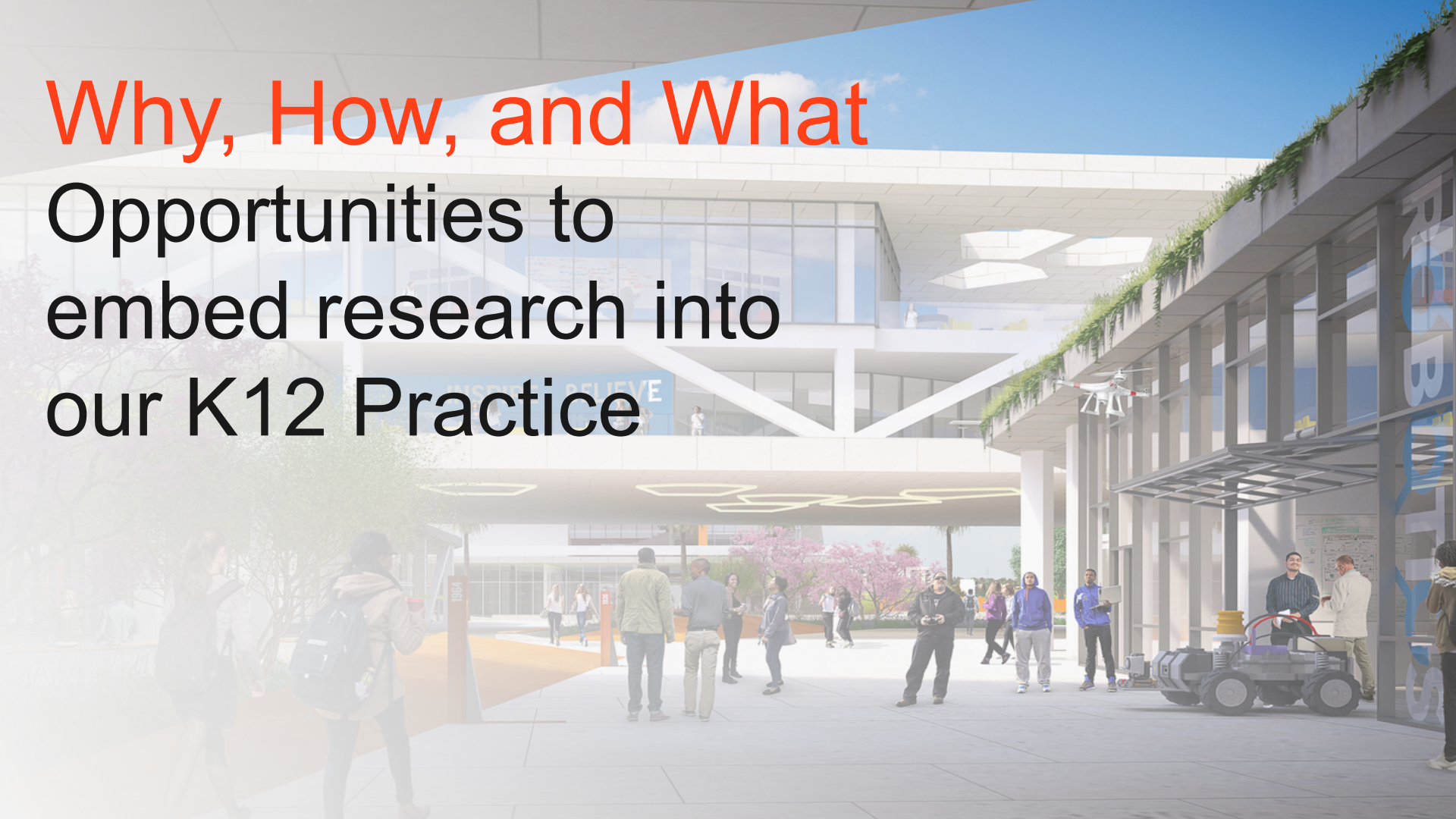


Why, How, and What Opportunities to embed research into our K12 Practice



A baby with light hair is wearing a white knit beanie, large black-rimmed glasses, and large white headphones. The baby is sitting on a light blue surface, possibly a bed or floor, and is looking down at a tablet device held in their hands. The background is a light-colored brick wall. A red banner with white text is overlaid at the bottom of the image.

Clients Are Different

Generation Z

1995-2010

Entrepreneurial • Connected • Private
Realistic • Progressive • Activist •
Diverse



Generation Alpha

2011-2025

Entrepreneurial • Connected • Realistic
Progressive • Activist
Diverse • Social • Mobile

Hello, I'm Violet French.

I'm three years old.

I know how to FaceTime.

I can watch videos on YouTube.

I can download apps on the iPad.

I can't read...yet.

