Engaging Students: Using Space as a Tool to Connect with Millennials.

Though there is more demographic diversity than ever before in the makeup of college students, Millennials represent the majority at over 60 percent. They will be part of the higher education landscape for the next decade. Their unique characteristics are causing them to collide with how learning is implemented in the classroom.

Researchers have spent the past several years documenting specific attitudes, behaviors and preferences that have characterized the life experiences of this Millennial generation. Undoubtedly, the most written about influence on the characteristics of the Millennial is the integration of technology in their lives.[2] Most members of this cohort have been so connected through technology; they do not consider technology a big deal. Technology for the Millennial is simply a tool for getting things done.

Millennials thrive on instant gratification. They live in a mobile world, which facilitates their multitasking nature.[3] They take advantage of the delay moments between activities to accomplish a variety of tasks, such as simultaneously e-mailing, texting, Web surfing, and chatting online.[4] Their electronic devices, which they bring with them to campus, allow them to stay in uninterrupted contact with the world around them.

Internet Activities by Millennials[1]

- 90% conduct online research
- 67% get their news online
- 64% send instant messages
- 60% send and receive text messages
- 56% download music
- 52% read blogs
- 43% play online games
- They read 2300 Web pages and 1281 Facebook profiles
- They write 500 pages of e-mail.

Technology is not the only attribute for which this generation is defined. Researchers Howe and Strauss describe Millennials as being team-oriented.[5] This cohort tends to prefer studying, socializing, traveling, and participating in group activities. Millennials are also very motivated. They are achievement-oriented which means that they tend to become disengaged in activities where they do not see a path that leads them to their goal or those activities that move too slow.[6]

We also know from studies at the University of Rochester that Millennials are very connected to their parents. Most have grown up with parents that were very active in their lives and so they crave feedback and input from others.[7]

In recent studies, Millennials were found to be less engaged than their older counterparts whether in class or out-of-class activities. So, given their limited time on campus and the focus on the classroom setting, what can be done to enhance student engagement?

The Collision between Today's Student and Yesterday's Teaching

Most young college students nationwide—whether they are Millennials or older—are enrolled only part-time, particularly within community colleges. This makes their time commitments on campus very limited. As a result, the classroom setting is where most students gain their collegiate experience, and the experience is not necessarily positive for young people.

The unique characteristics of this generation of college-age and pre-college-age students is colliding with how learning is implemented in the classroom. Traditional classroom design dictates how learning is implemented. Faculty and students are encouraged to have fixed roles. This is apparent in the single location where teaching is implemented—along the wall of the chalkboard or digital projector screen. The instructor makes eye contact with a small number of the students; this focal point also limits contact among students.

Faculty members are identified as the expert,[8] the giver of knowledge,[9] and the authoritative person who broadcasts information through a lecture-based teaching

style.[10] Students become passive learners as they sit in aligned rows facing the instructor. They tune in to the teacher's lecture and when learning occurs it is by memorization, repetition, and recall.[11] Edgar Dale's Cone of Learning suggests that students retain only 30 percent of course information when they become passive learners.[12]

Another reason for the collision is that "yesterday's education" is being offered to today's students.[13] According to educator Terry O'Banion, "Colleges and universities will find a generation that will simply not put up with traditional lecture formats and professors who teach in the 'great person' traditions. Rather, the next generation of students will be demanding consumers who expect active engagement in the learning process."[14] Millennials, in particular, desire to create and contribute to course content through inductive discovery. They prefer to be knowledge makers and not only knowledge receivers.

Millennial students feel disconnected in a learning environment that is not a "plug-and-play experience" and does not allow them to "learn through participation and experimentation."[15] These experiences compare to the video games they have played for years, which provide a trial-and error approach to solving challenging situations. Millennials anticipate that learning spaces will facilitate an exploratory, participatory, interactive, inductive, and social model of learning, especially with eye-catching visuals.[16]

As a result of their dependency on technology, Millennials are more likely to create an alternate stimulus, such as "facebooking" through most of their classes when classrooms are not designed to engage them.

