Understanding Learning Environments

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Places Created for Learning: We Bring *Your* Schools to *Life*

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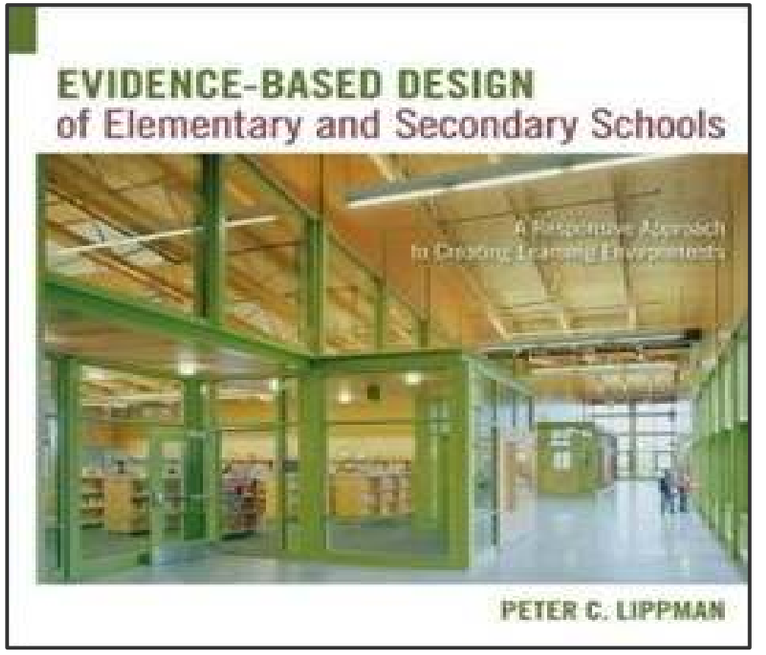
OBJECTIVES

- Reflecting on the Learning Environment
  - What does history tell us?
  - Where are we headed?

- Re-imagining the Learning Environment
  - How do we imagine our existing schools?
  - How can we create dynamic learning environments in existing school buildings?

INTRODUCTION



Educator: NYC Public Schools, Community Centers, and Universities in USA & Australia

Researcher: Cooperative Group Work and Complementary Settings

School Designer: Shaped the spatial design of Learning Environments in USA, Australia and Sweden

Author/Editor:

Evidence Based Design for Elementary and Secondary Schools (2010); &

Creating Dynamic Places for Learning: An Evidence Based Design Approach (2023).

