

Active Learning Environments Support Student Engagement, Collaboration, and Critical Thinking

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Active Learning Environments Support Student Engagement, Collaboration, and Critical Thinking HOW FLEXIBLE FURNITURE CREATES A LEARNER-CENTERED CLASSROOM.

Along with a shift of emphasis to assure that students are learning critical life skills, such as collaboration, creativity, critical thinking, and communication, traditional classroom design is also in transition. The integration of technology into instruction allows teachers to personalize learning for their students and facilitate the shift to a learner-centered classroom where students take responsibility for their own learning. Traditional classroom design met the learning objectives for the 20th century but not the 21st. Changes in classroom design mirror the new emphasis on collaboration in education and in today's workplace. Most businesses now organize their work into teams, so collaboration is a critical skill for students to learn for both academic and life success.

New pedagogies that allow students more voice and choice

in what and how they study have resulted in higher levels of student engagement as they collaborate and benefit from peer-to-peer learning. Instead of the "sage on the stage," teachers now have the flexibility to coach students as they work together. This creates more powerful learning experiences for students. The physical makeup of the classroom is now changing in order to support this new active learning environment as students gather and disperse throughout the day in small groups based on the needs of their learning. These active learning environments are supported and facilitated by technology.

Many economists believe that we do not know what the future of work will look like when today's students graduate. However, one thing is sure, adaptability and flexibility will be critical skills in

order to respond to constant change with confidence. Education now reflects the importance of developing transferable skills, such as creativity, communication, critical thinking, and collaboration, to prepare for the future of work in a global economy. The learning emphasis for students has shifted from memorizing content to learning how to learn—as that will be the most highly prized skill in coming decades. This paper will focus on the research that supports the role of active learning in the development of these critical skills.

EDUCATION RESPONDS TO THE CHANGING NATURE OF WORK

The World Economic Forum reports in the Future of Jobs that the primary driver of change in global business is the "evolution of flexible working environments."¹ Most companies now use teams of employees to



"...adaptability and flexibility will be critical skills in order to respond to constant change ..."

¹Retrieved from http://www3.weforum.org/docs/WEF_Future_of_-Jobs_2018.pdf



accomplish work tasks. Collaborative work is flexible by nature, and new working environments have been made possible by:



As these drivers create massive technology adoption by global businesses, education and government, it has resulted in new flexibility for work, such as teleconferencing, telecommuting, and coworking spaces catering to diverse companies and their employees. "Companies have become more focused on brand, vision, and mission, and the work that is performed has become more distributed and collaborative."³ The shift in the organization of work has precipitated a transition in the working spaces that support it.

The evolution of the workplace means that we also need to implement change in how students are educated for careers and lifelong learning in this new environment-one in which companies require the acceleration of creative and collaborative work. It is important that education goals align with new required job skills. Here are a few of the new realities:



OF JOBS THAT WILL EXIST IN 2030 HAVE NOT YET BEEN INVENTED

OF EMPLOYERS LOOK FOR PROBLEM SOLVING AND TEAMWORK SKILLS WHEN HIRING



OF TODAY'S JOBS WILL BE AUTOMATED BY 2030°

As we prepare students for their futures, it is important that classrooms mirror the new types of working environments in companies and organizations. Students need to master critical skills in order to be successful in school and work: creativity, critical thinking, communication, and collaboration. A critical element in mastering these skills is learning how to be a life-long learner. Teaching students how to become life-long learners begins with them taking responsibility for their own learning. Shifting pedagogy to a

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student-centered classroom is a different way of instruction and classroom organization that requires professional development for teachers. However, a student-centered classroom is one in which students gain experience in making choices and having a voice in what and how they learn.

THE SHIFT TO MORE FLEXIBLE LEARNING ENVIRONMENTS

While some schools have moved to variations of traditional classroom design, such as putting student desks in clusters rather than in rows, using different parts of the classroom as learning center areas, or creating a reading area, the majority of classrooms look the same as they did 20 years ago. The technology revolution has put a computer in everyone's pocket, which means that new practices and skills are required to succeed in education and work. Classrooms need to become active learning environments, supported by technology integration. Active learning promotes student engagement and the development of critical thinking, creativity, communication, and collaboration-exactly the skills that employers are looking for.⁷ Active learning environments should facilitate students working in a new way moving from collaboration to focused work to research to presentation toward their mastery of self-directed learning.8

One tool in designing learning spaces that support active learning is to use "flexible furniture" as opposed to traditional desks and stationary furniture. Flexible furniture is comprised of work surfaces and seating that supports "student choice of seating, location, and comfort



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encouraging classroom peer interaction, fostering collaboration and empowering students to become builders of knowledge."[?] This allows students to move around freely and adapt the furniture setting to the group and task they are focused on.

