

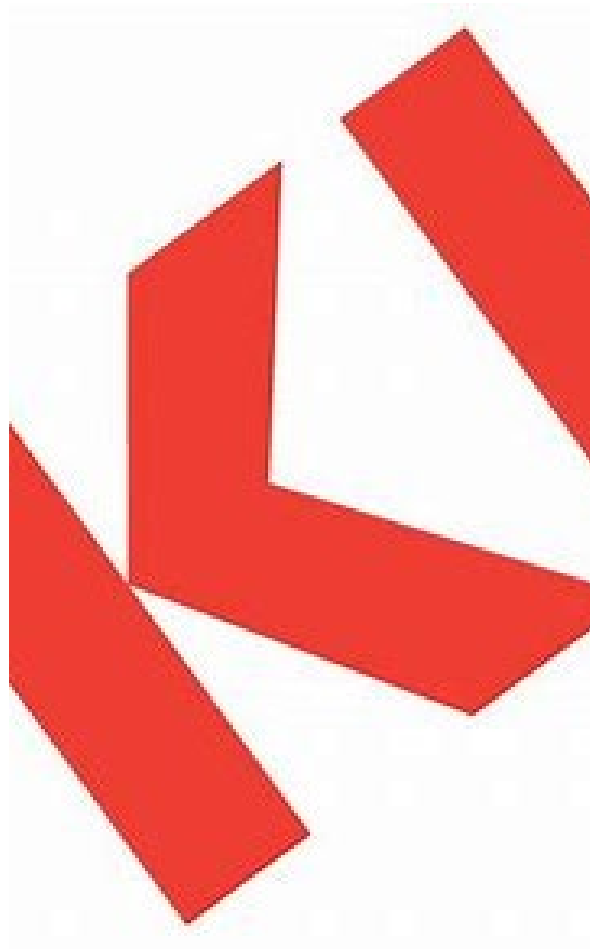


THE POWER OF PLACE

CREATING LEARNING ENVIRONMENTS FOR
STUDENT SUCCESS

SOUTHEAST A4LE APRIL 2025





Emily McGinnis
K-12 Market Manager, KI

Before joining the KI team as the K-12 Market Manager, Emily McGinnis spent the previous twenty-one plus years of her career as an educator in K-12 schools. She split that time as a **teacher and principal** in the Charlotte, North Carolina area. Her experience includes elementary, middle and high school levels for both public and public charter school systems.

Emily holds a Masters of Arts in Teaching, with an additional Reading Specialist certification, as well as a Masters in K-12 School Administration

Her passion has always been **culture building** and helping students and educators experience **Joy in learning**.

She continues to challenge our KI teams to learn more about how a school's culture and environment support the overall success of a student.

Emily **completed the A4LE's Advanced Academy in June 2024 and has the certification of Accredited Learning Environment Planner (ALEP).**



SHARE YOUR K-12 EXPERIENCES

THE POWER OF PLACE: CREATING LEARNING ENVIRONMENTS FOR STUDENT SUCCESS



LEARNING OBJECTIVES

➤ **Role of the Environment**

Understand the environment's impact on design and student success.

➤ **Drivers of Change and Possible Barriers**

Understand trends and insights that are impacting learning and learning design.

➤ **Design Considerations**

Introducing design considerations that could be a guideline for whole child design

➤ **Measuring Success**

Looking at ways to measure the impact of the environment and discussing research, case studies, and examples.



THE ROLE OF THE ENVIRONMENT

Personalized Learning Environments



“The learning environment...is ‘the third teacher’ that can either enhance the kind of learning that optimizes our students’ potential to respond creatively and meaningfully to future challenges or detract from it.”





CONSIDERATIONS FOR PERSONALIZED SPACE DESIGN

- ✓ **Universal Design**
- ✓ **Flexible** Layouts
- ✓ **Variety** of Seating Options
- ✓ Technology Integration
- ✓ **Student-Centered** Design
- ✓ Collaborative Spaces
- ✓ Safety and **Accessibility**
- ✓ Assistive Technologies
- ✓ **Sensory** Considerations
- ✓ Clear Signage and Wayfinding
- ✓ **Inclusive** Furniture Options
- ✓ Health and **Well-being**
- ✓ **Individualized** Space

What solutions would work?



WHICH WOULD YOU CHOOSE?





WHERE WOULD YOU LEARN BEST?