UNDERSTANDING THE LEARNING ENVIRONMENT

PAPER……

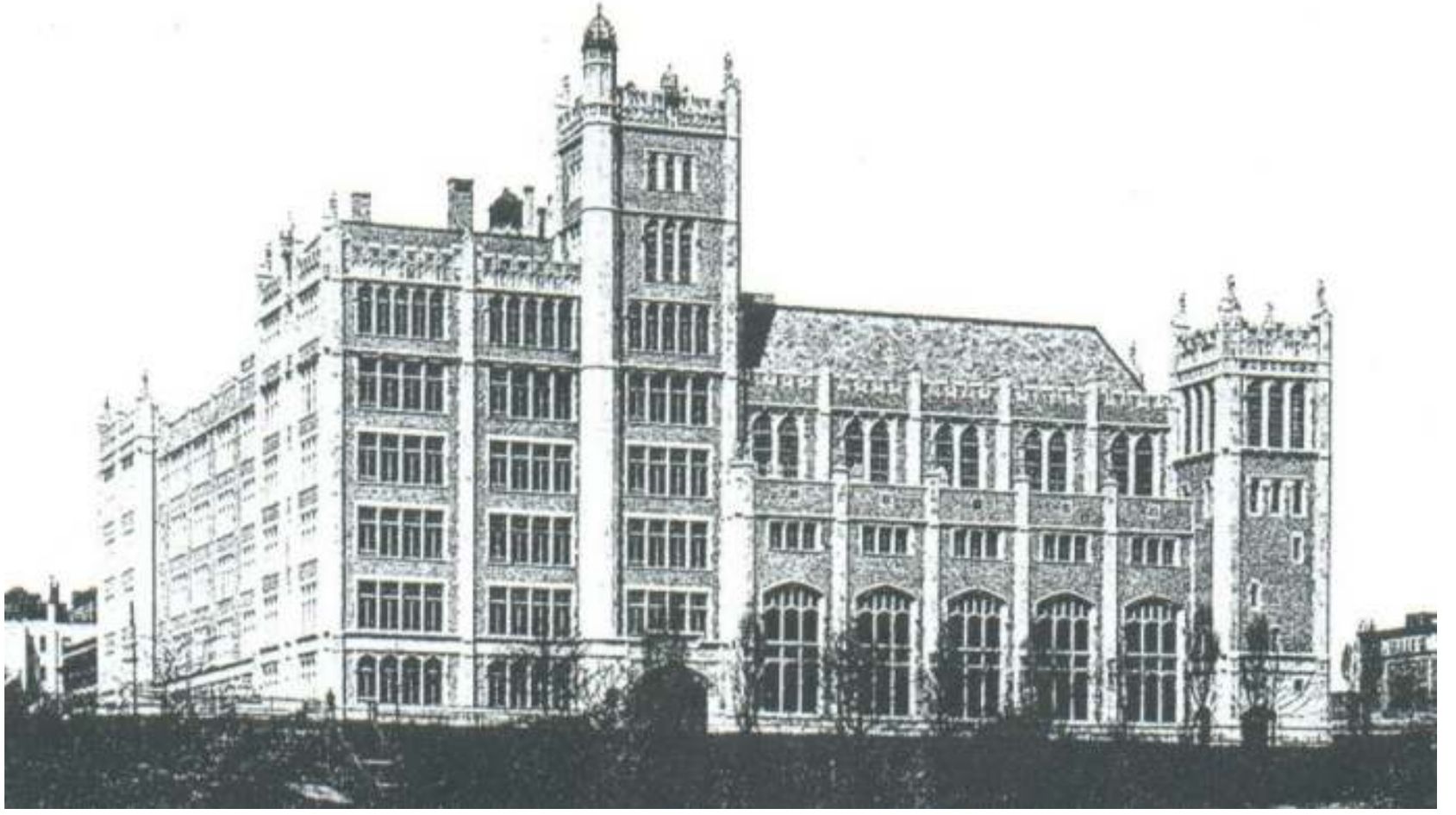
*The **challenge.....***

