formal learning spaces/ classroom

The changes in pedagogies and technologies are rapidly influencing the educational experience. Also changing is our understanding of brain science and the idea that students learn best with access to a range of tools.\(^1\)

Research suggests that a multi-sensory approach to teaching and learning has been shown to increase engagement, promote deeper participation, maximize student achievement and elevate the idea that learning is fun.\(^2\) Steelcase research and others suggest that active learning, engagement and interaction is a more effective way to learn than passive learning.\(^2\) However, as institutions adopt the constructivist learning theory, they still find themselves limited by the classroom environments designed for lecture-based instruction and density issues.

To fully capitalize on the benefits of active learning to improve student success, the physical space must support and enhance the pedagogies at work in the classroom. No longer should static furniture designed for the one-way transmission of information be disguised as supportive of an active learning environment.

The one-size-fits-all classroom neglects the modern day needs of educators and students. Today’s learner-centered perspectives acknowledge that people learn differently. Just as there are a variety of ways in which we learn, there must also be a variety of spaces in which learning occurs.

Classroom variety is necessary; within the space, with the shape of space and near the space. Different subjects and teaching methods require different classroom features. Some spaces are focused primarily on density demands, while others require a large worksurface and others maximize learning in highly connected and interactive learning environments. Within an institution, a combination of these classrooms supports the varying needs of students and instructors by subject and semester.

When focused on active learning, institutions should consider how flexibility and variety work with pedagogy, technology and space to support how learning happens in today’s classrooms.

what we observed

The majority of classrooms in use today were built for traditional, “stand-and-deliver, sit-and-listen” pedagogies in a passive learning setting.

Inflexible layouts and furniture with limited mobility hamper interaction among students, instructors and content; in fact, the environment is the barrier.

Technology access is highly variable from classroom to classroom and often poorly integrated.

Instructors and students cannot easily leverage technology – either built-in or portable – to support problem-based pedagogies and hands-on learning.

Many schools are reconsidering how pedagogy, technology and space can be better integrated for a greater impact on teaching and learning.

what we heard.

“We replaced typical cookbook experiments with guided inquiry exercises that encourage students to think and work as a group rather than follow recipes with predetermined results. These exercises develop skills that better prepare them for future work and give them the tools to help them retain knowledge long after the semester ends.”

PROFESSOR

“What bring a lot of stuff to class. And I use a lot of it – it’s not the old days, when we would just take notes in a notebook; it’s a multimedia and social experience. There aren’t a lot of classrooms that work for me.”

STUDENT

**tips for new classrooms**

These tips for planning and designing new classroom environments have been developed with the Steelcase Human-Centered Design Research Process, conducted at schools and colleges across the U.S. and Canada. They are intended to provide some guiding tenets to those who plan education spaces, assisting in the design of more interactive and flexible learning spaces that give permission to act differently.

### PEDAGOGY

1. Design to support fluid transitions among multiple teaching modes: lecture, learn project, discussion, etc. — from passive to active engagement.
2. Design for peer-to-peer learning.
3. Allow freedom of movement for the instructor, enabling a “visit” with each group to offer quick assessment.
4. Support the implementation of professional development, allowing for changes to teaching strategies.
5. Set expectations for what an active learning environment looks like — learning is messy, things move.
6. Expose students to what these future settings enable them to do.

### TECHNOLOGY

1. Design for sharing, leveraging both vertical and horizontal surfaces for display; use projection and interactive surfaces.
2. Take advantage of new media, including personal and in-room technology, and offer equal access to both.
3. Allow for displayed information to be persistent over time.
4. Use new technology in intended ways.
5. Be intentional about what technologies should be used and how to support pedagogical strategies.
6. Incorporate synchronous and asynchronous methods.