THE PHYSICAL ENVIRONMENT CAN IMPACT...

Communication
and Connection

Creativity
and
Inspiration

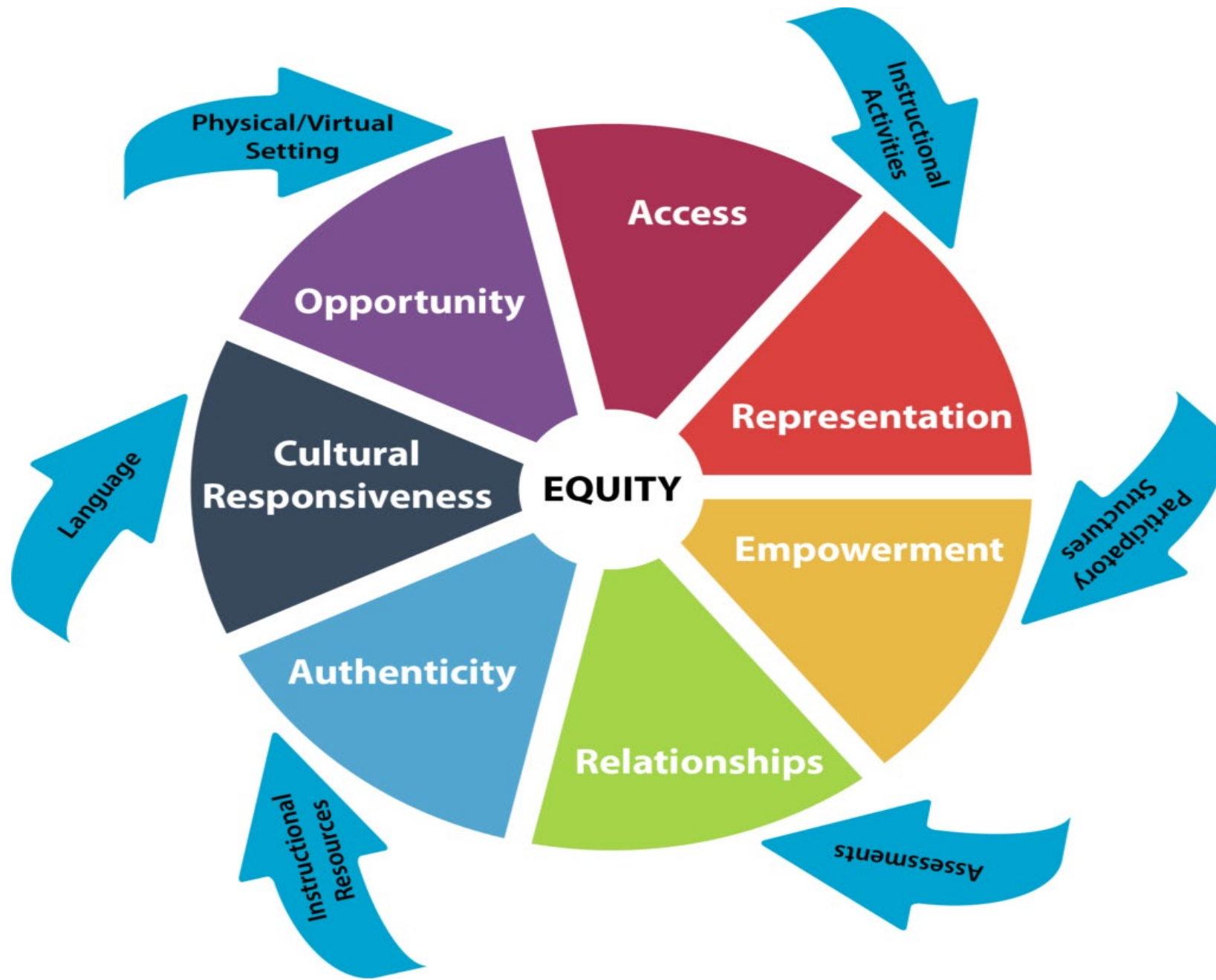
Engagement
and Focus

WHAT
ELSE???

Choice and
Problem
Solving

EQUALITY





What environment do we desire for students?



Future-Ready Learning Spaces

- CTE
- ED Tech, AI, VR
- Focus on Power Skills



Personalized and Accessible Learning Spaces

- Designing for Neurodiversity
- Multi-Sensory Spaces
- Collaborative Spaces



Wellness & Belonging

- Engagement and Choice
- Student and Teacher services and wellness spaces.

