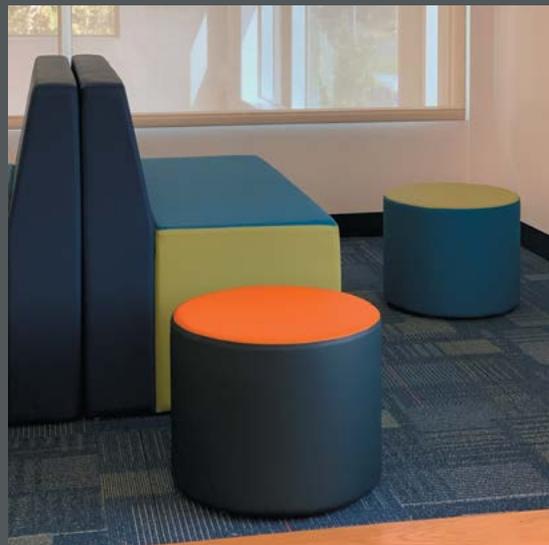




# K-12 INSIGHTS





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For more inspiration, visit [ki.com/K12](https://ki.com/K12)



## INTRODUCTION

# Insightful, Responsive Educational Spaces

*Supporting active, learning-centered approaches.*

As we look toward the future, what might the learning environment of tomorrow become? Supporting the development of world-class learning environments has been – and always will be – at the very core of KI. It's what we do best. KI built its reputation for excellence in education over 70 years, working shoulder-to-shoulder with our educational partners to support a “customer of one” experience and develop a roadmap for future innovation, specific to your unique learning culture.





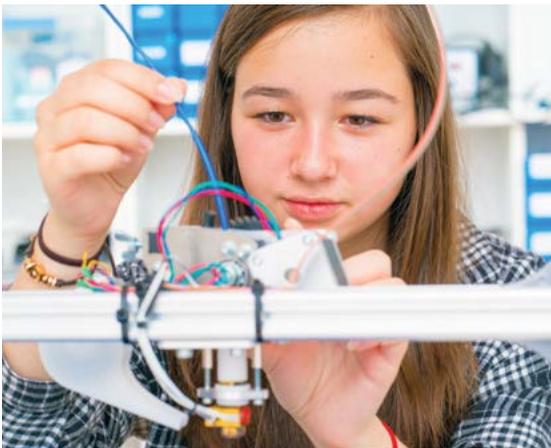
# Play, Make, Design

*The foundation of makerspaces in education.*

The identity of K-12 schools nationwide are changing, by way of embracing the concept of play during the school day. In playful learning, students initiate learning on their own and solve problems themselves with light teacher guidance, building a new reputation for school-based learning that better aligns with how a human being actively learns.

A growing body of research shows that playful models of education can improve learning outcomes. Students who play within the context of school have exhibited everything from a larger vocabulary to increased critical thinking and creativity skills.

Ninety-seven percent of teachers using a playful curriculum reported increased student engagement with their lessons. Ninety-two percent felt they increased their effectiveness as educators.



How do educators leverage the act of playing in order to instruct? Play naturally leads to other creative outlets like making and designing.

**Play:** Students engage in activities because they want to and will have fun, not for any practical purpose.

**Make:** Students create something—a robot, a film, a bird house, even a story or play—by combining parts.

**Design:** Students create, fashion or construct an idea and execute it according to a plan.

## PLAYFUL LEARNING AND THE MAKERSPACE

As a result of this natural movement toward playful learning, “makerspaces” are booming. According to one analysis from researchers at the University of North Carolina, there are close to 300 active makerspaces at more than 210 higher education institutions nationwide. Elementary schools and high schools are home to hundreds more.

Makerspaces empower students to play—to share ideas, converse and connect with one another. Through the art of play, students create something. In some cases, that might be intangible—an idea, an argument or a solution to a problem. In others, they’ll produce tangible objects, perhaps with equipment like 3D printers, robots and advanced graphic design or engineering software.



## MAKERSPACE DESIGN TIPS

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Adding a 3D printer may give your makerspace a fun amenity. But in reality, it takes thoughtful planning, design and buy-in from students and staff to create a true makerspace. Furniture serves as the foundation, allowing users to fully engage in their pursuits. In an ideal playful learning environment, the furniture helps students play, make and design. At KI, we recommend a variety of solutions when planning or specifying a makerspace.

**Storage:** Storage solutions help kids get the supplies and tools they need to make and design their ideas or objects. KI's Ruckus storage is mobile, available in a variety of sizes and is easily accessible, keeping learning tools handy and spaces neat.

**Tables and Desks:** Cutting-edge machines like robotic carving boards require durable tables with large workspaces. Work tables and desks provide ample space for ideation, collaboration, prototyping and design.

**Chairs:** Seating should be flexible and mobile. KI seating allows users to relate to their space any way they'd like. Students can move and interact with each other effortlessly.

**Walls and boards:** Students who make or design an object need space to plan out their ideas and watch them grow. Movable walls, or walls with built-in corkboards or whiteboards, can help.