I'm Generation Alpha





2B

generation z



76% want their hobbies to be their job



80% believe they are more driven than peers



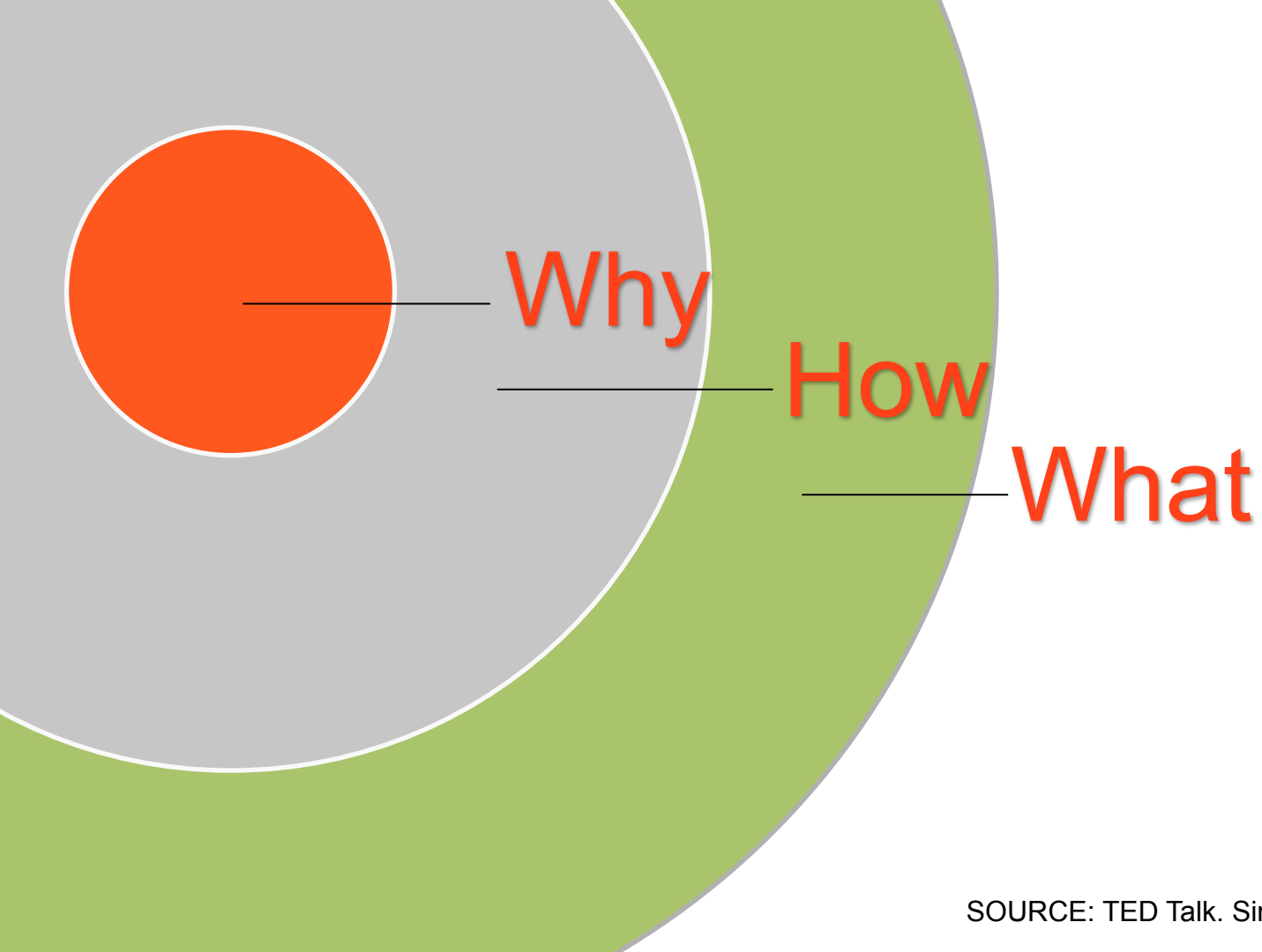
72% high school students want to start their own business

- 33% watch lesson online
- 20% read textbook on tablet
- 32% work with classmate online
- 52% use social media for research

generation z is aware of environmental and socio-political issues on a global scale and plan to intervene.

What To Do?





Why

How

What



Why

do we believe...

it is important for K12 practice
to be thought leaders?

generating primary research
as a component of a project
is how one leads?

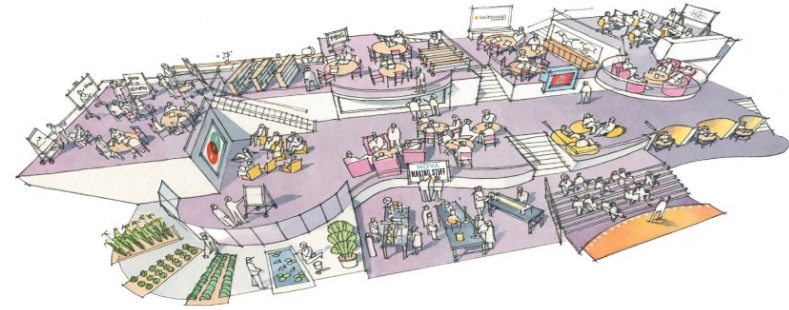
our clients expect us to be
knowledge leaders?

Elevate the Learning Environment

- Right thing to do
- Exploration of new teaching opportunities



Elevate the Learning Environment





How will we...

'embed' research into our projects?

motivate, inspire and ensure our K12 practice participates?

invest and how long will it take?

know when we are successful?