ONE THAT SUPPORTS STUDENT ENGAGEMENT AND SUCCESS

TRENDING DESIGN FRAMEWORKS THAT IMPACT ENVIRONMENT



- › **Community-Centric Design**
 - Inclusive and Accessible Design
 - Collaboration and Community
 - Multi-Use facilities
 - Areas for Connection

- › **Biophilic Design**
 - Outdoor Learning Spaces
 - Bringing the Outdoors In

- › **Sustainability & Green Design**
 - Materials
 - Waste Reduction
 - Green Spaces
 - Environmental Education
 - Financial sustainability



COMMUNITY

- **63% in ability to break into group work**
- 41% in ability to make and build things together
- 38% in ability to share their work with others
- 24% in to leverage technology



WELL-BEING

- **64% in belief that the learning space is beautiful**
- 43% in belief that it is fun to learn within the space
- 39% in desire to spend more time in the classroom
- 35% in belief that their individual needs are supported



ENVIRONMENT AND

- PLACE**
- **82% in seating comfort for the students**
 - 60% in storage capacity for student belongings, such as their bags, coats, etc.
 - 60% in storage capacity for student belongings, such as their bags, coats, etc.

[Infographic---Classroom-Furniture-Impact.pdf](#)

KI CLASSROOM RESEARCH: LOMA VERDE ES: 6TH



Post Occupancy- Teaching & Learning

- **92%** of students believe their classroom is a **FUN** place to learn, compared to 50% before.
- **80%** of students feel as though their **individual needs are supported** in the redesigned classroom, compared to 50% before.
- **96%** of students believe it is easier to **collaborate**, compared to 35% before.





DRIVERS OF CHANGE AND POSSIBLE ROADBLOCKS

DRIVERS OF CHANGE

TECHNOLOGY

AI, VR, 1:1, Hybrid

Future of Jobs/Careers

(CTE) Career Pathways. 2030 Job Predictions.
Skill vs. Competency

What do we mean by CHANGE?

Social and Emotional Wellness

Sense of Belonging, Teacher Retention,
Absenteeism, SEL , Anxious Generation

TRAINING and ACCESSIBILITY

Stakeholder Alignment

Many decision makers and influencers,
Superintendent tenures

Research

Neuro and Behavioral, Evidence-Based
Design, Observations

RESOURCES and FUNDING

Political

Dept. of Ed, State Policy, DEI, Funding,
Vouchers/School Choice



STEM/Machinery



Gaming and Esports

WHAT SPACES IN A K-12 CLASSROOM AND SCHOOL ENCOURAGE **FUTURE READY LEARNING?**

- CTE Labs
- Technology Labs
- Gaming/Esports
- Multi-Purpose Rooms
- Media Centers/Libraries
- Makerspaces
- STEM/STEAM
- Zones/Centers within classroom space



FUTURE-READY LEARNING: ED TECH





HUMAN-CENTRIC (POWER) SKILLS

Think about your job or your company and brainstorm all the skills you would hope for a potential new hire to have...

Examples:

- Communication
- Leadership
- Creativity
- Teamwork
- Problem-Solving
- Conflict Resolution
- Professionalism