Engaging Millennial Students

To meet the learning expectations of Millennial students and to increase their engagement in the classroom space, post-secondary institutions must reconsider how they use classroom space as a method to engage this population. Educational leaders must identify and adapt to their students' needs, provide amenities to enhance learning, and design classrooms that will encourage certain behaviors. Learning spaces should complement the students' habits by being as "adaptable and flexible as the students who occupy them."[17]

While definitions for engagement vary, educators have agreed that it is an indicator for student success. Skinner and Belmont associated student engagement with specific indicators (cognitive, behavioral, and affective) present in tasks of learning.[18] Pintrich and DeGroot correlated engagement with students' use of cognitive, meta-cognitive, and self-regulatory strategies to monitor and guide learning process.[19] Prensky links engagement to including activities students pursue in their personal lives into the course curriculum, "something that they do and they are good at, something that has an engaging, creative component to it."[20]

The National Survey of Student Engagement (NSSE) and Community College Survey of Student Engagement (CCSSE) have been actively assessing engagement for 10 and seven years, respectively. These two national systems separately measure engagement

in four-year and two-year postsecondary institutions. NSSE and CCSSE provide tools "specifically designed to assess the extent to which students are engaged in empirically derived good educational practices and what they gain from their college experience."[21]

Engagement is measured through information reported by the students on the following benchmarks:

CCSSE[22]
- Active and Collaborative Learning
- Student-Faculty Interaction
- Support for Learners
- Academic Challenge
- Student Effort

NSSE[23]
- Active and Collaborative Learning
- Student-Faculty Interaction
- Supportive Environment
- Level of Academic Challenge
- Enriching Educational Experiences

According to CCSSE, "The more actively engaged students are—with college faculty and staff, with other students, with the subject matter being learned—the more likely they are to persist in their college studies and to achieve at higher levels."[24] The result is student success. One strategy to enhance student learning and student success is to reinvent the classroom in a new paradigm, known as the Learning Studio.
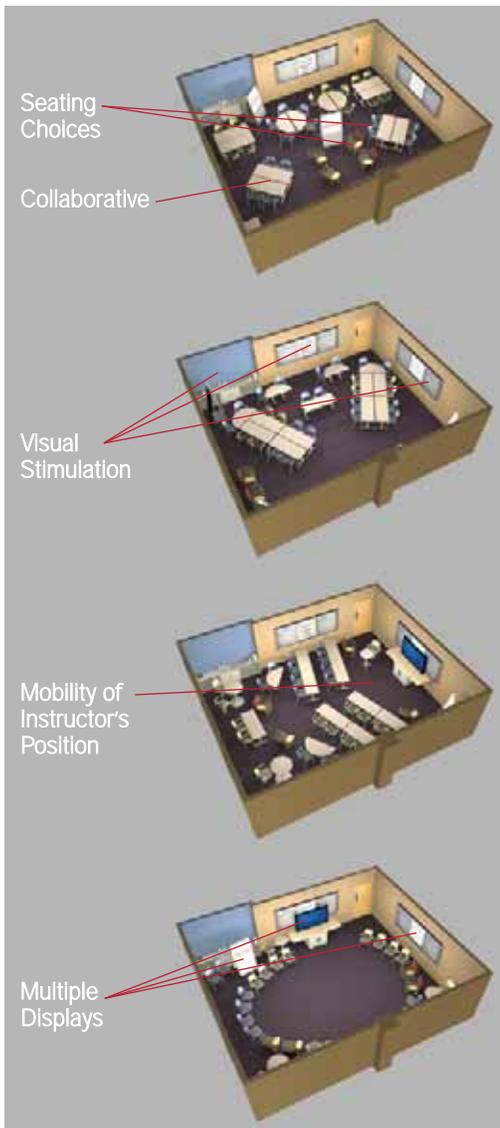
The Learning Studio Concept

New types of spaces are emerging on campuses to engage students in their non-class-time activities; yet the most fundamental element of engaged learning, the classroom experience, remains largely unchanged. Exceptions to this exist in schools beginning to embrace an alternative concept, called the Learning Studio.

The name is a metaphor for the artist's studio, which changes based on the artist's medium and the project for the day. In the same way, a Learning Studio adjusts to the learning activity. This new approach involves changing both the physical space and the teaching and learning processes.