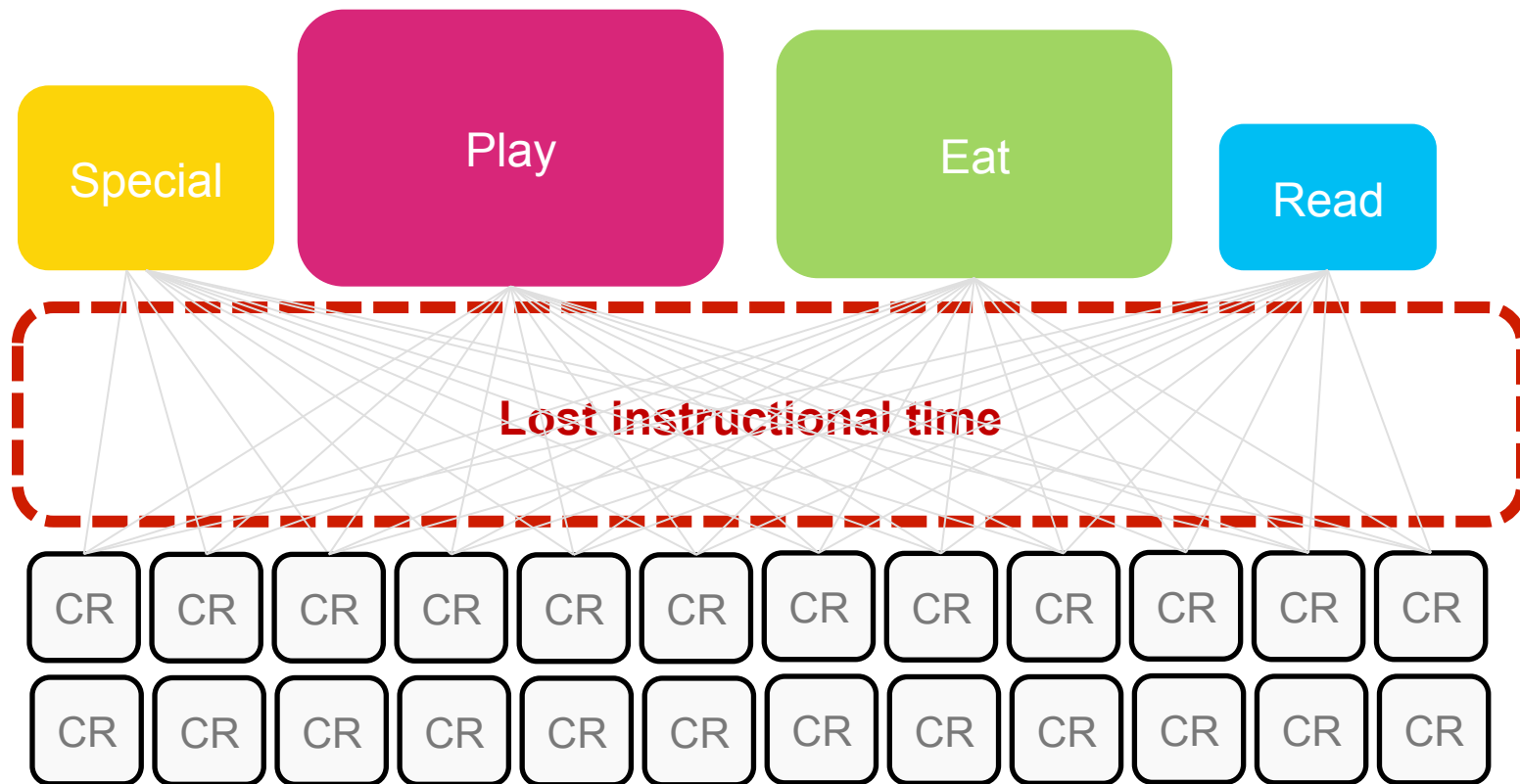
Pathfinder Kindergarten Center

Everett, Washington

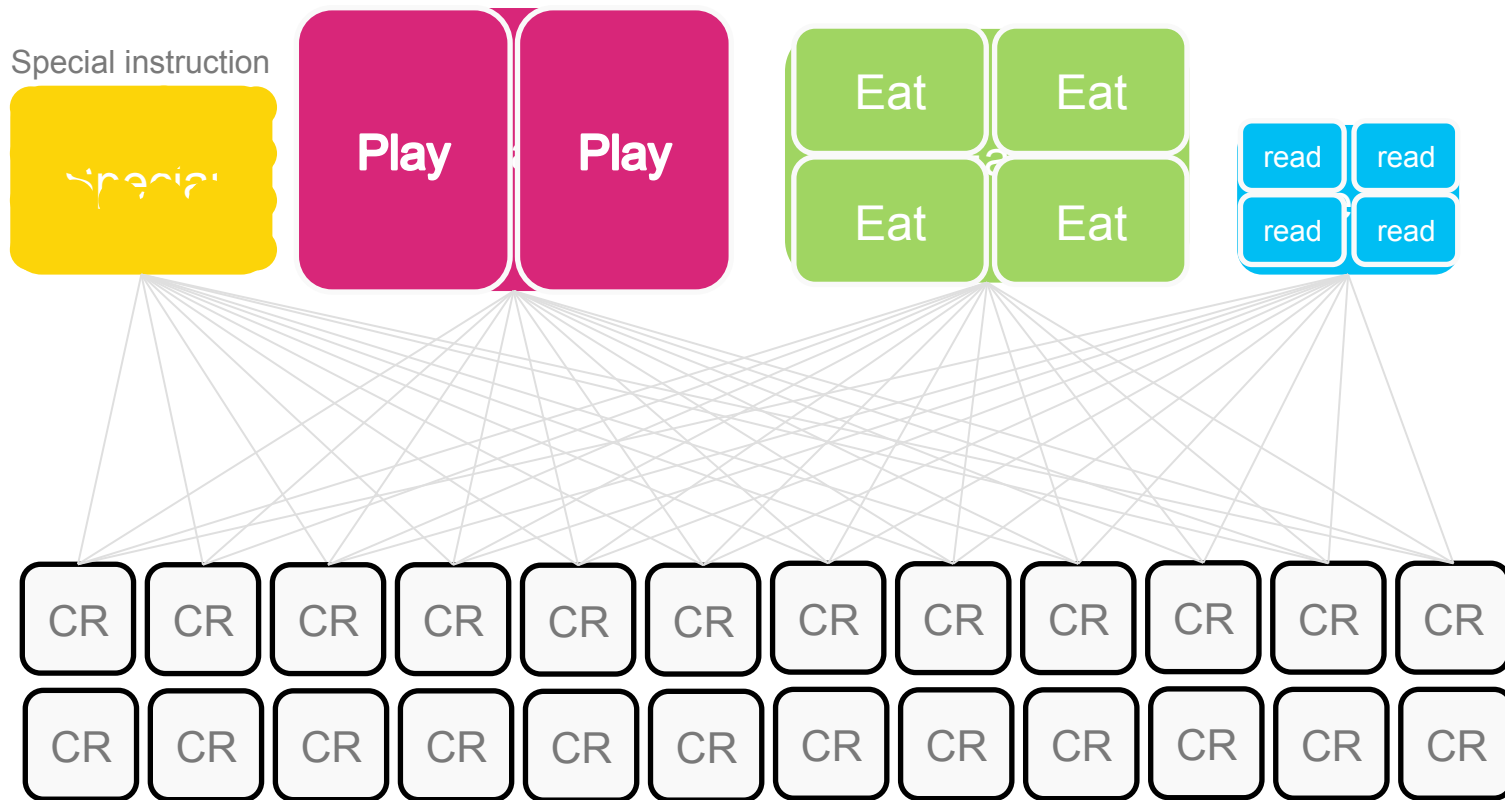
- 600 Students
- Observations led to design that minimizes transition time and recaptures 15 full days of learning



