

MOTIVATING CULTURE CHANGE THROUGH COURSE CLASSROOM TRANSFORMATIONS

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In 2013, the University of Arizona (UA) was one of eight universities awarded a grant from the Association of American Universities (AAU) to improve undergraduate STEM Education.

In the following year, UA was one of twelve schools awarded an active learning classroom through the Steelcase Education Active Learning Center (ALC) program.

These two awards spurred a number of programs and initiatives that formed the foundation for a culture shift from one that accepts lecture-based teaching as the norm to one that embraces evidence-based teaching and learning.

The leadership team for the UA AAU Undergraduate STEM Education Project, a group of campus thought-leaders often referred to as the “coalition of the willing,” established a vision for change. They recognized that culture change is complex and involves many significant interactions and interdependencies.

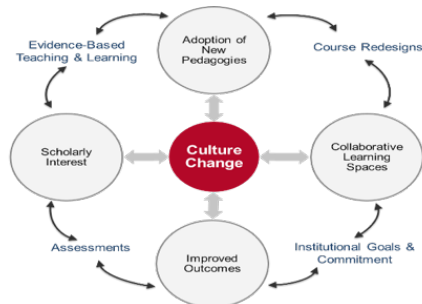


Figure 1: Culture Change at UA

Figure 1 illustrates the key elements that the leadership group believed were essential to achieve the desired transformation.

Fundamental to their vision was the realization that a variety of entry points is crucial to inspire a broad and diverse group of faculty members to embrace change and help institutionalize new strategies.

They also appreciated the need to eliminate barriers that might discourage faculty, administrators or students from adopting the desired changes.

Faculty: Early in the process, course redesign—a major component of the AAU project—motivated faculty to investigate evidence-based teaching and adopt new pedagogy based on that evidence.

Faculty Learning Communities (FLCs) were established. These were facilitated by faculty strongly committed to better teaching and learning.

They provided a forum for faculty to explore new pedagogical strategies and, perhaps more importantly, to share ideas leading to greater scholarly interest in the science of learning.

Beginning with three FLCs, participation grew dramatically from 3 facilitators and 30 members in 2014 to the current average of 9 FLCs, 13 facilitators, and 90 members each semester. Although initially focused on STEM learning, current membership includes representatives of all colleges across the UA campus, engaging instructors of both very small and very large classes.

Aware of the evidence that student collaboration improves student learning, in their course redesigns, faculty replaced traditional lectures with short lecture segments that were integrated with meaningful learning tasks that encourage students to collaborate and to use higher-order thinking during the class period.

This naturally led to a demand for physical learning environments that facilitate collaborative learning. Campus leaders agreed to pilot a large Collaborative Learning Space (CLS) in the former Science-Engineering Library journal room. The favorable results of the pilot, along with the Steelcase grant, prompted a five-year plan to develop five new CLSs each year.

In many cases, faculty members actively sought opportunities to teach in one of the new collaborating learning spaces, as they have designed or redesigned a course for collaborative learning. In other cases, the appeal of the new CLSs has sparked the interest of those who had not been particularly interested in devoting time and effort to course redesigns, or being involved in a FLC.



One instructor's comment is representative of the typical attitudes of faculty new to the CLSs:

"I am trying new ideas in the CLS that I have never tried in my 10 years of teaching, so it has been fun for me. The classroom is a 'partner' in the learning process."

An emphasis on high quality collaborative furniture and low-tech tools (e.g. tabletop whiteboards) rather than complex technology eliminates a potential barrier for faculty who are opposed to or intimidated by too much technology.

During the first year they were piloted, 80 individual faculty from 40 different departments and 10,000+ student enrollments benefited from the new CLSs.

Due to the favorable outcomes, additional funds were allocated and the schedule for building new rooms was accelerated. By Fall 2017, 20 CLSs, ranging in size from 24 students to 264 students, serve 210 faculty from 60 departments on the UA campus.

In addition to ongoing attention to spaces enabling collaborative learning, in support of the growing interest in evidence-based instructional practices, the University developed professional development programs focused on collaborative learning to help traditional lecturers who want to transform their courses in order to take advantage of the special features of the new CLSs.

These are a continuation and expansion of the Faculty Learning Communities (FLC) established at the very beginning of this change initiative at the University of Arizona. Many faculty new to collaborative instructional practices participate in the FLC to gain new insights about how to improve the quality of the education of their students.

The associations developed during the professional development programs and FLCs endure and create a growing network of educators committed to better learning. These individuals are encouraged to advocate evidence-based teaching and learning with their departments to further expand the network.

Assessment is another important component of the overall strategy to improve learning on the UA campus. Evidence shows that students who receive frequent and prompt feedback learn better.

The UA Office of Instruction and Assessment (OIA) provides support and guidance for faculty about ways to incorporate formative assessment throughout courses to enhance student learning.

These assessments provide the basis for evaluations of the impact of changes to instructional practices and allow faculty to contribute to the evidence-based teaching and learning knowledge base across campus.

Once familiar with the literature involved in scholarly pursuits related to quality education, faculty often become vocal advocates of evidence-based teaching and learning thus advancing the desired culture change.

The factors that trigger faculty interest in evidence-based learning vary. For example, some simply desire better student outcomes while others may have a general interest in better teaching and value the opportunity to network with like-minded colleagues. Others may be motivated by the opportunity to teach in the desirable learning environment offered by the CLSs.

Regardless of the motivation, the cumulative result is a movement that is gaining momentum and promises to be transformative.

Learn more at: <http://academicaffairs.arizona.edu/collaborative-learning-spaces>.