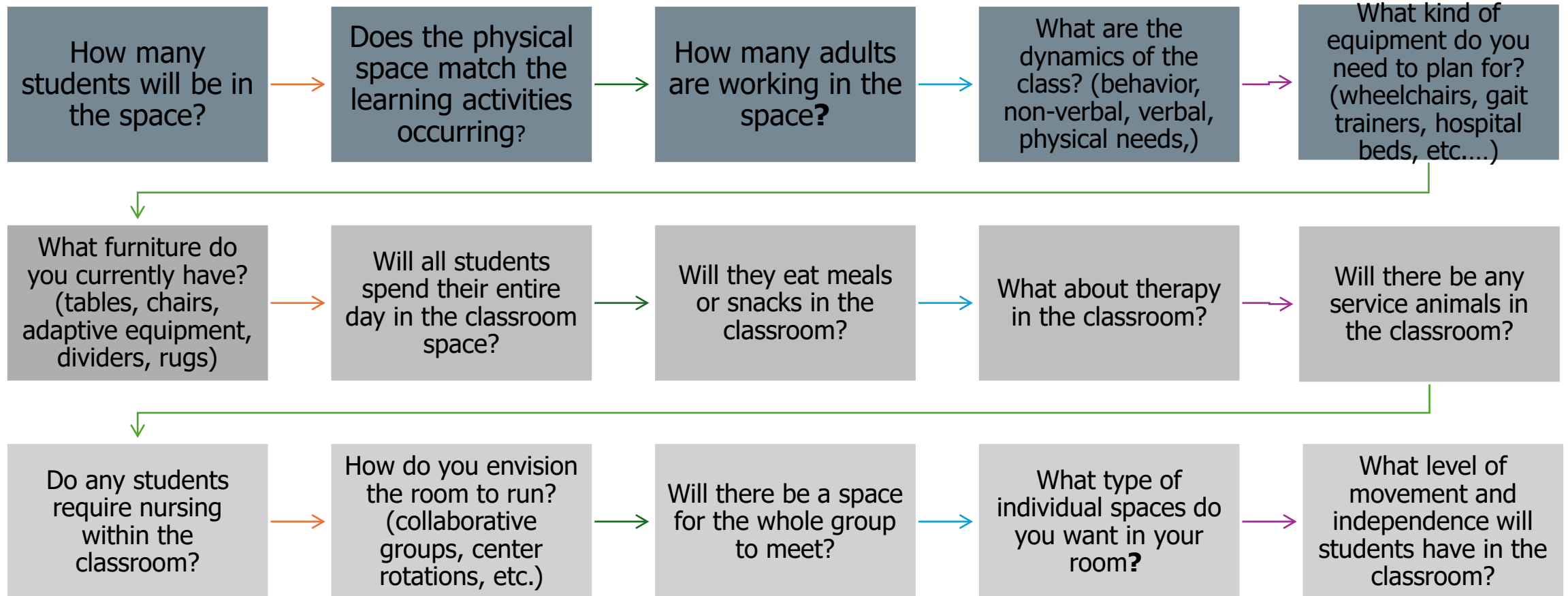
NEURODIVERGENT SUPPORTED LEARNING ENVIRONMENTS

Students have different needs, and their needs should drive change in classroom and school environments.

- Flexible Pacing
- Tailored Instruction and Environment
- Customized Tools and Resources
- Individualized Support
- Sensory-Friendly Spaces
- Enhanced Engagement
- Sense of Belonging/Inclusivity
- Reduced Anxiety
- Improved Academic Outcomes



Questions to consider when creating space for ALL students...



Positive classroom
environments don't just
happen...
they are created.



POSSIBLE BARRIERS IN K-12

WHAT CREATES BARRIERS IN K-12?

“From the possible scale back or elimination of the Department of Education to shifts in funding, the expansion of school choice, and ongoing curricular debates, 2025 brings both potential challenges and opportunities for U.S. schools.”

- ✓ Funding
- ✓ Absenteeism
- ✓ Tariffs and Rising Prices
- ✓ Time Constraints
- ✓ Declining Enrollment
- ✓ Safety
- ✓ Stakeholder Buy-in
- ✓ Resources and Training