*The **Opportunities.....***

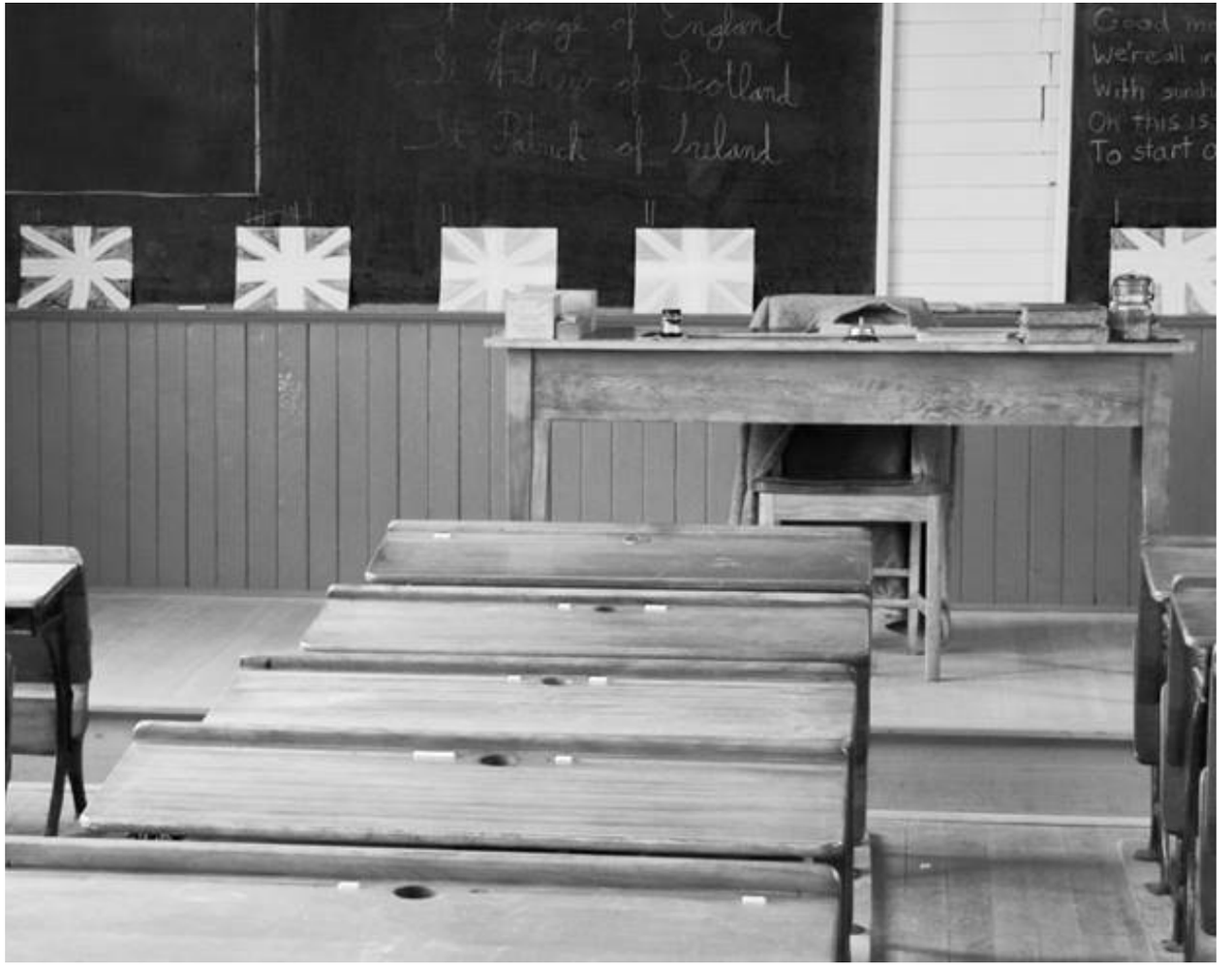
And how do we.....