### SPACE

1. Design for visual and physical access, giving every student the best seat in the house and allowing the instructor and student access to each other.
2. Design for quick ownership change so classrooms adapt to changing users and varying class requirements.
3. Design to support quick reconfiguration among multiple modes: from lecture to project work to discussion and test taking and back again.
4. Include wall protection for table and chair movement.
5. Support learning styles with both analog and digital means to co-create and provide postural change.
6. Design the entire ecosystem to work as a tool for learning.
7. Design educational places from the inside out.

Movement is key to active learning. When students can move about easily, they are more interactive, collaborative, comfortable and engaged in class. The Verb™ classroom collection reinvents the table-based classroom, allowing easy movement between lecture-based and team-based modes and providing the tools needed for collaboration and group engagement.
application ideas: classrooms

These are classrooms that rethink “the box” and move away from the traditional setting of rows of fixed tablet chairs and a lectern. Here you will find learning spaces that can easily morph from lecture mode to teamwork to group presentation and discussion and back again. Every seat is the best seat: access to content, students and instructors is available for all. Technology is integrated in smart ways so everyone can use it, providing democratic access. These are classrooms that engage and inspire by putting control of the learning space in the hands of students and instructors.

Node classroom

This classroom features Nodes on casters and personal worksurfaces, portable Huddleboards and a height-adjustable instructor table for maximum flexibility and comfort.

Node’s swivel seat and mobile casters make it easy for students to have open sight lines to the instructor and other students.

Real estate is precious. Node can handle density as well as any seating solution, with the added advantages of comfort, flexibility and mobility.

With built-in storage in the base, personal worksurface faces, swivel seat and casters, Node makes maximum use of every square foot of classroom space.

Instructors can position their adjustable table and stools at any point in the room that’s best for their teaching style.

Lightweight Huddleboards are ideal for small group content creation and review. Hang on workrail or easel for presentation to the class.

Personal worksurfaces adjust for large and small users and move independently of the seat shell and base.

Featured products

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Verb classroom

Verb is an integrated system of classroom furniture designed to support a full range of learning and learning styles on demand. The freedom to move and engage means wall protection is required in all active learning settings.

- Verb tables
- Verb wall track and hooks
- Verb whiteboard
- Verb easel
- Verb instructor station
- eno flex

As a system, Verb supports multiple pedagogies and learning styles, allowing for fluid transitions between modes. Chevron design allows eye contact to be maintained, even in lecture mode. Team modes are for longer duration projects.

LearnLab™

LearnLab integrates furniture, technology and worktools to support a variety of teaching methods and learning preferences. Multiple stages make it easy for both students and instructors to share content, and a unique “X” configuration gives everyone clear sightlines to digital and analog content. LearnLab reclaims and redistributes the classroom real estate, providing democratic access for all.

- Fixed and portable whiteboards and display screens support the need for information immersion and persistence, allowing students to generate, capture and share their work.
- Access legs allow students to connect at the ends of tables.
- The eno interactive whiteboard acts as a combination dry erase board and interactive whiteboard.
- The flexible space supports different learning processes and preferences from one class to the next and enables fluid transitions between modes.
- LearnLab’s unique geometry ensures that there’s no “front” of the room and that every student has a clear view. It is a square with a center door, using all corners.

- Projectors and screens in a unique geometry break the traditional classroom hierarchy and give everyone an unobstructed view.
- The eno interactive whiteboard acts as a combination dry erase board and interactive whiteboard.

- Seating that swivels and offers height adjustability supports all user types. The table’s chevron shape supports the individual’s intimate zone, separating “my” space from “your” space.
- Information persistence is supported with wall track at multiple heights for whiteboards.

- Ergonomic chairs let students huddle quickly, swivel easily, refer to content in any direction and stay comfortably focused and engaged in class.

- Fixed and portable whiteboards and display screens support the need for information immersion and persistence, allowing students to generate, capture and share their work.

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**Featured Products**

- Verb classroom
- LearnLab™

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media:scape® LearnLab

Combining innovative LearnLab design with unique media:scape technology creates the opportunity for three distinct modes of sharing digital content: small team co-creation, group sharing and lecture.

