

Active Learning Classrooms Research - Steelcase

How Active Learning Classrooms Are Making a Difference¹

- Theme 1: ALC's are connected with improved student learning outcomes - traditional quantitative outcomes and those framed by the concept of "21st Century Skills."
- Theme 2: ALC's are connected with improved student engagement
- Theme 3: ALC's have a positive connection with instructor practices and beliefs
- Theme 4: ALC's are a potential tool for the evolution of a new culture of learning.

A Space for Learning: A Review of Research on Active Learning Spaces²

What impacts do ALCS have on student academic achievement, student engagement, pedagogical practices of instructions, and how does design elements of ALC's contribute to these?

Either measurable gains in academic performance (traditional measurements and 21st Century Skills) were seen in course sections held in ALC's or there was no change between sections. ALC classroom student performance was not negatively impacted. Some studies reported pronounced improvement in minority and low-achieving students.

21st Century skills were measured by three dimensions: the ability to access, evaluate and use information, creativity, and innovation, problem-solving, effective communication face-to-face and virtual interaction, and social responsibility (responsibility, decision-making, and reflective practice and digital citizenship).

Students found learning to be more fun, an important factor in shifting the culture of learning. Students found spaces to be more comfortable.

Engagement: preference for learning in ALC's, increased motivation to attend class, participate, go beyond their comfort zone, increased interaction and improved relationships with peers and instructions - leading to a sense of community and belonging.

Instructors: ALC's contributed to a change in instructor practice - used more active teaching methodologies and use the new spaces to support that. Some outcomes suggest that these spaces challenge instructors' philosophy about education but this was dependent upon the initial philosophy of instructors. Some studies suggested a shift in the perception of the role of the instruction to that of a facilitator.

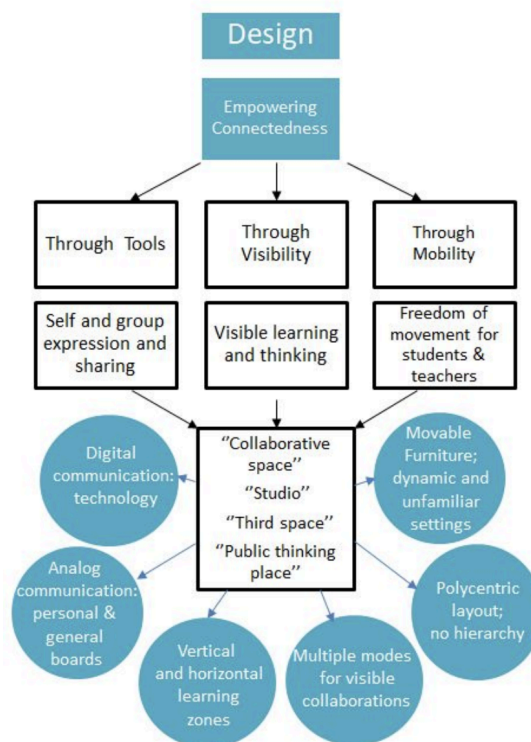
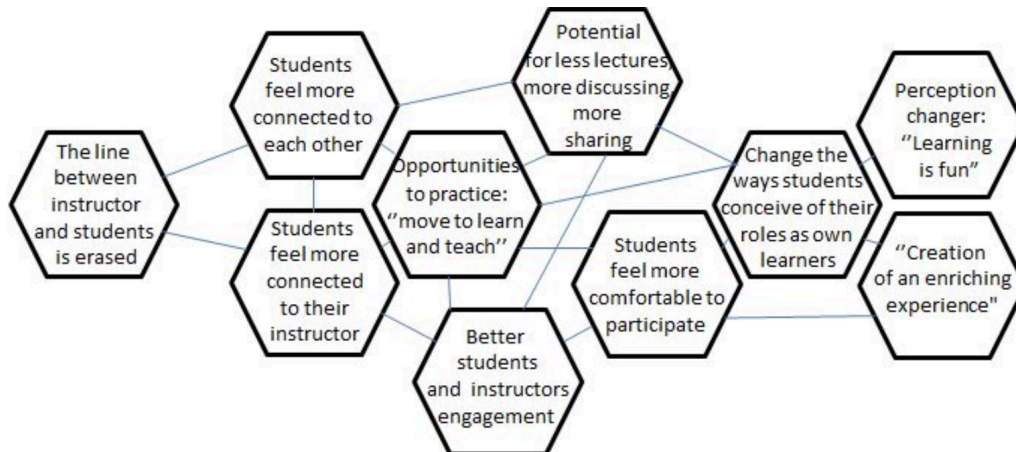
¹ "How Active Learning Classrooms Are Making a Difference."