To create a different learning experience, the Learning Studio's physical space is distinctive in the following ways:
- Comfort, achieved largely through a combination of different kinds of seating that gives individuals choices
- Social and collaborative settings, which assumes the movement of people and furniture to allow for variety
- Cues that changes in the space are encouraged and expected
- Changing focal points, typically enabled by multiple display surfaces and mobility of the instructor's location or position in the space
- Visual stimulation, such as color, texture, and reference to nature enhance cognitive skills
- Technology on demand
- Lighting control

Seating Choices

Collaborative

Visual Stimulation

Mobility of Instructor's Position

Multiple Displays

This reinvented classroom frees faculty and students to customize their learning environment to meet the teaching and learning needs on demand. Estrella Mountain Community College (Arizona), a pioneer in the Learning Studio concept, coined the term "radical flexibility" to describe this feature.[25]

At Estrella, the relationship between students and faculty was intentionally reframed, discouraging the faculty person from being the focal point in the classroom. Instead, faculty members are encouraged to take the role of a facilitator, coach, counselor, and mentor, while the student becomes an active participant in the classroom. Students are encouraged to discover, construct, and understand knowledge rather than memorize and recall the information.[26]

Steps to change the teaching and learning processes have been echoed at Butler Community College outside of Wichita, Kansas. Dr. Gene George, Executive Director of Research and Effectiveness describes the Learning Studio experience:

> We had made the development of new, more engaging learning spaces a strategic priority before joining the Learning Studios project in 2008, but doing so created an opportunity for us to take a systematic, critical look at our classrooms. The students and instructors who spent the first semester of the pilot in the studios told us they made the learning experience more comfortable and more engaging, and that led us to ask, if space design and technology can have that kind of impact, then how can we use those tools to intentionally create student engagement? That's the question that has gained traction at Butler.

Another example is North Carolina State University. It has created a learning space that provides "a highly collaborative, hands-on, computer-rich, interactive learning environment in large-enrollment classes."[27] This project is known as SCALE-UP (Student-Centered Activities for Large Enrollment Undergraduate Programs). The university's goal is to encourage students to collaborate and be actively involved with course material. As a result, the university has seen significant improvement in the students' ability to solve problems, understand concepts, as well as a reduction in academic failure rates.

At the University of Kansas, a study on the effects of physical design on learning experiences in university classrooms found an increased frequency of interaction between students and students-to-teacher. Students reported that they were given more learning autonomy. Also, students said they valued flexible space, space for breakout groups, and movable whiteboards in the classroom. Their overall perceptions of the classroom experiences improved significantly in comparison to traditional learning environments.

The University of Dayton (Ohio) continues to evolve the learning spaces throughout its campus, such as the library, Learning Teaching Center, School of Business, and engineering building. The school's administration believes that space should appeal to all five human senses to engage students in learning. In response to the University of Dayton's approach to learning spaces, students report they feel connected to an environment that is comfortable, visually appealing, flexible, and interactive. They have

taken ownership of the spaces, congregated to work on projects, and found their peers and faculty more approachable.

Measuring the Learning Studio Effect on Engagement and Learning

Several community colleges and universities, in cooperation with Herman Miller, Inc., have conducted research to determine the effect of Learning Studio-type spaces on student engagement. The research is organized around the categories of the national and community college surveys of student engagement: active and collaborative learning, student and faculty interaction, and supportive environment.

Summary focus group findings are represented in the text that follows, specific survey data is represented in the endnotes.

A Flexible Environment Encourages Interaction and Teamwork

Faculty said student interaction increased in the Learning Studio in comparison to the traditional classroom. They believed this was a result of the mobile tables and chairs that can be glided across the room from one table to another. Faculty noted that the fixed furniture in the traditional classrooms challenged students participation in collaborative and active learning situations. They observed that students were less likely to participate, respond, and react when sitting in isolated desks.

Millennial students agreed that the Learning Studio is a classroom with a purpose—to encourage a collaborative learning environment. Students felt ready to learn upon entering the classroom. "You feel that you are actually going to do something instead of just watch the instructor," one student stated. "You are ready to work and learn."[28]

Faculty expressed they were more inclined to implement active learning in the Learning Studio since the classroom layout could be modified instantly. They stated that the Learning Studio was flexible enough to support various teaching styles.[29]

Students agreed that furniture could be easily reconfigured for various learning needs.[30] For example, a counseling instructor asked students to role play. He had them rearrange the classroom into a counseling office to make a client feel comfortable. As two students demonstrated a session, the class moved their chairs around the activity to observe the interaction.

"In a traditional classroom, that would have taken longer, and I would have been inclined to not do it," one faculty member stated. "Moving the desks creates too much chaos. You're limited on space and time."[31] With the flexible Learning Studio approach, faculty at Eastfield College in Dallas noted a 19 percent increase in classroom demonstrations.