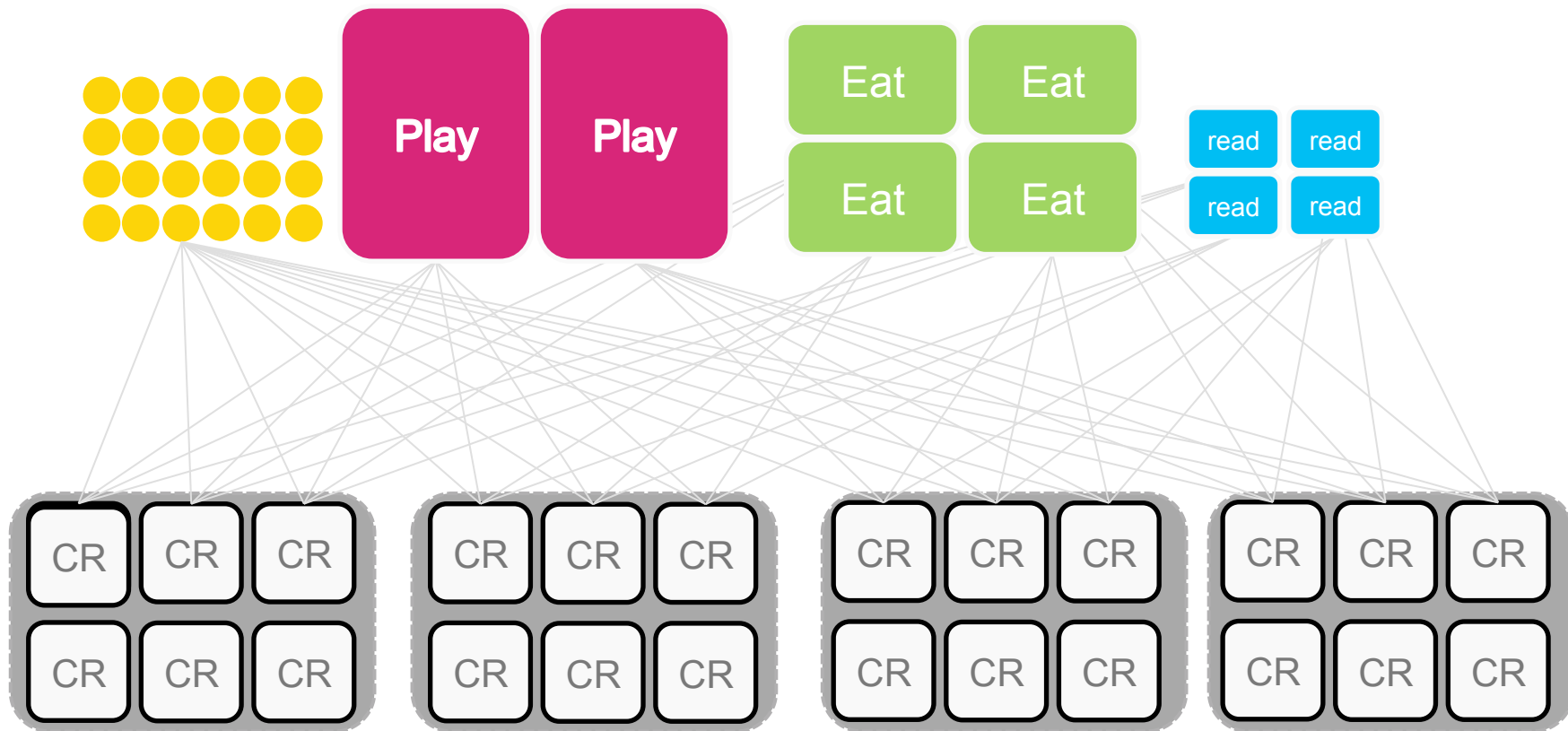
Pathfinder Kindergarten Center



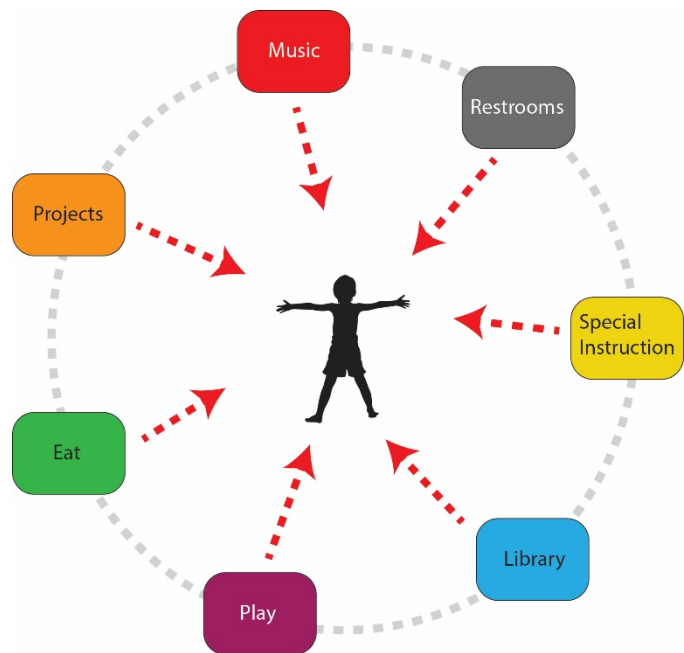
Pathfinder Kindergarten Center

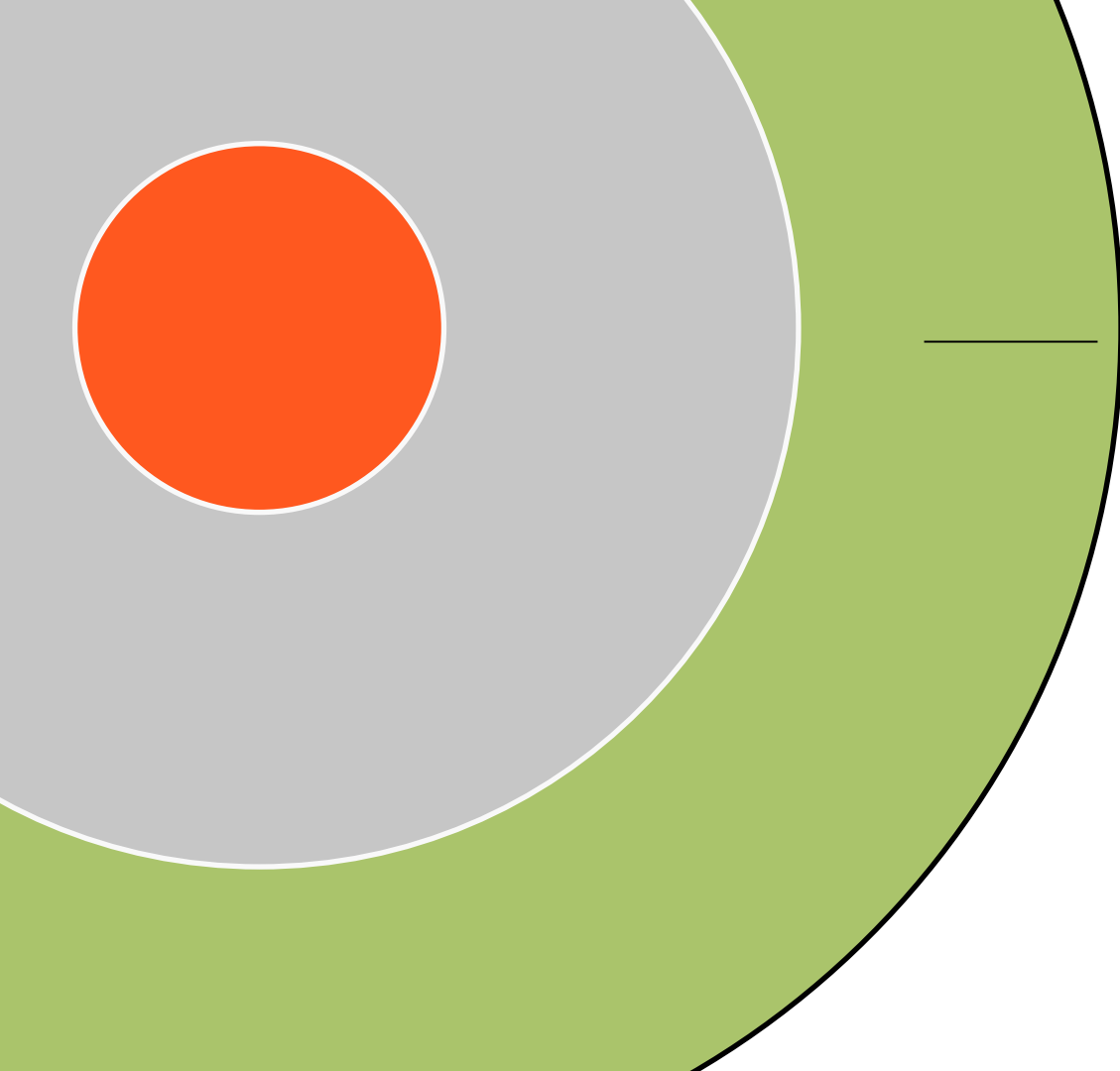


Pathfinder Kindergarten Center



Pathfinder Kindergarten Center





What should...

our 'measurable' outcomes be?

our 'products' of research be?



Beliefs

Point of View

Engages in primary and uses secondary research to inform all design in an effort to make a difference.

- **Enrich** the culture of design through research-led innovations and solutions
- **Ignite** the team's passion
- **Help** clients go beyond just 'listening' and have them believe a research-informed practice provides 'trusted' pathways

Does Space Matter?



Research Efforts

Planting Seeds

Academic scientific protocols / hire & use 3rd parties added legitimacy to process...

- Research & statistical consultants
- Human subjects review and signed consent forms