***Integrate the Evidence** from the research on learning environments?*

Part 1: Socio-Cultural History of School Buildings



Music and Art High School, New York City

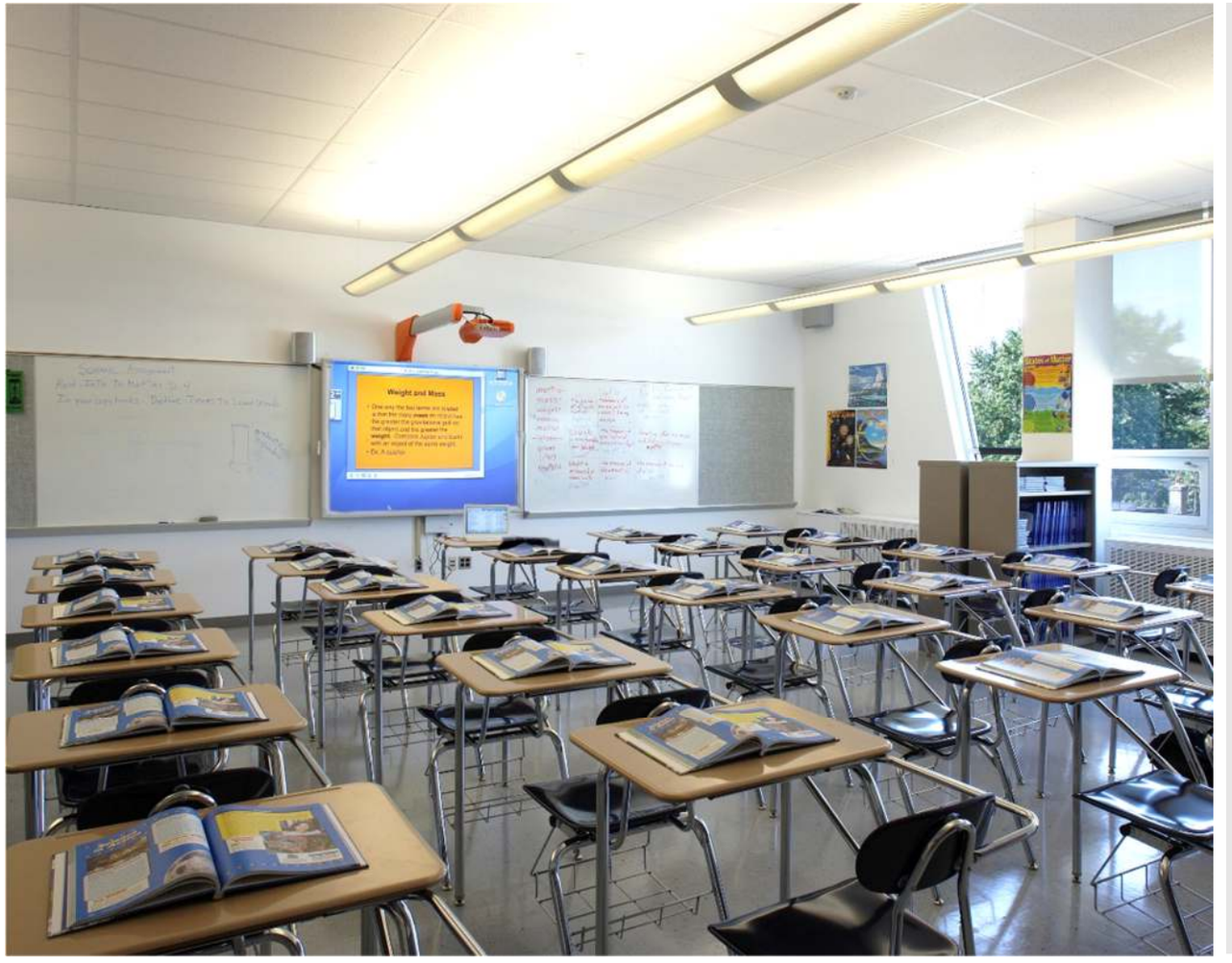


1880

ENVIRONMENTS FOR LEARNING

1960

ENVIRONMENTS FOR LEARNING



2010

ENVIRONMENTS FOR LEARNING

Today!