# Designing for A(lpha) to Z

*Reimagining learning and instruction.*

**“Tell me and I forget. Teach me and I remember. Involve me and I learn.”**

*-Benjamin Franklin*

We recently facilitated a workshop with the objective of exploring how the convergence of technology, space and pedagogy impact learning.

The workshop, entitled “Designing for A(lpha) to Z”, focused on Generation Z (born 1995-2009) and Generation Alpha (2010-today) and brought together teachers, administrators, designers and architects who worked within a 3-part framework of questions aimed at defining learning:

WHERE HAVE WE BEEN?

WHAT ARE WE HEARING?

WHERE ARE WE GOING?

## WHERE HAVE WE BEEN?

Design teams were asked to define learning based on “where we have been”. Exploring the thoughts of historical and modern leaders allowed teams to consider how learning often aligns with human passions, which align with experiences and experiments critical to the learning journey. Learning requires more than listening and note taking. To truly learn, one has to imagine, create and contribute. As one participant wrote, “learning is not exclusive to school”.

## WHAT ARE WE HEARING?

Design teams then moved on to explore users - defined as “one who uses,” and dove into what we are hearing from Generations Z and Alpha. The goal of this portion of the sprint was to identify generational traits that may impact learning design and to also hear first-hand from students. We listened to real interviews, featuring a Gen Z student and a Gen Alpha student, asking each two simple questions:

- What do you like about school?
- What do you wish was different about school?

In both instances, we used the power of WHY to dig a little deeper and then asked the teams to form definitions surrounding the user needs that were just explored.

## WHERE ARE WE GOING?

As we moved on to the final question, “where are we going?” teams were given just five minutes to form a future vision of learning. They came back with truly compelling learning patterns and visions that pulled from the past and the present to lay a foundation for the future. The results were honest and authentic, highlighting the tension between learning and learning within the constraints of school. We took the final visions/definitions and converted each into “HMWs” and “WMs”, which stand for How Might We... and What Might... questions which help drive additional creative ideation sessions.



## FINAL DEFINITIONS, AND HMW'S/WM'S:

Definition 1: Learning is Borderless: both physical and on the digital continuum.

*How might we...design for borderless learning?*

Definition 2: We need to learn how to be human in the 21st century.

*How might we...learn to be human in the 21st century?*

Definition 3: Demonstrating mastery without grades.

*How might we...demonstrate mastery without grades?*

Definition 4: Designing a healthier risk climate for teachers.

*How might we...design a safe risk climate for teachers?*

Definition 5: A 21st century teacher is a coffee house barista.

*What might...a 21st century "barista" teacher look like? How might they teach?*

Definition 6: From scarcity to surplus with information (who controls it and how it gets used).

*What might...we do with a surplus of information?*

Definition 7: Foundational learning that empowers intentional choice.

*How might we...design a foundation that fosters authentic pathways and learning choices?*

KI's reputation of using the power of design to bring shared contribution to the future of learning in schools is still refreshing, and we promise to keep moving the iterative nature of this creation forward. The act of playing, making and designing with you allows us to harness the power of a bigger community; a community that is boldly re-imagining the future of learning in schools.

# Human-Centered Design

*Focusing on the needs of students and teachers.*

Human-Centered Design is essential to designing spaces that support learning and build a positive experience. A Human-Centered Design process simply means that we design for the humans who will use the solution. Design is not based on our preconceived notions of what an effective learning environment is or “me too” inclinations. Human-Centered Design creates the “why” and also lays the foundation for authentic creation. People – students, faculty, administrators and community – are the core of all learning. Human-centered design puts their needs first.

All too often, features outweigh the functional merit of products. Shifting the focus from what a product is, to what it does, dramatically alters its value. Design teams immerse themselves in learning environments to see how people actually interact, live, and learn within the real world. They observe. They listen. They become part of the learning experiences.

“Being there” allows our understanding of design to evolve and respond to not only the physical needs of people but more importantly their behavioral needs as well. This process reinforces the belief that products and environments are for and about people.





Start with empathy. Share an experience with a student and/or teacher. Viewing a challenge, a learning environment, or their education goals brings perspective, removes guesswork and prevents ideas from being put in silos by our “me too” tendencies. Collecting qualitative data about user’s behavior leads to design drivers that make great design, human-centered design, possible.

Read more at [blog.ki.com](https://blog.ki.com):

- [The “Human” in Human-Centered Design](#)
- [The Impact of Human-Centered Design in Education](#)
- [Making Life A Little Easier Through Human-Centered Design.zz](#)



# Ruckus Research

*The impact of furniture within learning spaces.*

## THE IDEA

In the past, research has been done by others on the effects of the environment on learning. However, for these studies, the complete environments were altered (curriculum, walls, teaching styles, as well as furniture) so results were generalized to the complete environment.

So, KI decided to test on an un-biased, data-driven basis, the impact that furniture alone has on student learning and teacher facilitation within the classroom.

## THE PROCESS

KI reached out to education leaders, schools and universities across the country asking for participants in a controlled research project to determine the impact of furniture on learning spaces. A simple application garnered information on pedagogies, existing learning space configurations and more.

