Defining Active Learning Classrooms for UW Bothell
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What is an active learning classroom (ALC)?
It is a classroom space that is conducive to active learning where students are actively engaged in course activities such as problem solving, discussions, group work, and reading and writing in contrast to a standard lecture class where the student is more passive. Active learning “involves students in doing things and thinking about the things they are doing.” (Bonwell, n.d.)

ALCs are designed to:
1. Facilitate collaboration and group work.
2. Enhance faculty and student interactions.
3. Provide support for students to invest in their own learning.
4. Create a more welcoming and egalitarian space.

Characteristics of an ALC include:
1. Flexibility - this includes moveable chairs and tables (typically on wheels), different types of furniture shapes (cafe tables, soft chairs etc.), and flexible computer access.
2. Adequate workspaces for laptops, note taking and whiteboards as well as adequate space around workspaces for students and faculty to move around the room and interact.
3. Highly conducive to sharing information - this can include wall-mounted whiteboards, writeable wall paint or glass surfaces, moveable whiteboards, screen sharing technology, interactive whiteboards and flexible presentation technology.
4. A welcoming, student-centered space - this can include good light (natural light if possible), windows, good acoustics, a variety of types of furniture for students to use, a diminished or no epodium to allow for more faculty and student interaction.

Why is creating an active learning classroom important?
1. Teaching a class in an ALC has significant positive effects on student learning outcomes and student perceptions of the learning experience. (Walker, J. et al., 2011; Cotner et al., n.d.)
2. Faculty who teach and students who learn in active learning classrooms have strongly positive attitudes about ALCs. (“Learning Spaces Research,” n.d.)
3. It will promote innovative teaching methodologies as lecturing is reduced.
4. A number of UWB faculty are interested in teaching in ALCs.
5. It can help attract innovative faculty and students and make classroom spaces more inviting for students. (Alexander, D., et al., 2007)
6. It can promote UWB as a student-centered institution and help maintain UWB’s reputation as an innovative university that continues to hold paramount the faculty and student relationship.

How can ALCs be used at UWB?

Some work has already been done and is being done on implementing some active learning design principles into classrooms. While there are different ALC models which we can consider for implementation at UWB (see examples below), making classrooms flexible and highly conducive to sharing information so as to support group work and faculty-student collaboration should be an important consideration for all classrooms. A typical 30 to 60 seat UWB classroom (and possibly larger classrooms) could include:

- chairs and tables that are mobile and easy to move and rearrange
- varied classroom designs and furniture which could include round tables, different seating arrangements, and different types of chairs
- whiteboard space on walls and mobile whiteboards
- smaller epodiums (and possibly in some cases no epodiums)
- presentation technology
- mobile microphones for lecture capture.

Other considerations for selected classrooms would include implementing technology that facilitates collaboration such as:

- screen sharing technology
- multiple projection displays such as LCD screens mounted in various locations
- mobile laptop carts which can easily be used in the ALC
- mobile teaching infrastructure that can allow faculty to use mobile devices to teach and project course content
- technology infrastructure (power, network access etc.) that helps the tools meld seamlessly with classroom teaching and learning

Support services such as IT, scheduling and facilities would need to be adapted to handle these new classrooms. Faculty development would also be vital in helping faculty adapt and develop teaching methodologies that would take advantage of these spaces. Accessibility issues would also need to be carefully considered to ensure that students with disabilities can also use the spaces effectively.

UW3 represents an opportunity to incorporate some ALC principles broadly in many of the new classrooms. It may also present the opportunity to develop specific classrooms that more extensively incorporate active learning opportunities such as the integrated technology models
listed below.

Future updates of furniture and infrastructure in UW1 and 2 also represent opportunities to redesign classrooms as active learning spaces.

**What are some ALC models?**

ALC characteristics can be incorporated into a variety of classroom models which can range from a slight tweaking of current classroom designs to radical redesigns. Below are some models which can help inform classroom design at UWB.

**Low technology ALC**

For UWB, making classrooms flexible to support group work and faculty-student collaboration can be done in a relatively low-stakes, budget-friendlier way. Characteristics of this model would include easily movable tables and chairs (typically on wheels), different classroom configurations, extensive use of glass and/or whiteboards (fixed and mobile), a reduced epodium presence, and wireless microphones for recording lectures. If possible, it would be efficient to build in technology infrastructure which could support a later conversion to an integrated technology model if needed. These models can be potentially used in most UWB classrooms, whether 30-seat, 60-seat or higher. Here are a few examples of this model (photos 1 through 3 from Everett CC).

1. Round table model. Some ALCs also contain stackable tables or furniture of different shapes and sizes including cafe tables and lounge chairs. Using round tables is a preferred way to create an active learning classroom.
2. Traditional (yet mobile) tables with varying heights. This would probably be a minimal active learning design. The space can be rearranged but doesn’t automatically lend itself to quick group formation or collaborations.
3. Node-style chairs. Western Washington University uses this model for some of its classrooms. One drawback of this design is that it’s harder for students to spread out materials and collaborate.

4. Larger lecture halls - While larger lecture halls will pose some constraints, it is still advisable to incorporate flexibility as much as possible. This example is from Iowa State University. UWB is also planning on doing something similar in the 100-person classroom in UW3.
5. Fully Flexible spaces - Some classrooms, such as spaces developed by the Stanford d.School, are fully flexible or fluid. This means the furniture can very quickly and easily be reconfigured. In addition, the furniture can be used for multiple purposes. For example, a cube can be used as both a chair and a writing surface.

![Image of a flexible classroom space]

**Integrated Technology ALC**

Building on the ALC design principles listed in the low technology section, this model leverages technology to add additional opportunities for innovation, communication and active learning. The technology characteristics of the integrated technology ALC can include screen sharing technology, multiple computer display options, and the ability to leverage mobile technologies. The podium may be moved away from the front of the room or entirely removed. Round tables that seat 6 to 9 students are typically used. Some ALCs may contain breakout spaces.

1. University of Washington Seattle ALC

![Diagram of a University of Washington Seattle ALC]

**Active Learning Classroom 136 North Alcove**

Capacity: -- 90 (10 tables of 9 seats)
Data Diners: -- 6 booths (4 seats each)
2. University of Minnesota ALC

3. MIT ALC
Future ALCs? There are some interesting explorations of space design, primarily outside the academy, which may inform the design of future active learning classrooms. A key characteristic of emerging models is a focus on interdisciplinarity. As a campus, we should monitor these trends and consider opportunities to design a profoundly different classroom that could, for instance, host courses from different disciplines being taught jointly or cooperatively.

1. Spacecubed - Spacecubed is a “network of coworking, collaboration and innovation spaces and communities.” The space pictured below is intentionally designed to house 1/3 social and environmental entrepreneurs, 1/3 technology and creative startups and 1/3 government and corporate projects.

References and Resources