- Research Question - *“Can we demonstrate that the design of the built environment for grades 9-12 impacts student academic engagement levels?”*
- Design, develop, test and administer online ‘Alpha,’ ‘Beta,’ and ‘Omega’ survey tool
- Gather data, analyze, synthesize and disseminate research findings
- To date – 1 year for end of Beta.

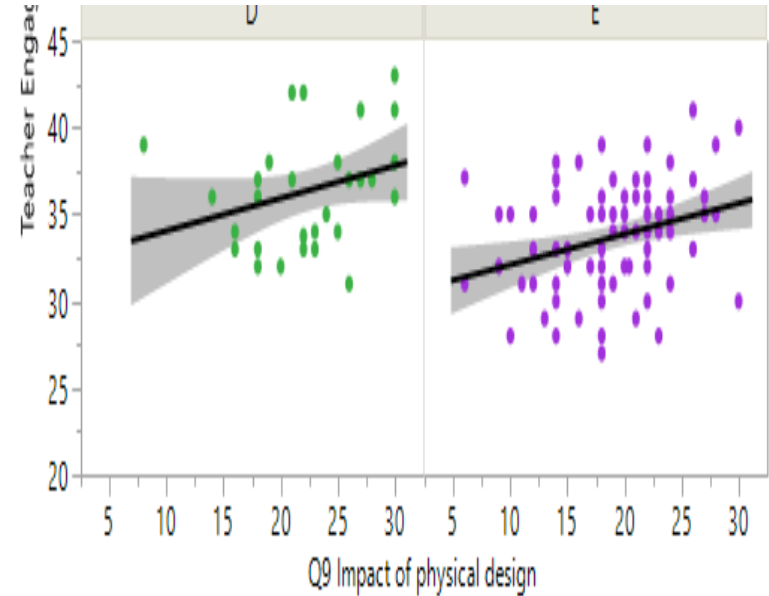
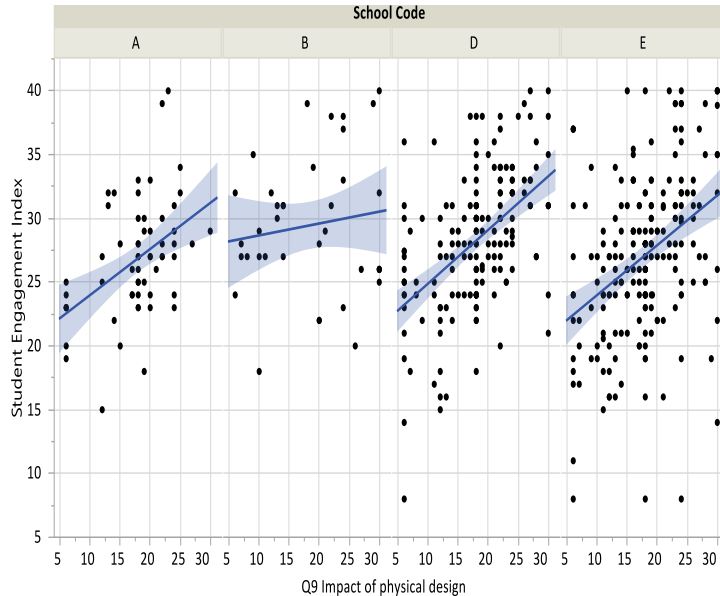
Research Goals

Answer

- Research Question - *“Can we demonstrate that the design of the built environment for grades 9-12 impacts student academic engagement levels?”*
- Develop a Student Engagement Index© and a Teacher Engagement Index©
- Have a statistically reliable and valid instrument that can be used at scale post occupancy
- Disseminate the knowledge
- Learn from the data and embed learnings into practice = Evidence-Based Design

Findings

Figure 2: Students' By School – Impact of Physical Design: SEI vs. Q9.



p<.0001 when students move to learn; are academically engaged; have their brains' challenged with 'real world' projects