Modern learning environments for contemporary learning (operant conditioning, observational learning, and/or constructivism)

21st Century Learning Principles

21st Century Learning Principles

1. Critical Thinking
2. Collaborating
3. Creating
4. Communicating

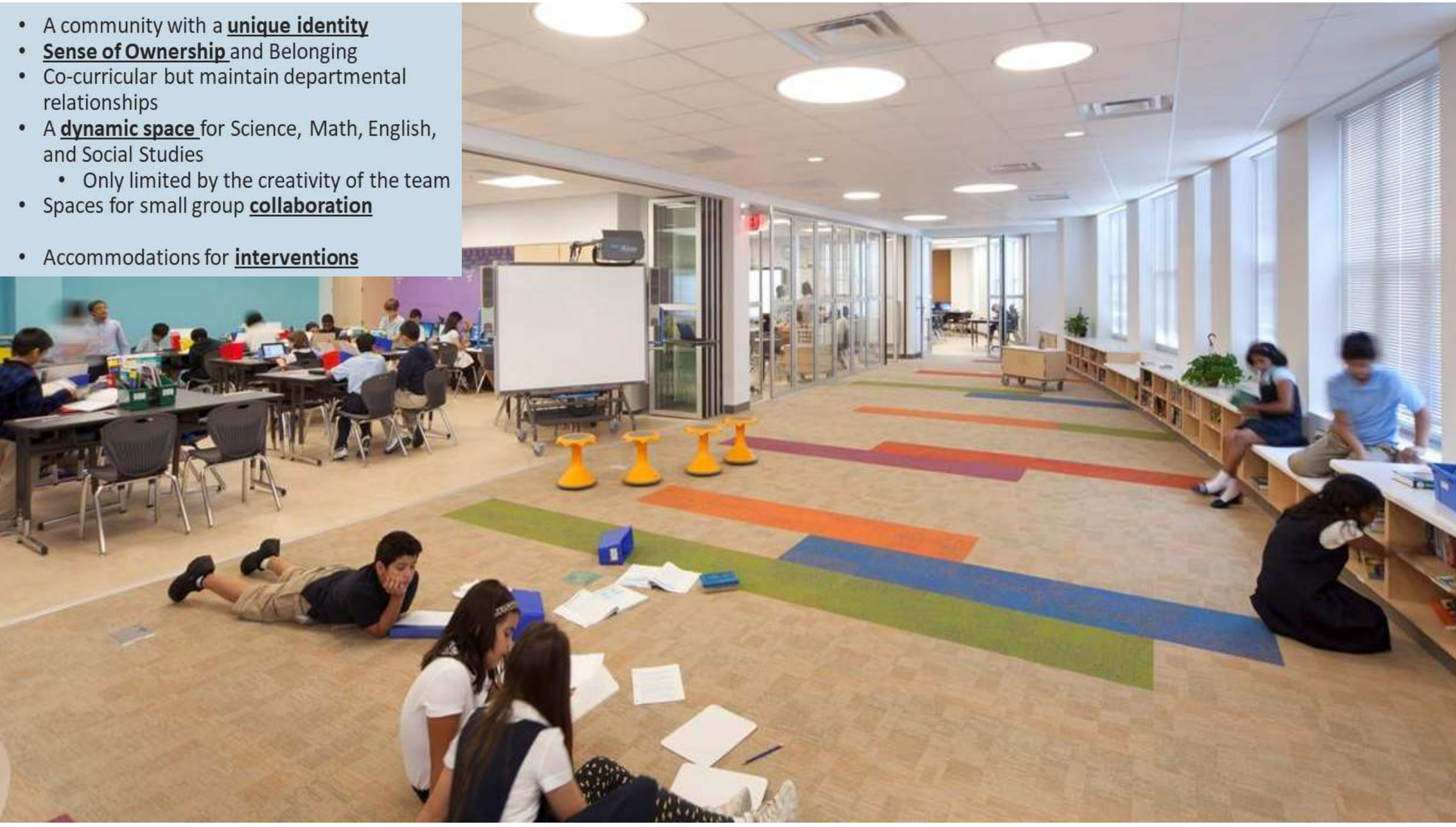
How do we Integrate Technology in the Learning Environments?