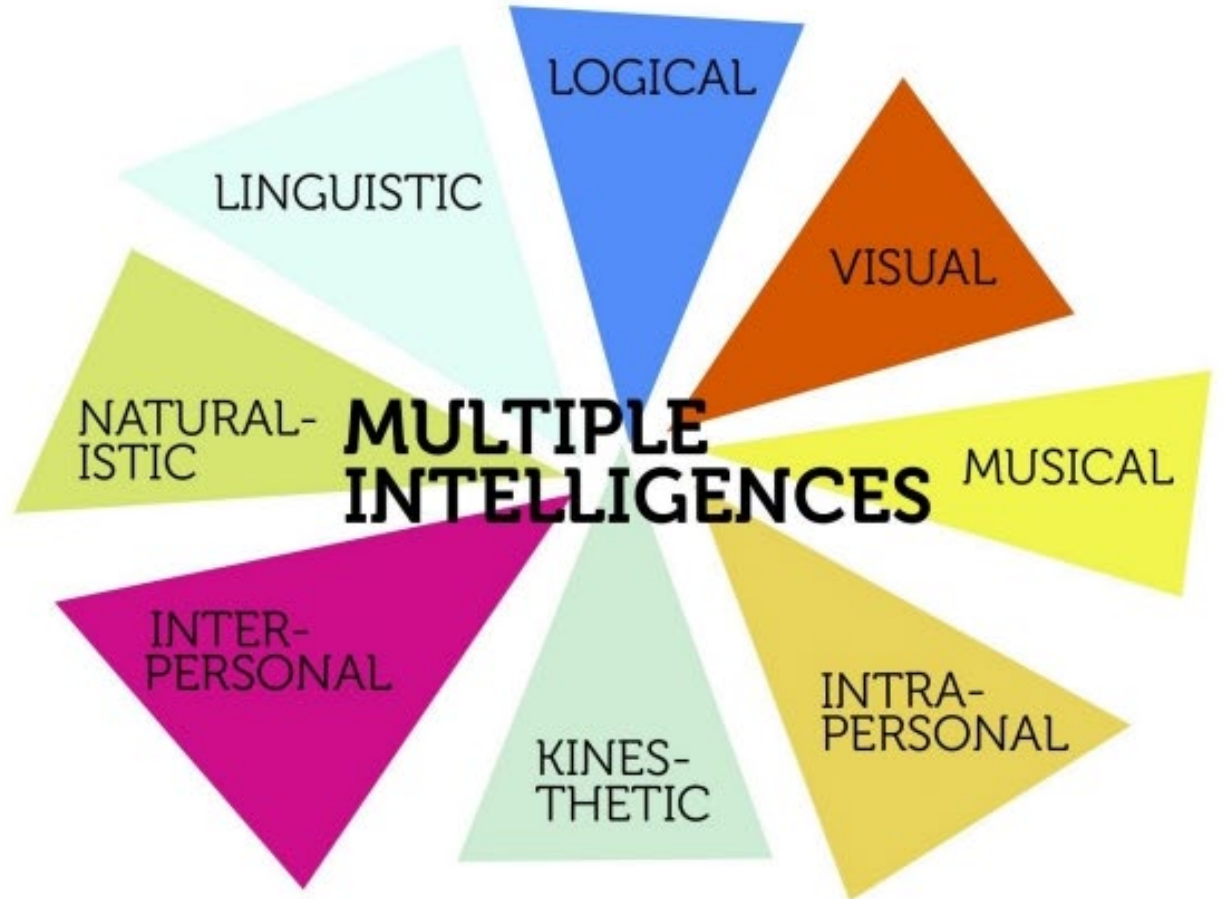


PERFORMANCE
DESIGN CONSIDERATIONS
DESIGNING FOR THE WHOLE- CHILD

**WE ALL LEARN DIFFERENTLY,
LEARNING STYLES**



'VARK MODEL'