Another component the faculty found significant in the collaborative environment of the Learning Studio was the mobile whiteboards. They stated that this tool was beneficial for students who needed to brainstorm with their peers and instructor.[32] Since the mobile whiteboards could be moved in any location of the classroom, the faculty could take

Faculty Perspective on Learning Studio
· Encourages an integration of a wide range of teaching methods.
· Flexible enough to support various teaching styles depending on the day's needs.
· Makes it easy to see all students in the room.
· Enhances ability to communicate with students during class.
· Helps students collaborate with each other for their in-class group work.

Students' Perspective on Learning Studio
· The space is flexible enough to support group work of various sizes.
· I often move or adjust furniture to support the way I like to learn.
· Furniture in the room can be easily reconfigured for various learning needs.
· I am comfortable asking questions and contributing to class discussion.
· The space allows students to use group work time efficiently.

the time to address questions from a group without interrupting other students who were already working on the assignment.[33]

Faculty Become More Approachable

Millennial students expressed that the Learning Studio has affected the role of the faculty in the classroom. They report that their instructors were less likely to be seen as the authoritative person in the learning environment and more likely to be viewed as the facilitator, coach, or mentor. Millennials felt this new role encouraged them to contribute to the learning environment, which made learning reciprocal between groups.

"In the traditional classroom, the instructor is the boss," one Millennial stated. "They don't want the students to learn. We have to listen. They take the role of lecturer."[34]

Students found their instructors were more approachable and less intimidating in the Learning Studio, especially when the faculty person decided to use many areas of the classroom rather than standing in one location. Students reported that the classroom design features (furnishing, layout, and lighting) allowed them to get to know their instructors better.[35]

"If we had more Learning Studio classrooms," one student said, "it would be easier to approach instructors in a lot of courses. You feel comfortable. I feel less afraid and anxious."[36]

Faculty Know Their Students Better

Faculty members believe their modified teaching style has strengthened relationships with their students. They said that the Learning Studio has allowed them to get to know their students better.[37]

Faculty indicated they thought this was largely a result of having enough space to walk around the classroom and interact with the students.[38] "Students ask questions more readily in this atmosphere," one faculty member stated. "I do less talking in the Learning Studio."[39]

Students Support Each Other

Millennial students noted that the Learning Studio layout created a supportive environment. At one site, there was a 25 percent increase in students who said that the Learning Studio made it easy to interact with their peers in comparison to the traditional classroom.[40]

Students also reported being more likely to assist their peers who sat at the same table next to them. This type of support relieved students from the fear of not understanding the course material. Students expressed that they were more comfortable asking questions in class in a group setting environment. "You're not by yourself in this environment," one student said. "We support and lean on each other."[41] Students reported that they found it easy to approach other students and extend the discussion of ideas outside of class time after the class was over.[42]

Faculty also agreed that the Learning Studio was a supportive environment. They said that the vast amount of table space, which encouraged students to sit together, enabled them to feel comfortable to cluster, participate, and collaborate during and after classroom learning. "Student's who wouldn't normally talk now ask questions in their group," said one faculty member. "They become comfortable."[43]

As a result of the Learning Studio, the faculty members believe that the students were more likely to create additional friendships with their peers and assist one another with course content. "Students become familiar with each other because they are sitting in a small group as opposed to sitting in rows," a faculty member explained. "The students are able to establish bonds and community. They become friends and get to know each other's names."[44]

Technology Enhances Learning

An additional component that enhanced the supportive environment in the Learning Studio was the availability of technology. One college provided Smart Boards, an interactive whiteboard with computer capabilities, for students and faculty to collectively engage in course activities.

Another community college provided laptops in the Learning Studio for their students to conduct online research during class time.[45] Students indicated that the laptops made their learning convenient. They were more likely to understand the topic of discussion when they had the freedom to "google" information.

Student Success: The End Result

Student success is the reason why colleges and universities are working to engage their Millennial student populations. Research indicates that the Learning Studio approach has a significant impact on student success.

One faculty member, for example, noted "a 15 percent higher quality of papers coming out of this class than in my other course located in the traditional classroom." She went on to explain that she is "doing less correcting than I ever had to do. The students help each other with their writing, do peer reviews much better, and pull their creative talents together."[46]

Millennials who were studied agreed. This student's comments are representative: "We would probably have fewer dropouts in the Learning Studio. There is more action and entertainment in this room. You don't feel bored. It stimulates the mind. In the traditional classroom, you look at the clock constantly, and you are eager for the class to be over."

Succeeding with the Millennial student population is of vital importance to colleges and universities. The Learning Studio is one way they can use space as a tool to increase Millennials' engagement and their academic success.

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