21st Century Learning

- *Connects Learning, learners and the things to be learner, where students can learn* ***anytime***, ***any place***, ***anywhere*** *and* ***at their own pace***.
- *Allows for the Distribution of information remotely*
- *Provides opportunities to share knowledge from different locations*

- A community with a **unique identity**
- **Sense of Ownership** and Belonging
- Co-curricular but maintain departmental relationships
- A **dynamic space** for Science, Math, English, and Social Studies
  - Only limited by the creativity of the team
- Spaces for small group **collaboration**

- Accommodations for **interventions**



IN TODAY'S SCHOOL ENVIRONMENT ....

- What **works** about this space?

- What's **not working** about this space?

PART 2: BREAK

FIKA

What happened to our learning environments?

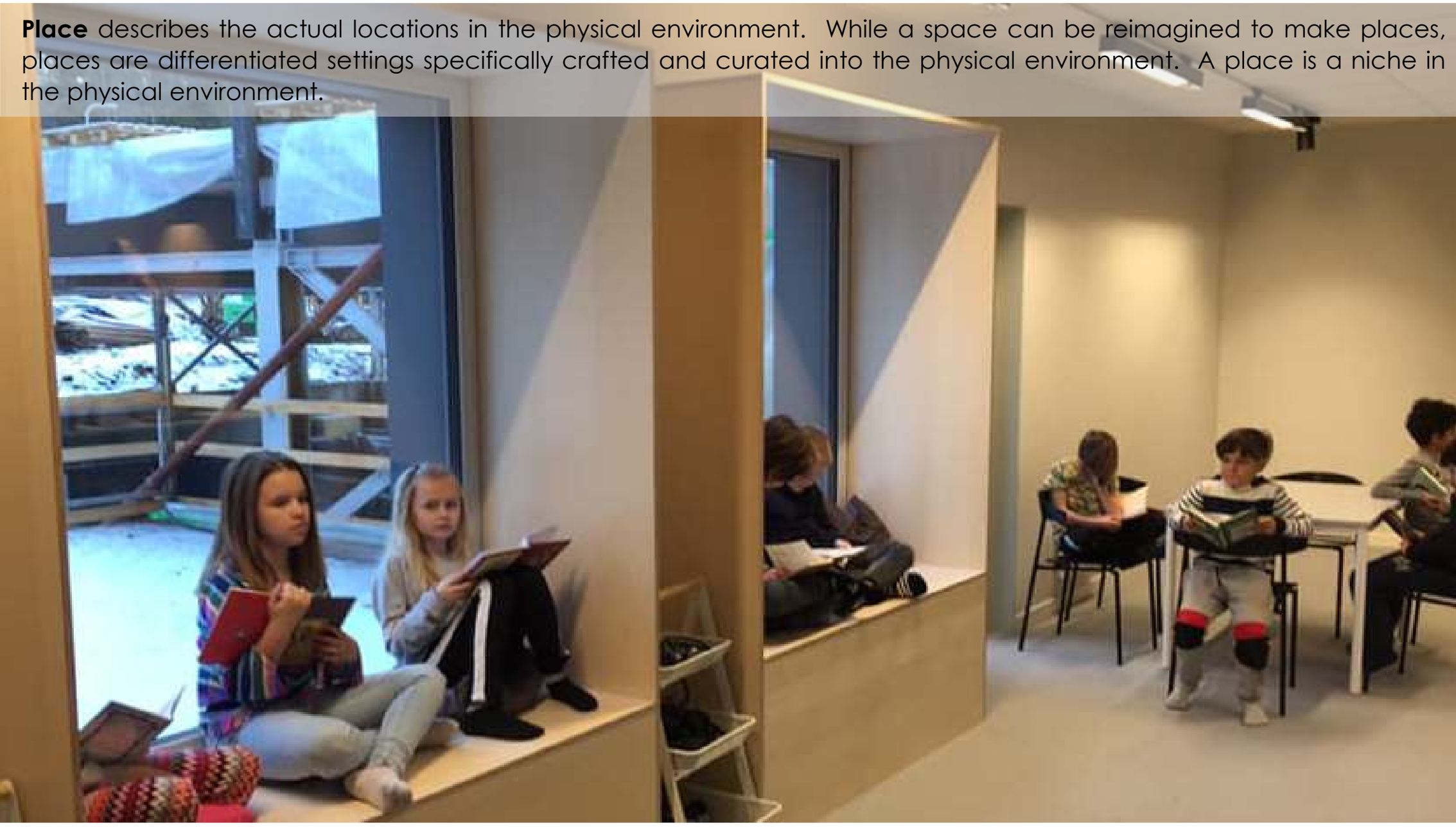
OPEN-PLAN SCHOOL BUILDINGS

What are the **challenges** with this school design?

What are the **opportunities** with this school design?

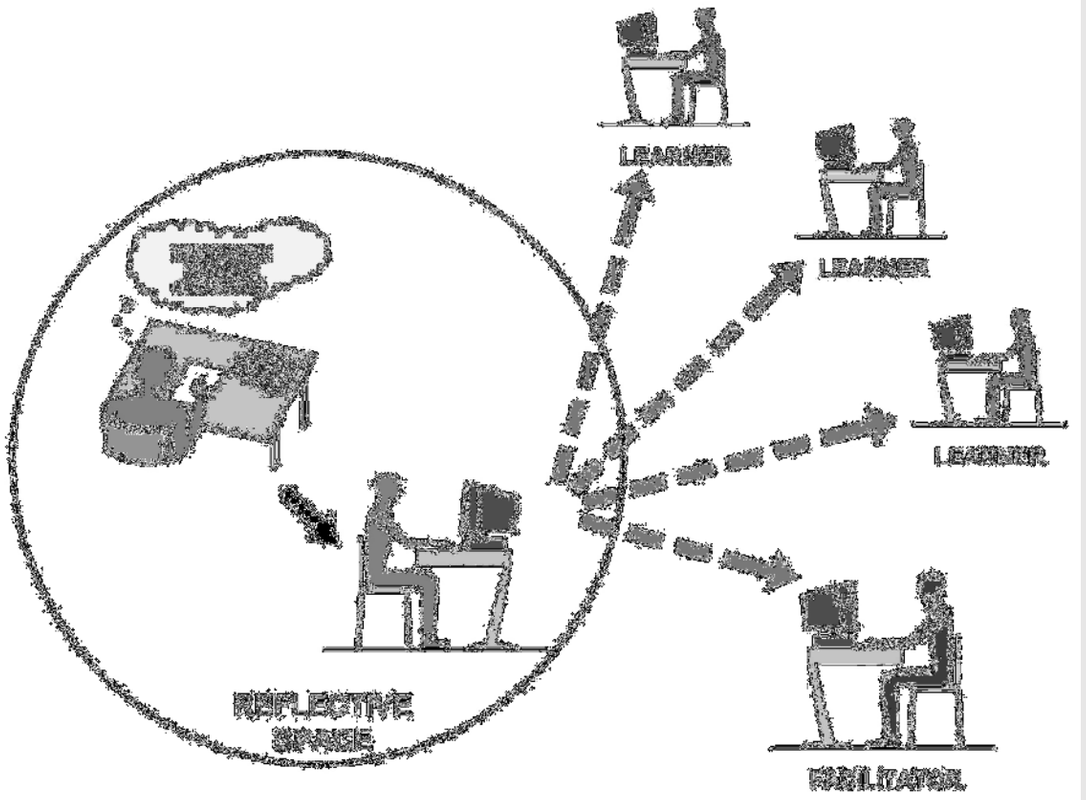
Space is, generally, defined as a dimension in which things are located and as something abstract, without meaning, while place refers to a location in the physical environment, with meaning.