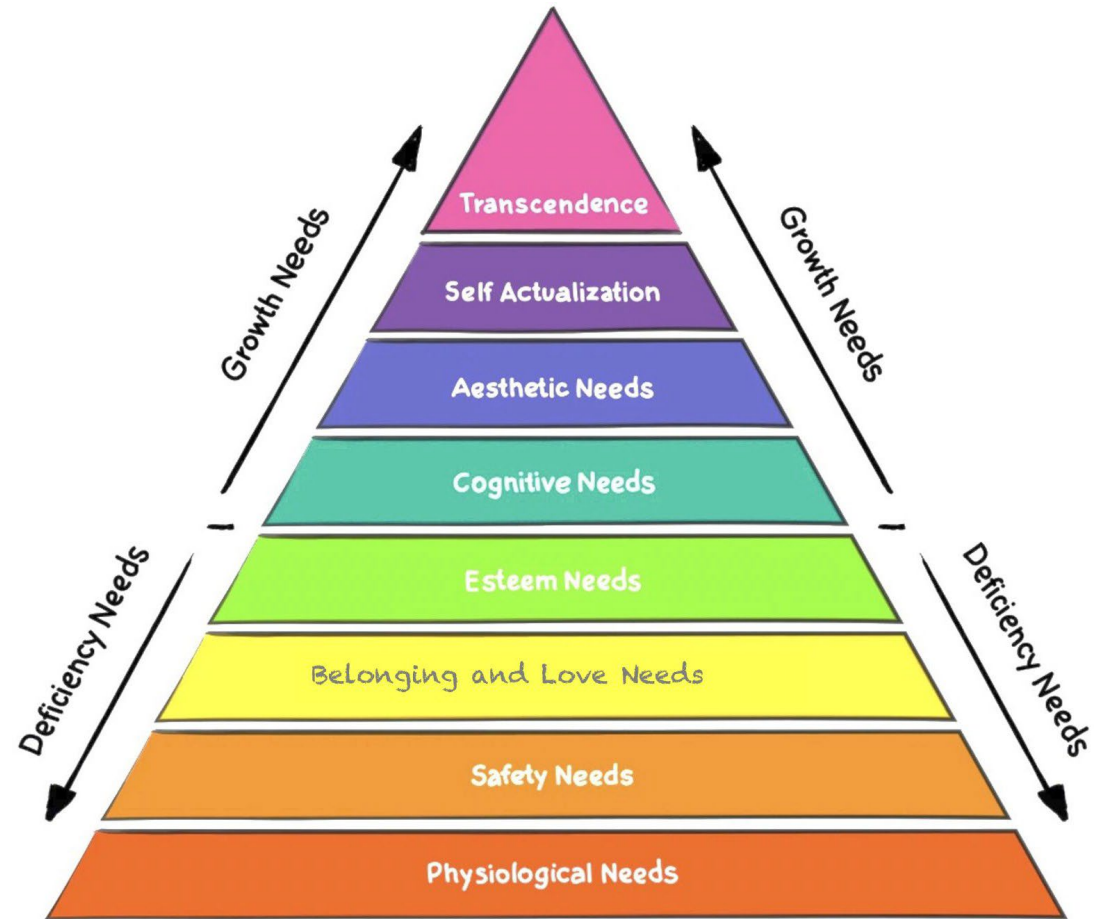
HOWARD GARDNER: MULTIPLE INTELLIGENCES

I NEED TO FEEL SAFE TO LEARN: TRAUMA-INFORMED DESIGN

Chronic Stress and Feeling Unsafe can impair brain development and cognitive functions

The entire school atmosphere, including daily interactions, contributes to creating a supportive or unsafe environment

In a safe, supportive climate, students are more engaged and willing to take intellectual risks, which is essential for learning.





PERSONALIZED LEARNING SPACES



MULTI-SENSORY SPACES

Considerations for Multi-Sensory Spaces

- Lighting
- Tactile Elements (textures)
- Quiet Zones/Calming Areas
- Visual Stimuli
- Impact of color
- Furniture with Sensory or Tactile elements
- Flexible Seating
- Soft seating
- Movement
- Interactive and Integrated Technology
- Sensory Rooms
- Therapy Rooms
- Counseling Suites
- Ergonomics
- Acoustics



Students learn differently and their learning space should support these differences

Relax like you're- Respectfully- at home

- › Common spaces
- › Lounges for teachers
- › Counselor's Suites
- › Nooks
- › Student Areas outside of Cafeteria
- › Libraries
- › Transitional Areas



WELLNESS AND CALMING SPACES



PERFORMANCE DESIGN CONSIDERATIONS



PHYSICAL SAFETY

- Open & Visible Pathways
- Maneuverability
- Space circulation



EMOTIONAL SAFETY

- Supportive
- Belonging
- Inclusive



ACCESSIBILITY

- Neurodivergence
- Physical
- Tech, Tools, & Power



MULTISENSORY

- Acoustics
- Visual/Lighting
- Tactile



COMFORT & AESTHETICS

- Materiality
- Choice
- Color



ERGONOMICS

- Posture & Place
- Movement
- Flexibility



COMMUNITY & CONNECTION

- Supportive
- Belonging
- Inclusive



SUSTAINABILITY

- Adaptive
- Financial
- Environmental

PERFORMANCE DESIGN STANDARDS



AN OUTCOME BASED APPROACH







NOISE STANDARDS

Noise Standards for Classroom Speech Intelligibility set a **35 dB A-weighted limit** for average background noise in classrooms (ANSI S12.60). Maintaining this requires careful control of background noise sources such as HVAC systems, building infrastructure, and equipment like computers and projectors.



GOOD ACOUSTIC

Reverberation Time

Echoes and Acoustic Shadows

Sound Intimacy, Texture, and Blend

External Noise

Sound Absorption of
the Finish Materials





I NEED TO SEE TO LEARN

Research in cognitive science shows that visual learning enhances comprehension, retention, and engagement. The brain processes visuals more efficiently than text or sound with 30% of the cortex dedicated to visual processing—compared to 8% for touch and 3% for hearing. While visual learning is powerful, it should be balanced with other methods to suit individual needs and avoid cognitive overload.



