



A Swivel Chair: The Most Important Classroom Technology?

Redesigned learning spaces can engage students and faculty members, research says.



New research shows classroom layout and furniture can positively impact student engagement.

By Allie Bidwell | July 21, 2014 | 3:28 p.m. EDT

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What if the key to boosting student engagement was as simple as swapping out desks and chairs and rearranging the layout of a classroom?

The most important classroom technology nowadays is not a classroom projector, laptop or tablet – it's the swivel chair, according to one environment and behavior researcher.

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"You can have students change and switch in a fluid moment, rather than clunking around to try to get into different situations," says Lennie Scott-Webber, director of global education environments for Steelcase Education. "We really felt that allowed the faculty member to be able to be more of a coach ... rather than just focusing on pedagogy that might be all about delivery of information."

New research from the education-focused branch of the furniture and design company Steelcase Inc. shows more intentionally designed classrooms are positively correlated to student engagement, which can in turn improve student success. The company surveyed more than 300 students at four universities

– including Ball State University and the University of Minnesota–Rochester – about their perceptions of the redesigned classrooms, which featured swiveling chairs, connectable tables and X-shaped layouts.

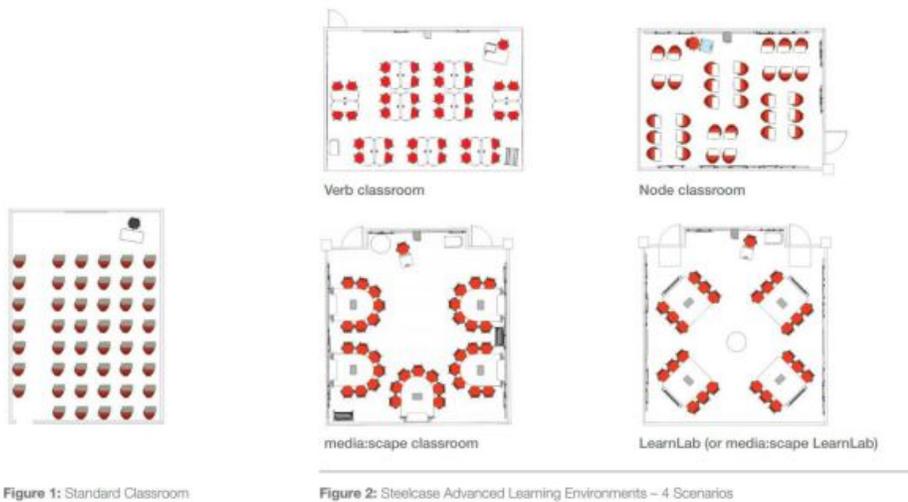


Figure 1: Standard Classroom

Figure 2: Steelcase Advanced Learning Environments – 4 Scenarios

Different classroom designs can keep students engaged and motivated, a new study finds.

"For many years, researchers have understood that the environment impacts behavior ... But we hadn't really looked at it from an education arena and from a student perspective," Scott-Webber says.

Overall, 72 percent of students said the changes increased their motivation to attend class, 72 percent said the design would increase their ability to achieve a higher grade and 84 percent reported being more engaged, according to an early draft of the study given to U.S. News. The differences in student engagement levels between the old and new classroom layouts were also statistically significant.

"Never did I realize just how valuable a piece of furniture can be to how one perceives the learning opportunities," says Gary Pavlechko, director of teaching technology in the Office of Educational Excellence at Ball State.

The university transformed two 24-seat classrooms – and has plans to renovate a larger lecture hall for the 2015 fall semester – using redesigned furniture such as [Node chairs](#), [Verb tables](#) and classroom [layouts](#) in which all students can see each other from any seat.

That type of layout is more conducive to the sort of deeper thinking colleges and universities press students to engage in, Scott-Webber says.

"If we're going to move more to problem-based, inquiry-based, learning pedagogical methods, then connecting and feeling connected to others is a critical piece of student success as well," Scott-Webber says. "It's really challenging faculty to step back and say, 'How best do students learn and how might [we] support that?'"

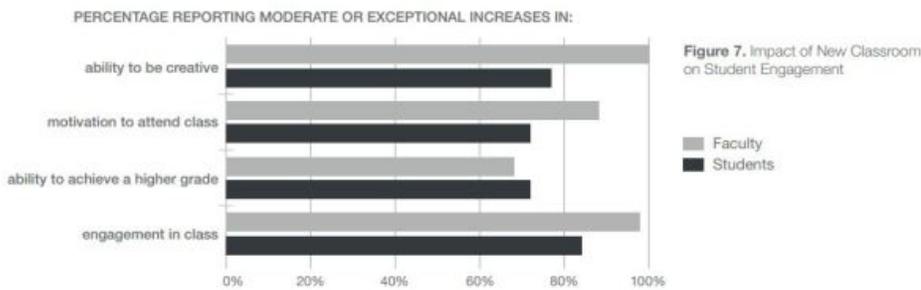
About 40 faculty members from the participating universities were also surveyed on their perceptions of students' engagement. Nearly all – 98 percent – said there was a moderate to exceptional increase in student engagement, and all said there was an increase in students' ability to be creative. Large percentages – 68 percent and 88 percent, respectively – also said they saw increases in students' ability to achieve higher grades and in students' motivation to attend class.

"When it's allowed and afforded [to] the faculty, they will certainly step up and rethink their teaching in order to be able to provide students with the best learning opportunities possible," Pavlechko says. "All



Ball State University redesigned two classrooms using Steelcase Education's media:scape layout (top) and Node chairs (bottom).

too often what they're given is something that just encourages straight lecture."



Students and faculty said new classroom design had a positive effect on factors related to student engagement.

But the redesigned classrooms don't just benefit the students, Scott-Webber and Pavlechko say. Having environments more conducive to active learning can help faculty members stay enthusiastic about their jobs and become more creative with teaching methods.

"The faculty go to work in these classrooms day in and day out. Students go through them," Scott-Webber says. "It's really important that it supports multiple kinds of disciplines and multiple ways of teaching to help stay excited about what you're doing."

Pavlechko says in observing faculty who have used the redesigned classrooms at Ball State, the faculty members appear to be "getting lost within the learning space."

"They have become so much a part of the learning experience, versus being just the teacher in the process," he says. "Direct instruction has been around for a very long period of time, but when we talk about true learning, most experts will say that in order to understand how to teach effectively, you have to be yourself an effective learner."

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In order to be eligible to teach in one of the redesigned learning spaces at Ball State, faculty must go through a six-semester professional learning process, which in part involves observing already-trained faculty, Pavlechko says. The current cohort of faculty members going through training should be able to begin teaching in the classrooms by the spring of 2015, at which point approximately 75 of Ball State's more than 800 full-time, tenure-track faculty members will be trained to teach in those spaces.

While it may not seem like a large number, Pavlechko says the university sends an average of 500 students or more per semester through classes taught in the two spaces.

The key to achieving the greatest outcomes for students, he says, is to provide continuous professional development opportunities to faculty members. Pavlechko says initial studies examining whether the transformed classrooms actually affect student achievement, and not just engagement, are promising.

"If you're going to change the culture of higher education teaching, you've got to ... give them the opportunities to be able to explore what effective pedagogy in an active learning space can lead to," Pavlechko says. "We're seeing without a doubt that learner-centered pedagogy is at the heart and soul of seeing improvement in student learning."

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