A media:scape LearnLab supports multiple learning styles and different teaching preferences and offers unprecedented ease in sharing and creating digital content.

Small team breakouts occur at the table in the classroom, eliminating the need to move to another location.

Face-to-face seating encourages student engagement and team collaboration.

media:scape integrates furniture and technology to let instructors and students share digital information instantly.

Double LearnLab

The Double LearnLab is designed to activate all aspects of the classroom and learning experiences while supporting large class enrollment.

Portable whiteboards allow students to ideate and work in small teams.

Multiple movable side tables allow for educator-to-student mentoring.

Triangulated screens give all students an unobstructed view.

Verbs team tables support teamwork while providing personal space and further enhancing sightlines.

All 64 students have equal access to content, the instructor and each other.

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Density is an ongoing issue, even in active learning classrooms. Node supports both needs by connecting students with eye contact and supporting fluid transitions into group and other learning modes. Node allows quick transitions between learning modes, even in dense environments.

A large, integrated multi-modal Verb classroom allows students to work together and build community within a large class. Node chairs that can swivel let students easily see others and content throughout the space. Teams of six can easily be configured for group activities while swivel seats allow students to turn to see content and others.

### Large Node classroom

Multiple whiteboards ensure all students can see content.

Swivel seats allow students to maintain visual contact with each other and information, despite a large class size.

Wall guard gives permission to move yet protects vertical surface materials.

Verb easels allow students to bring work tools to any location within the classroom for collaboration, sharing and display.

### Large Verb classroom

The subtle arch created by the Verb chevron table enhances sightlines even in lecture mode.

A versatile instructor station supports lecture, focused work and collaboration with students.

Node chairs allow students to connect with others and content throughout the space while storing personal belongings in the tripod base.

Teams of six can easily be configured for group activities while swivel seats allow students to turn to see content and others.

### featured products

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Learning in context

Active learning typically demands multiple modes of learning and tools within a classroom, often at the same time. Design multiple zones that support a range of postures and allow students to choose the space that is best for them while allowing access for the instructor to mentor each group.

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- Moby 2
Inspired by our research findings and the input of instructors and students, Steelcase created Node, a chair designed to support the many modes of learning and teaching. Every aspect of Node’s design was focused on creating a chair for active learning in a future-focused classroom.

Node’s impact on the classroom experience was evaluated in pre- and post-installation studies at Northview High School. The two-month study was conducted in an advanced-placement English classroom that regularly uses different active learning and teaching modes. Students and faculty praised the Node chair for its comfort, storage and ease of movement, while faculty reported significant improvement in their ability to reach and engage students in an active learning environment.

It was Node’s mobility and how it affects the classroom’s performance that made most instructors stand up and take notice. “We use the gradual release model here in the high school, which means that the teacher does a focus lesson for 10 minutes and then involves the students in that lesson,” said teacher Sheri Steelman. “The next step is collaboration with peers, and that’s the piece that’s amazing with these desks, and it’s also one of the steps that gets skipped. [Some teachers] might lecture the whole time, but this way, it makes it so easy for students to work together.”

Where instructors were once isolated at the front, in a Node classroom they moved easily and frequently among their students. And instead of being locked into the existing static configuration of their desks, students could now swivel or “scoot” to work in pairs or groups, often at a moment’s notice from their instructor.

Researchers also observed instructors taking the center of a circle of desks for some instruction sessions and then moving to become “guides on the side” during discussion and project work as students smoothly reconfigured from one segment of class activity to the next. “A lot of times now, I’m grabbing a chair and becoming a part of their group, which has changed how I do things,” noted a curriculum director at the school. Meanwhile, students quickly adapt to whatever is occurring in the classroom. “No matter where I am, they can turn whichever way they want to. It’s so instant and so automatic.”

Several instructors reported significant improvement in their ability to reach and engage students in an active learning environment.

Research showed that the Node chair encouraged group activity and helped students focus better on course material.