DESIGN STRATEGIES AND ACTIONS



Sound Map

Assess layouts based on activity type, noise levels, and user needs. Create a color-coded map to define zones. If loud and quiet areas border each other, adjust layout or add sound mitigation.



Sound & Speech Privacy

Determine the desired level of sound for enclosed rooms with respect to partitions, doors, and floor-ceiling assembly design.



Technology for Acoustic Enhancement

Consider adding telecom and AV systems that utilize speech enhancement technology.



Private Speech Solutions

Provide options for private speech within open offices.

DESIGN STRATEGIES AND ACTIONS



EMBODIED
LEARNING



ACTIVE LEARNING
STRATEGIES



VARIED SEATING
AND SPACES



OUTDOOR
LEARNING



I NEED TO MOVE TO LEARN

Research across multiple disciplines supports kinesthetic learning, emphasizing movement's role in enhancing cognitive function, attention, and memory. By integrating movement into educational settings, learning becomes more engaging and effective for all ages.



I NEED TO BE COMFORTABLE TO LEARN

Research shows that ergonomic comfort, thermal comfort, and air quality are crucial for an optimal learning environment. Ergonomic seating improves focus, reduces discomfort, and enhances learning, while agile classroom design encourages movement, choice, and adaptability.

Fact

Every 1 degree increase in our planet's temperature equates to 1% learning loss!



INVEST IN ADJUSTABLE /
AGILE AFFORDANCES



INCORPORATE MOVEMENT
INTO THE CLASSROOM



CONSIDER
THERMAL COMFORT



THERMAL COMFORT FOR LEARNING

Earthman (2002) highlighted the existence of prime temperature ranges for optimal learning outcomes. Ideal temperature range for learning environments is between **20-23°C (68-73°F)**.

Strategies to control thermal comfort include:



Control for Solar Heat Gain

Optimize insulation, space windows and fans evenly, limit occupied spaces over unheated spaces.



Manage Temperature Fluctuations

Implement strategies to stabilize thermal variations as temperatures fluctuate such as including thermal mass.



Ensure Long-Term Comfort

Design for thermal comfort and passive survivability to maintain a habitable environment during extreme weather conditions.