Place describes the actual locations in the physical environment. While a space can be reimagined to make places, places are differentiated settings specifically crafted and curated into the physical environment. A place is a niche in the physical environment.



What happened remotely?

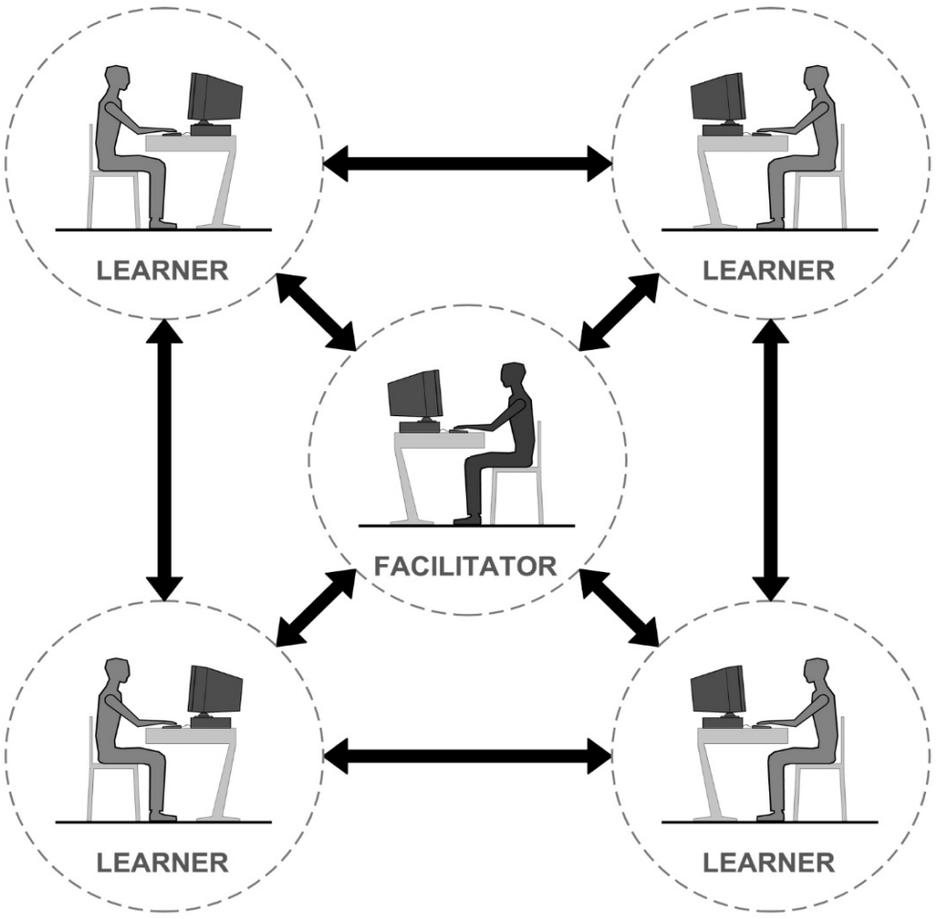
Integrating Technology



Distance Learning

- How do transactions take place remotely?
- What are the transactions that occur?
- Are learners fully participating in their knowledge acquisition?
- Do students display high levels of engagement?
- Do teachers showcase high levels of engagement?