Inspirational



Flexible

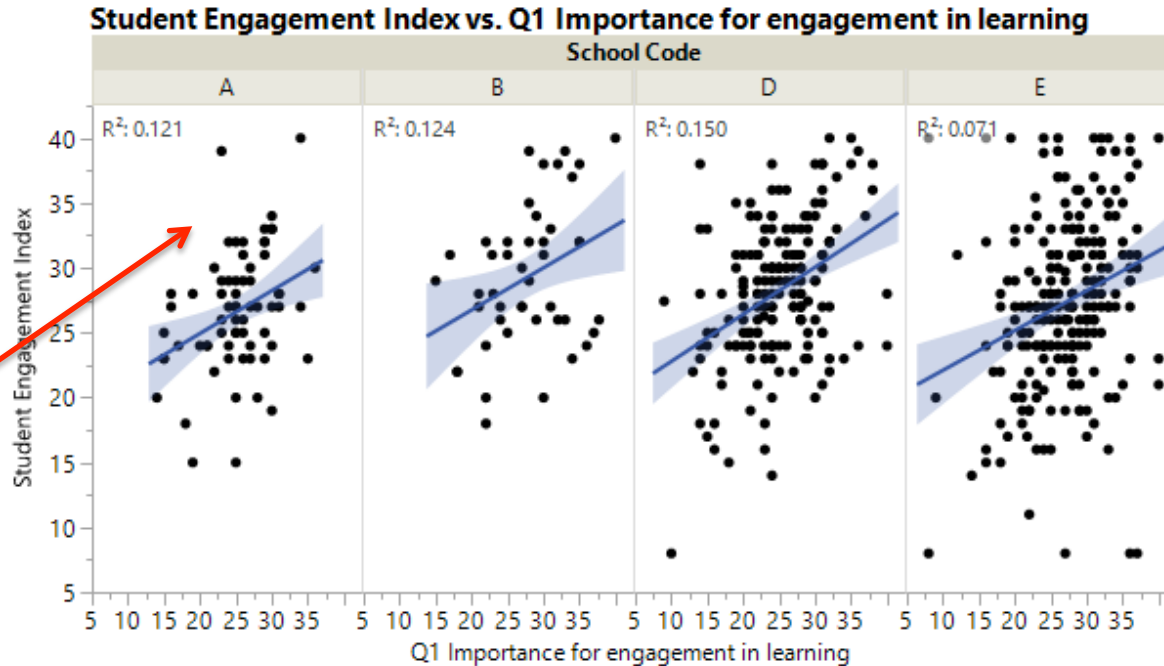


Personal



Findings

Importance of student engagement - students





Think



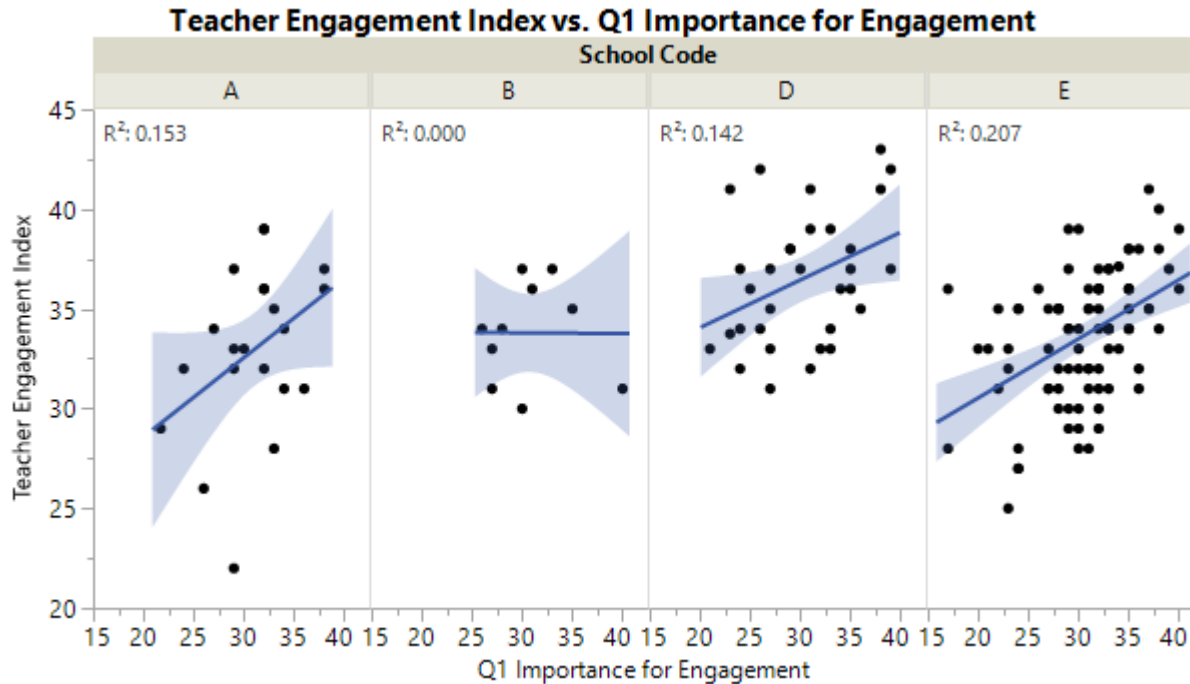
Model



Make

Findings