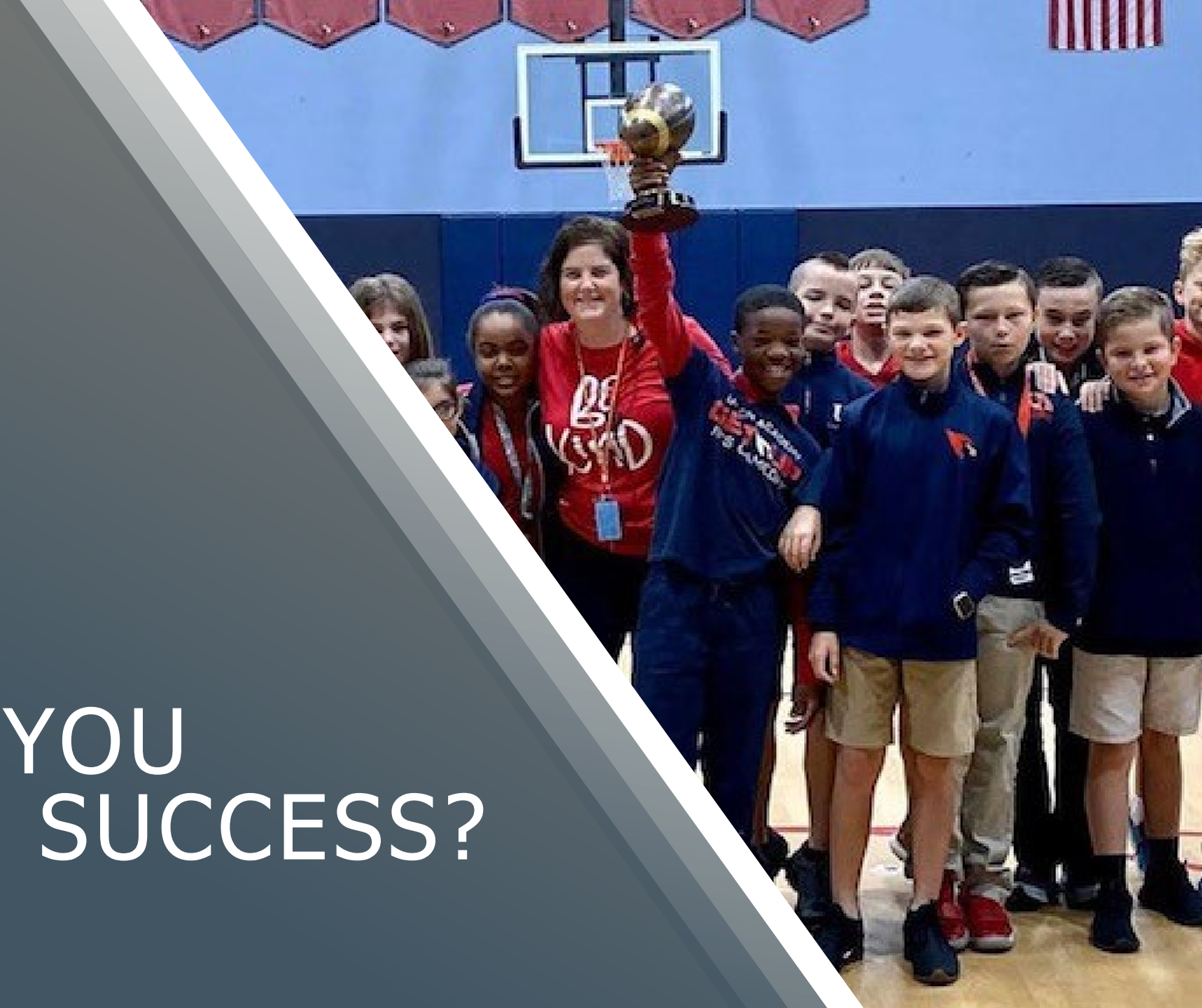
ROSENFELD: DESK ARRANGEMENT



- Rosenfield et al. (1985) tested how desk and chair arrangement affected students' behavior.
- Elementary school children were measured according to their on-task behaviors, such as hand-raising, discussion comment, questioning/pupil request, listening, out-of-order comment, and speaking; and on their off-task behaviors, such as disruptive conduct, withdrawal, and aggression.
- **Possible desk arrangements were clusters, rows, and circles.**
- **Results showed** that students seated in circles showed the most on-task behaviors. The second-best arrangement of desks and chairs was a cluster arrangement, and the least effective was desks arranged in rows



HOW DO YOU
MEASURE SUCCESS?



MEASURING ENGAGEMENT AND STUDENT SUCCESS

- ✓ Define what engagement looks like (e.g., participation, attention, enthusiasm)..
- ✓ Collecting ongoing feedback from students and teachers to adjust the space.

•**Student Engagement Level**

•**Academic Performance-** Monitor improvements in test scores, assignment completion rates, and overall academic achievement.

•**Attendance Rates-** Track changes in student attendance and punctuality. Example: Use AI-powered attendance systems to monitor and analyze attendance patterns before/after

•**Feedback from Students and Teachers- Observational Assessments:** Conduct regular assessments to observe how students interact with the space and each other. (**Student Voice and Choice in the space**)

•**Longitudinal Studies-** Conduct long-term studies to track the impact of the design of the space on student outcomes over time. Example: Compare cohorts of students who have experienced renovated learning environments with those in traditional classrooms.

•**Low-cost design changes** that can have a big impact (moving desks to create more space, adding plants or interactive displays)

Reinforce the idea that *classroom design is not just about aesthetics*—it's about fostering an environment that supports active learning, student well-being, and engagement.

FUTURE OF LEARNING SPACE DESIGN



1. A Networked Approach

Integrating performance and prescriptive standards with a deeper awareness of their impact on internal design.



2. Human-Centered Adaptation

Designing spaces to support physiological, physical, and social needs rather than forcing people to conform to fixed environments.



3. Neuroscience Integration

Embracing emerging neuro-based research and implementing strategies to create cognitively responsive environments.



4. Agile and Hybrid Learning Spaces

Developing adaptable spaces that foster multi-curricular learning and collaborative opportunities.

WHERE IS THIS GOING?

When the atmosphere encourages learning,
the learning is irresistible!

-Elizabeth Frost



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