From a pool of 200 applicants, nine facilities were selected; three K-5, three 6-12, and three Higher Education. Participants then



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agreed to freeze their respective “control” environment – no changes to anything; not flooring, wall color, lighting, technology, etc. They also completed initial surveys to establish a baseline measure of overall effectiveness of the furniture within the environment.

KI then swapped the existing furniture with a kit of new furniture (included KI’s Ruckus Collection, MyPlace Lounge, Instruct and Connection Zone Screens).

After a semester of use, the survey was repeated. Results were contrasted to the initial survey results (the established baseline).



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## THE RESULTS

The survey questions focused on five things:

- Movement
- Comfortable Tech Use
- Group Work
- Engagement/Participation
- Enjoyment/Retention

The findings show that adaptable furniture solutions provide a positive increase in all these areas. While positive in all age levels, the younger the grade, the more pronounced the positive impact. The top driver in all age levels was the freedom to move.

## FINDINGS

- Move “however I want” – **61% increase**
- Work Comfortably with Technology – **36% increase**
- Work in Groups – **34% increase**
- Engagement/Participation – **32% increase**
- Enjoyment/Retention – **32% increase**

## WHAT’S NEXT

KI is committed to the continued development of world-class learning spaces. We will continue to delve into the role of furniture on learning dynamics. The results of this research provide empirical context to shape our new product development both now and in the future. Data-driven results showing a desire for mobility/adaptability in furniture, also aid specifiers and designers in furniture selection that can improve student engagement and much more.

# Planning Ideas

*Be inspired!*



## EMPOWER CHOICE

This configuration empowers student and teacher choices in worksurface and seating heights as well as workstation sizing for both groups and individuals. These choices enhance engagement and learning outcomes.

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## GET IN THE ZONE

Zoned learning continues to grow in popularity within classrooms and schools. Providing designated zones for specific activities improves focus and outcomes for students and teachers.



## PLAY – MAKE – DESIGN

Options that support playing, making, and designing enable a fully engaged learning environment.

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## FACE-TO-FACE

Interaction is a powerful tool in learning. It improves communication and supports a sense of community. The right worksurface shapes and room layouts can increase face-to-face interactions and ramp up your classroom's sense of togetherness.



## ACTIVE SPACE – ACCESSIBILITY

Rapid prototyping and group work require large surfaces and immediate access to supplies. This simple yet functional grouping adeptly provides both.

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## BUSY HANDS

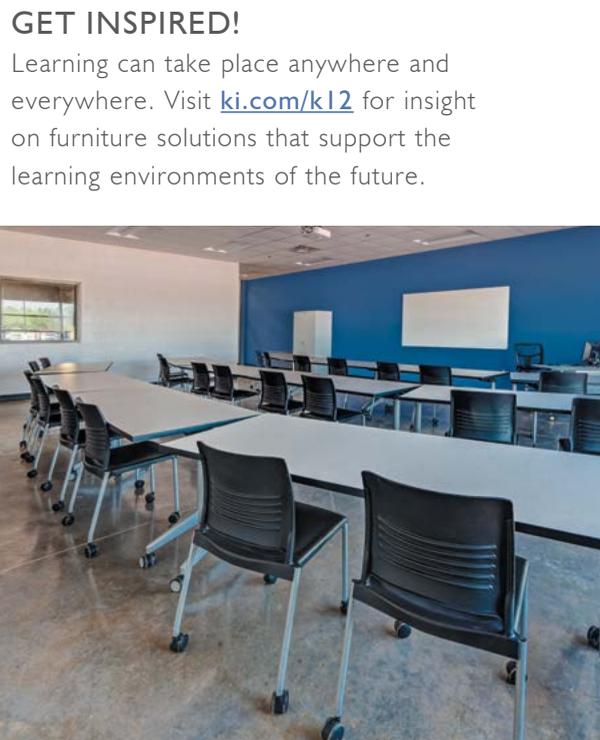
When students work on projects together, the sky is the limit on what they can accomplish. These configurations make group work easy. Nearby storage keeps supplies handy.



Ruckus post-leg desks, Ruckus stack chairs, Ruckus cubby, Ruckus tote storage



Ruckus 4-leg chairs w/casters, Pirouette tables



## GET INSPIRED!

Learning can take place anywhere and everywhere. Visit [ki.com/k12](https://ki.com/k12) for insight on furniture solutions that support the learning environments of the future.

Top: MyPlace lounge seating, modified Pillar tables, Strive café stools, Sway lounge chairs

Bottom Left: Dōni Stool, Learn2 seating w/Dōni

Bottom Right: Strive 4-leg chairs w/casters, Pirouette tables



Top: Datalink table system, Dōni task stool, Dōni task chairs, Ruckus work tables  
Bottom: Intellect Wave chairs and café stools, Pirouette tables



Ruckus activity tables, Ruckus 4-leg chairs, Ruckus café stools, Ruckus post-leg desks, Ruckus storage, Intellect Wave 4-leg chairs with casters



Top: Dōni café stools, Backbone media platform  
Bottom: Strive HD chairs, Pirouette tables  
Back Inside Cover: Hub modular seating and tables



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