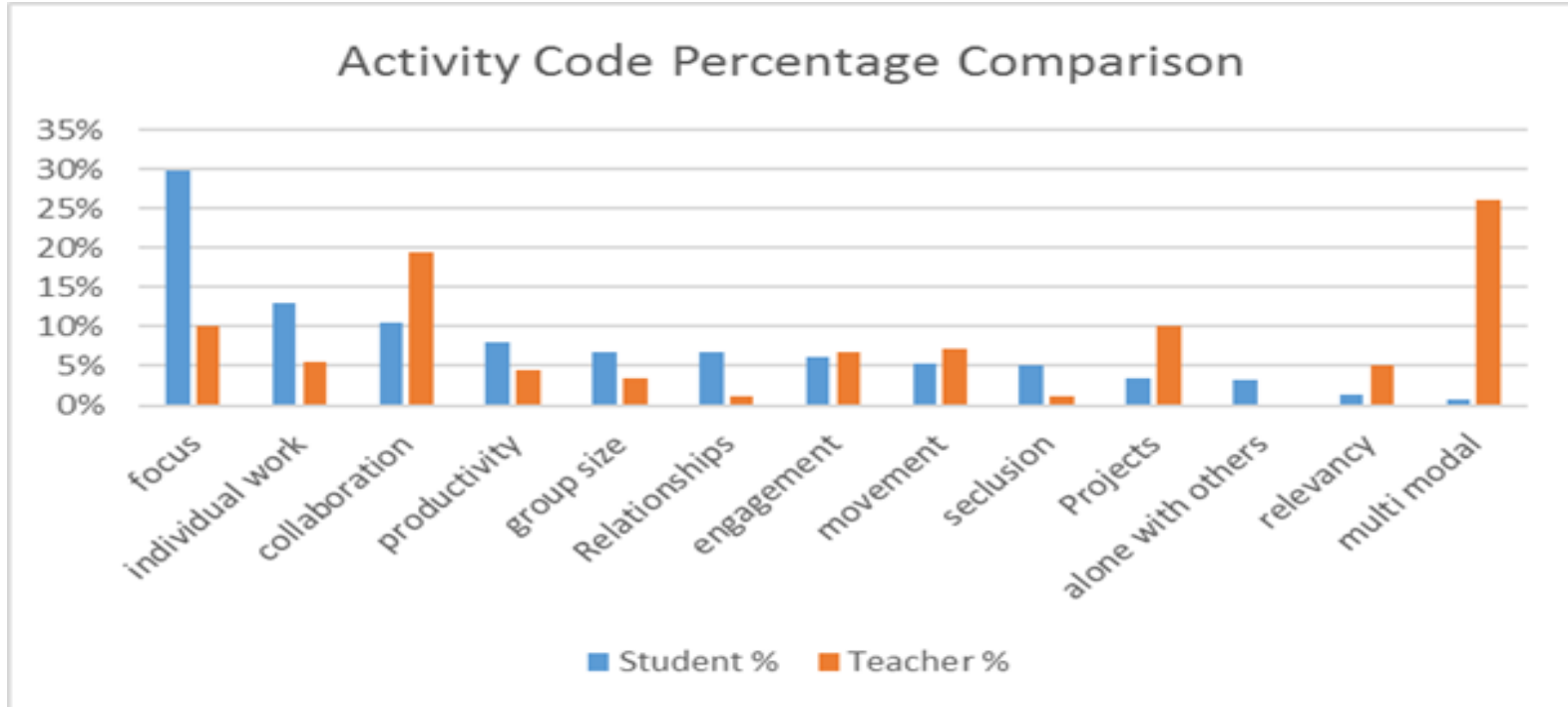
Importance of student engagement - teachers

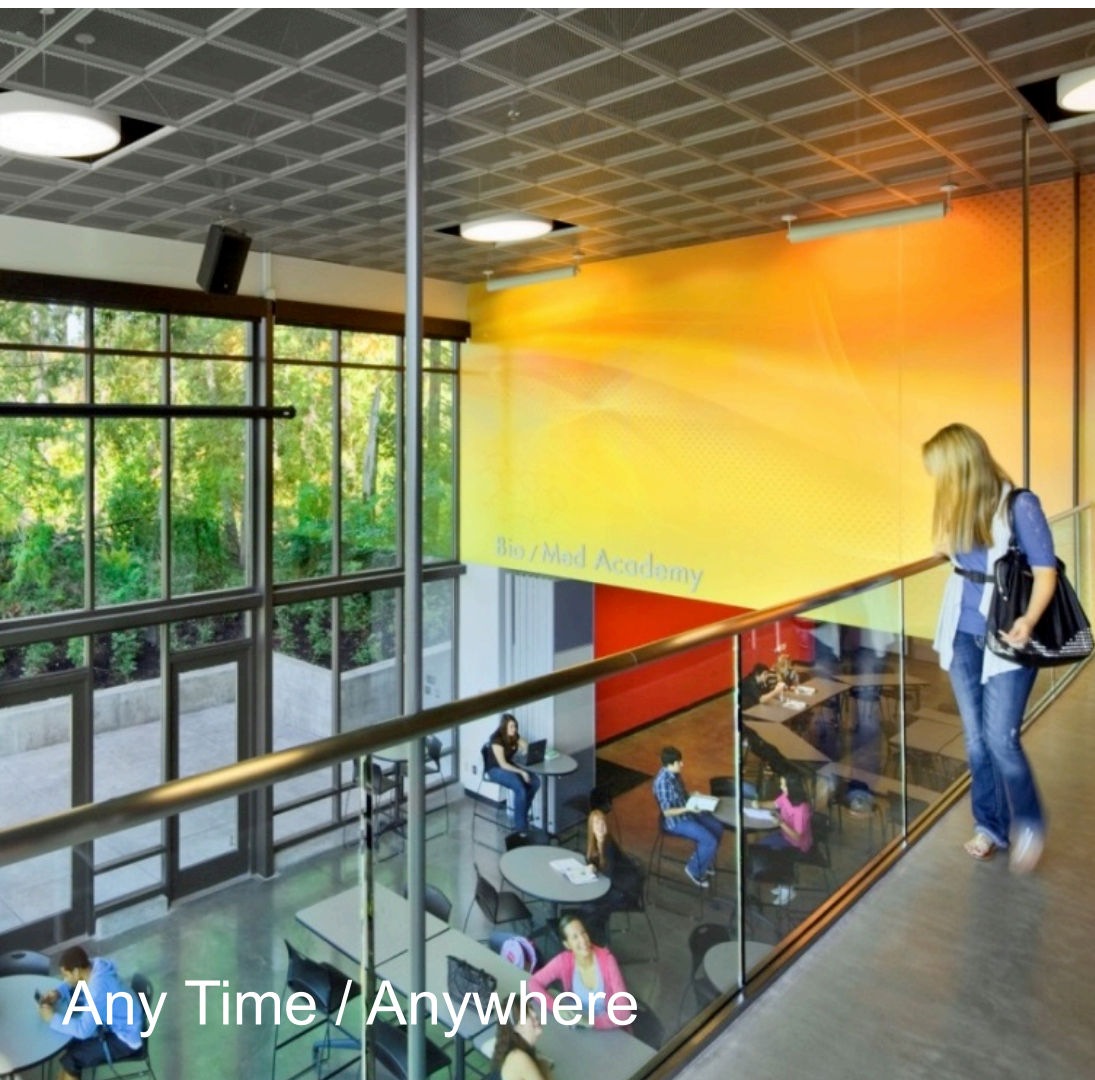




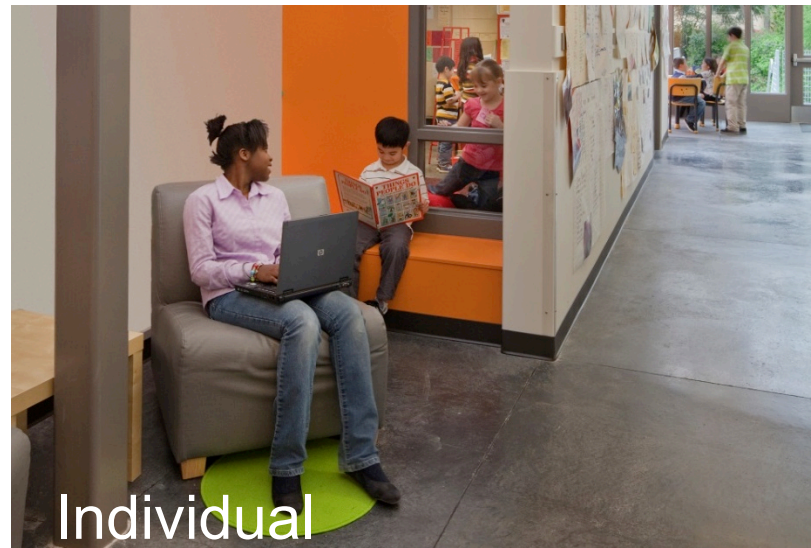
Findings

Figure 15. Activity Code Percentage Comparison.