Educators in traditional classrooms set up for lecture format want to create learning environments that promote active learning. The difficulty is that the physical space that supports active learning is quite different from one designed for lecture-focused teaching. One researcher "found that open learning environments, classroom space, and flexibility in furniture arrangement can have positive effects on learning outcomes." Another researcher asserted that "flexibility in the classroom is proving an essential tool for teachers attempting to provide a variety of activities to meet the learning needs of all students."

THE IMPACT OF FLEXIBLE LEARNING ENVIRONMENTS

Research suggests that teachers with flexible classrooms provide more opportunities for students to practice 21st century skills. Flexible furniture supports a change in pedagogy as teachers create more activities that allow students to engage and use their critical thinking skills and set the stage for collaborative discovery. Early assessments from researchers are that flexible furniture results in:

> Students practicing voice and choice about where and how they learn best.

More opportunities for students to collaborate and communicate leading to deeper connections among teachers and peers.

> Greater student autonomy when professional development that allows students freedom to move about is used in conjunction with flexible furniture.¹²

In one research study, teachers provided examples of how work surfaces, such as whiteboard table tops, promoted student-to-student communication by enhancing group brain storming activities,

DISTRICT CASE STUDY

As Director of Personalized Learning for Charleston County (SC) School District, Dr. Kristen Brittingham chose to use flexible furniture as part of a larger strategy to create different kinds of learning zones for students. As they tested their new strategy, Dr. Brittingham and her colleagues decided that the first step for transitioning to a more active learning environment was to choose the kind of learning activity they wanted to create and to then choose the furniture to support that based on creating certain learning outcomes. For example to develop a quiet space for reading, put soft furniture near the classroom library. To foster partners or small group collaboration, use whiteboard tables. Use a rug in early elementary to create a home base or gathering place for everyone in the class.

Teachers can think about what kind of direct instruction, quiet workspace, or assessment areas they want to create and work with students to empower them to choose their learning zone based on the kind of work they need to do from their individual learning plan. Students have agency – they choose. These strategic changes require educators to develop different ways to support student-centered learning.

The point was to create flexible learning zones so that students could choose a space based on the kind of work they needed to accomplish. "Using flexible furniture supported our strategy to build a learner-centered culture that supported students' different learning styles," said Dr. Brittingham. "Creating a district-wide shift to new learning environments is easier to sustain than a piecemeal approach. It takes leadership from the top, a commitment to changing ideas and expectations about how students learn, and professional development to tie it all together."

⁹ Retrieved from https://baylor.ir.tdl.org/bitstream/handle/2104/10794/Investigating_the_Flexible_Classroom_Environment.pdf?sequence=1&isAllowed=y ¹⁰ Ibid. | ¹¹ Ibid. | ¹² Ibid.

Create an Active Learning Environment with PowerUpEDU and MiEN. Click HERE or moreinfo@powerupedu.com coding abilities, pre-writing activities, math problem-solving skills, and peer editing techniques in ways that large format tables, technology, and hand-held whiteboards had not been able to accommodate.¹³

The results of another study suggest that classrooms with flexible furniture supports transformation of teachers' pedagogy as they provide students with more collaborative opportunities to actively engage students in purposeful learning. Also, students engage in more conversations during learning in flexible environments than in traditional environments—promoting essential skill development.¹⁴

CLASSROOMS WITH FLEXIBLE FURNITURE:

- SUPPORT TEACHERS IN CHANGING THEIR PEDAGOGY.
 - PROVIDE STUDENTS WITH MORE OPPOR-TUNITIES TO COMMU-NICATE AND COLLAB-ORATE WITH PEERS.
- ACTIVELY ENGAGE STUDENTS IN THE CREATE LEARNING PROCESS.