https://www.eandi.org/wp-content/uploads/Steelcase-ALC-Research-Summary_2019.pdf. Accessed 16 Jun. 2019.

² "A Space for Learning: A review of research on active learning spaces." 19 Oct. 2018, <https://osf.io/preprints/socarxiv/vg2mx/>. Accessed 16 Jun. 2019.

There is evidence to suggest that ALC's are a component of the evolution of the institutions learning culture.

A common thread of the research regarding spatial design: ALC's increase in the connectedness of student to student - and student to instructor. Design elements that promote movement, choice, and both analog and digital tools contribute to a new learning landscape



Connectedness occurred through mobility - freedom of movement, furniture that enabled that was always the highest rated.

Connectedness through visual relationships - impacts the perception of the space and their role (student and instructor) - a shift from dominant authority figure at the front of the room to each other - which in turn supports different active learning instructional methodologies.

Connectedness through tools for learning - analog tools such as whiteboards create “public thinking spaces” and digital tools such as digital projections and laptops (or bring your own device) increased connectedness

Making the Case for Space: Three Years of Empirical Research on Learning Environments³

Students attending ALC at the University of Minnesota exceeded their final grade performance expectation compared to their ACT scores. Students in the ALC classroom had greater gains in performance than those in a traditional classroom as expected by their ACT score.

Freshman and sophomore students (from metro areas as compared to those from rural areas or upper levels) rated ALC's significantly higher with regards to engagement, enrichment, effectiveness, flexibility, and instructor use.

Spaces influenced teaching and learning even though attempts not to have space impact teaching and learning.

Instructor role changed to a facilitator

More teamwork and collaboration among students

Reported that technical and physical features of ALCs were important.

Instructor: more lecture in the traditional classroom, more discussion in ALC. Instructor remained at the front of the classroom in traditional, more movement and interaction in the ALC.

“the ALC was strongly correlated with infrequent lectures and frequent discussion, the instructor walking around the room, and the instructor engaging individual or groups of students in discreet conversation. Conversely, the traditional classroom was strongly correlated with frequent lecture delivered mostly from the podium and infrequent class discussion and student consultation.”

³ "Making the Case for Space: Three Years of Empirical Research on" 22 Sep. 2010, <https://er.educause.edu/articles/2010/9/making-the-case-for-space-three-years-of-empirical-research-on-learning-environments>. Accessed 17 Jun. 2019.

On-task behavior: in the traditional classroom, the only instructor behavior that predicted significantly higher levels of on-task behavior was lecture; in ALC, group activities and discussion predicted high levels of on-task behavior that were significantly significant.

Student perceptions of ALC's: ALC students said classroom contributed significantly to their engagement, enrichment of experience, the flexibility of learning, and fit of the classroom to course, compared to traditional course.

No significant differences were seen as the result of gender and ethnicity

Significant differences in perceptions differed between students that had a rural or metropolitan background as well as upperclassmen compared to freshman and sophomores. It was suggested that upperclassroom students had already become comfortable with traditional classrooms and this may have impacted their perceptions. For metro students, it was suggested that they may have been more familiar and comfortable in technology-rich environments; rural students saw the technology as a waste of resources.