regulation to keep on task.
ALC RESEARCH REPORTS

Year 1 research report
4 course profiles in active learning

guides.lib.washington.edu/activelearningclass
ACTIVE LEARNING CLASSROOM PROGRAMMING 2015-16
FACULTY PROGRAMMING

ACTIVE LEARNING CLASSROOM OPEN HOUSE

Table 1
CTL
Odegaard ALC team
UW-IT LT

Table 2
Steve Groening
C LIT 397: Cell Phone Cultures

Table 3
Sara Lopez
EDUC 210
breaking non-ALC habits with undergrads

Table 4
Alison Crowe
BIOL 401 equity in student discussions

Table 5
Sean Munson
HCDE 310
Balancing lecture and activities

Table 6
Michelle Averill
SPH 381
active learning exams

Table 7
Linda Martin-Morris
BIOL 355 converting lectures to team learning activities

Table 8
Nicole McNichols
PSYCH 445 encouraging student participation

Table 9

FACULTY PROGRAMMING

“ACTIVATE YOUR TEACHING” WORKSHOP
FUTURE DIRECTIONS
QUESTIONS & DISCUSSION