HELP STUDENTS LEARN AGENCY AND CHOICE IN CREATING EFFECTIVE LEARNING ENVIRONMENTS.





Before they make the shift in their own classrooms, it is important for teachers to observe for themselves how flexible classrooms support changes in teaching strategies. Physical spaces that are appropriate for primary and secondary classrooms will be different from each other, and seeing the difference for themselves is an important piece of professional learning for classroom teachers.

Research indicates several other design factors that increase student engagement as a result of the physical environment. These include light, temperature, and air guality; student ownership and flexibility; and color and visual complexity, which would include the colors of the furniture. It appears that optimizing all of these physical characteristics in primary classrooms improved student achievement in reading, writing, and mathematics by 16 percent.¹⁵ Remarkably, 75 percent of student math progress was attributed to the change in classroom design that resulted in student ownership. The researchers posited that academic subjects like math cause anxiety and students are more receptive when they feel comfortable in the classroom.¹⁶

⁴⁴ Retrieved from https://scholarship.shu.edu/cgi/viewcontent.cgi?article=3/35&context=dissertations

¹⁵ Retrieved from https://www.edutopia.org/article/flexible-classrooms-research-scarce-promising

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Create an Active Learning Environment with PowerUpEDU and MiEN. Click HERE or moreinfo@powerupedu.com While examining the questions around how active learning environments designed with flexible furniture supports development of creativity, critical thinking, collaboration, and communication skills, researchers from Baylor University found that:



When teachers provided students an opportunity to be **CREATIVE**, students fully engaged in the activity and used skills such as elaboration, refinement, analysis, and evaluation of original ideas to improve and maximize creative efforts.



COLLABORATION in a flexible learning environment than in a traditional classroom.



engaged in **CRITICAL THINKING** with cognitive thought problems solved more problems in a flexible learning environment than in a traditional classroom.



Classroom observations revealed that classrooms with flexible furniture provided more opportunities for students to engage in activities that required **COMMUNICATION**.¹⁷

It is important to note that flexible classrooms in and of themselves are not sufficient to change learning outcomes. It is the combination of changed teaching methods and the learning environment that result in the changes indicated above.

CONCLUSION

Flexible furniture contributes to a different, more active learning environment where students have opportunities to master essential skills, such as creativity, critical thinking, collaboration, and communication. Creating these new learning environments and supporting new pedagogy, curriculum, and personalization with technology will drive higher levels of student engagement and academic achievement. Flexible learning environments facilitate student-centered classrooms where students take responsibility for their own learning and have personalized support for where and how they learn best.

These changes in schools are intended to mirror the current state and the future of work. Businesses organize their work into team responsibilities where colleagues work together to produce desired results. Today's work-place is a very collaborative environment and requires top notch communication skills to be successful. With an uncertain work future for today's students, it is important to recognize that these skills are transferable and are already prized in the workplace.

There are many examples of flexible, active learning environments across the country—not just in new school design but in retrofitting existing schools. District leaders can see how these new learning environments, supported by customized professional development, flexible furniture, and student-centered curriculum accelerate learning and help students transition from school to career.

ABOUT MIEN COMPANY

Our innovative furniture creates spaces that promote student engagement and creative thinking while reflecting a school's culture. Created by education experts, our award winning designs are flexible and adaptable incorporating mobile and collaborative features that support the 21st Century School and Learning concepts.

¹⁷ Retrieved from https://baylor-ir.tdl.org/handle/2104/10795

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AUTHOR BIOS



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DR. CHRISTINA COUNTS, VP of Education, is a proven leader with a successful background in transforming learning spaces to modern engaging learning environments. Dr. Counts has worked in education for over 17 years with experience as a classroom teacher, district instructional leader, school administrator, and digital and innovative learning designer. In her most recent position, Christina leads a team of professionals that support schools making the transition to a flexible, collaborative, & student-centered learning space. She holds a doctorate in K-12 Educational Leadership, National Board certified, and Google & Apple certified.



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is a national leader in personalized learning and change management. Dr. Brittingham has worked in education for 25 years with experience as a college professor, classroom teacher, assistant principal, principal, technology specialist and director of personalized learning. Currently, Kristen leads a team of strategy officers at Modern Teacher who work with superintendents and their leadership teams to modernize learning across the country. She holds a Masters and Doctorate in Educational Leadership.

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