Any Time / Anywhere

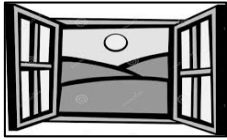


Individual

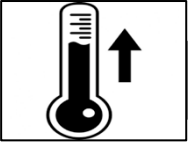


Groups

ENVIRONMENTAL QUALITIES / CLASSROOM



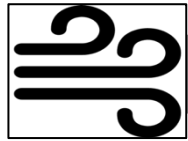
ACCESS TO NATURAL LIGHT



TEMPERATURE COMFORT



NOISE LEVELS

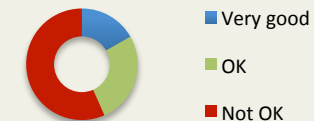
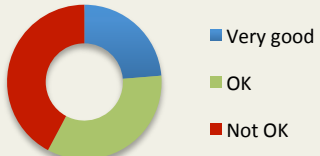
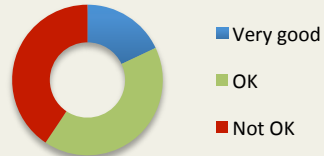
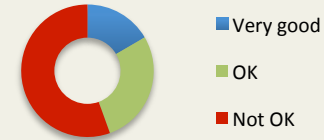
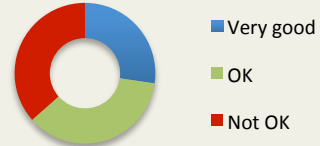


AIR QUALITY AND FLOW

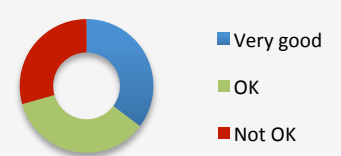
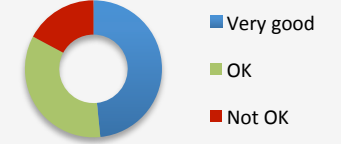
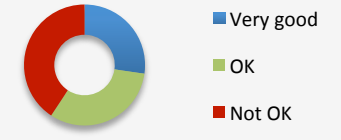
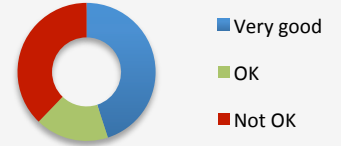


FURNITURE COMFORT

STUDENTS



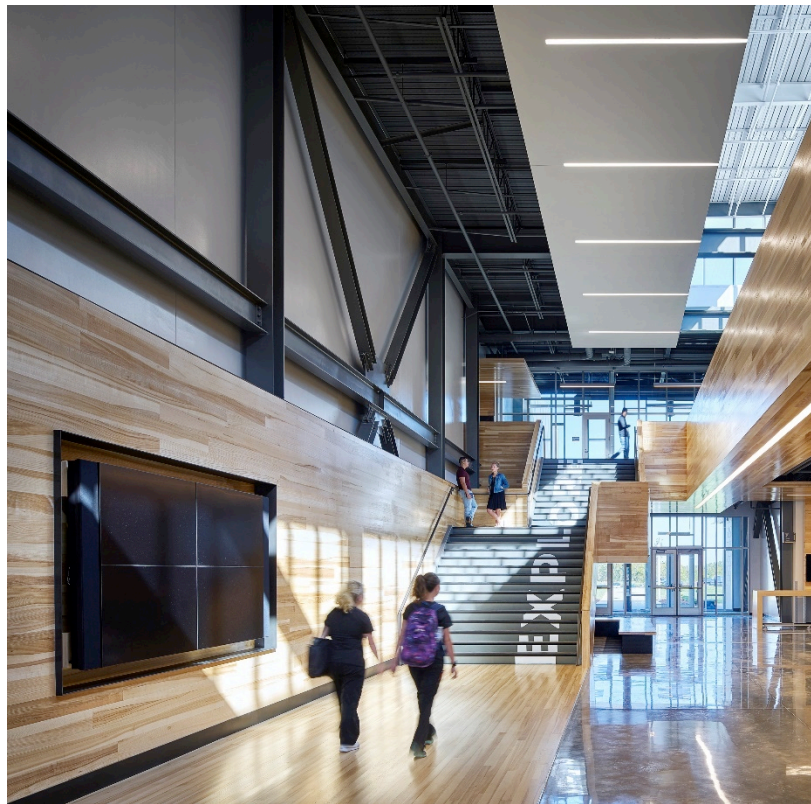
EDUCATORS



Furniture



Daylighting



Prove It – SEI© Beta Summary.selected information

- Agreement from students across all schools, grades, and genders that the **buildings' designs impact their academic engagement levels** at a level of significance ($p < .0001$).
- Conclude that for educators, **the overall “culture” of the school is a far more important factor** for teacher engagement than the physical layout.
- Desirable designs of the physical attributes of the overall spaces and needs are provided for, means **students perceive their level of academic engagement is higher** ($p < .0001$).
- Seen as a real effect, **all respondents acknowledged that the physical environment impacted engagement in their teaching and learning practices** ($p < .0001$).

Prove It

- Systematic, scientific, academic method to go about generating this data and looking at the evidence.
 - 3rd IRB review, research consultant & statistician for ‘arms distance’/ validation
- Looking at space post-occupancy for grades 9-12
- We are not done with this ‘tool’ design; gone through Alpha and Beta pilot phases and now into the Omega phase of development
 - Plans to embed EBD learnings through workshops with firm members
- Research plan including SEI/TEI surveys at 9-12, 6-8 + research case studies

Moving Forward

Is research important to you?

How does the built environment impact your daily role?

What are the biggest challenges you face on a daily basis?

What research questions do you want answers to?

How can we work better together?



Thank-you