Integrating Technology



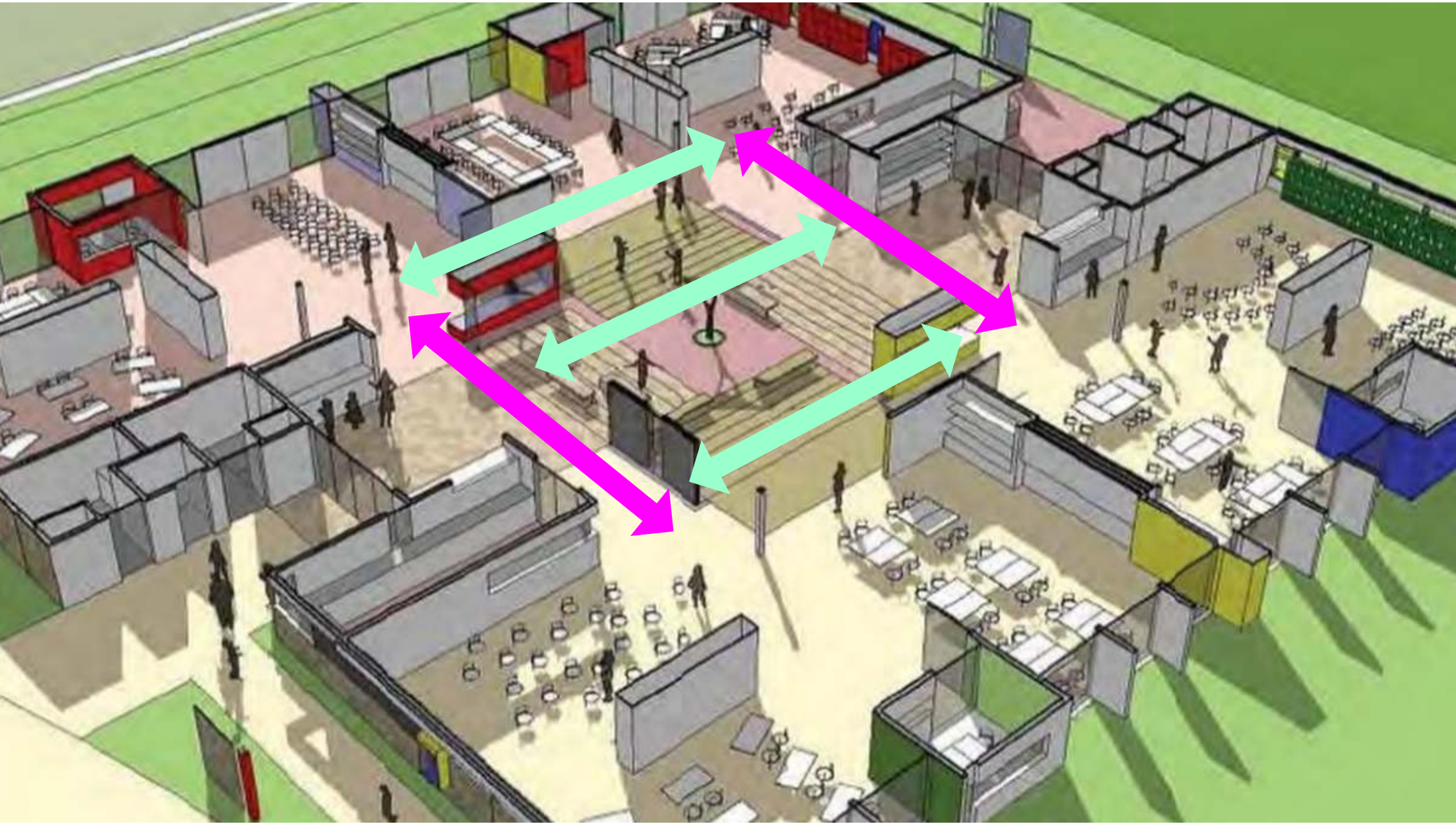
Distance Learning

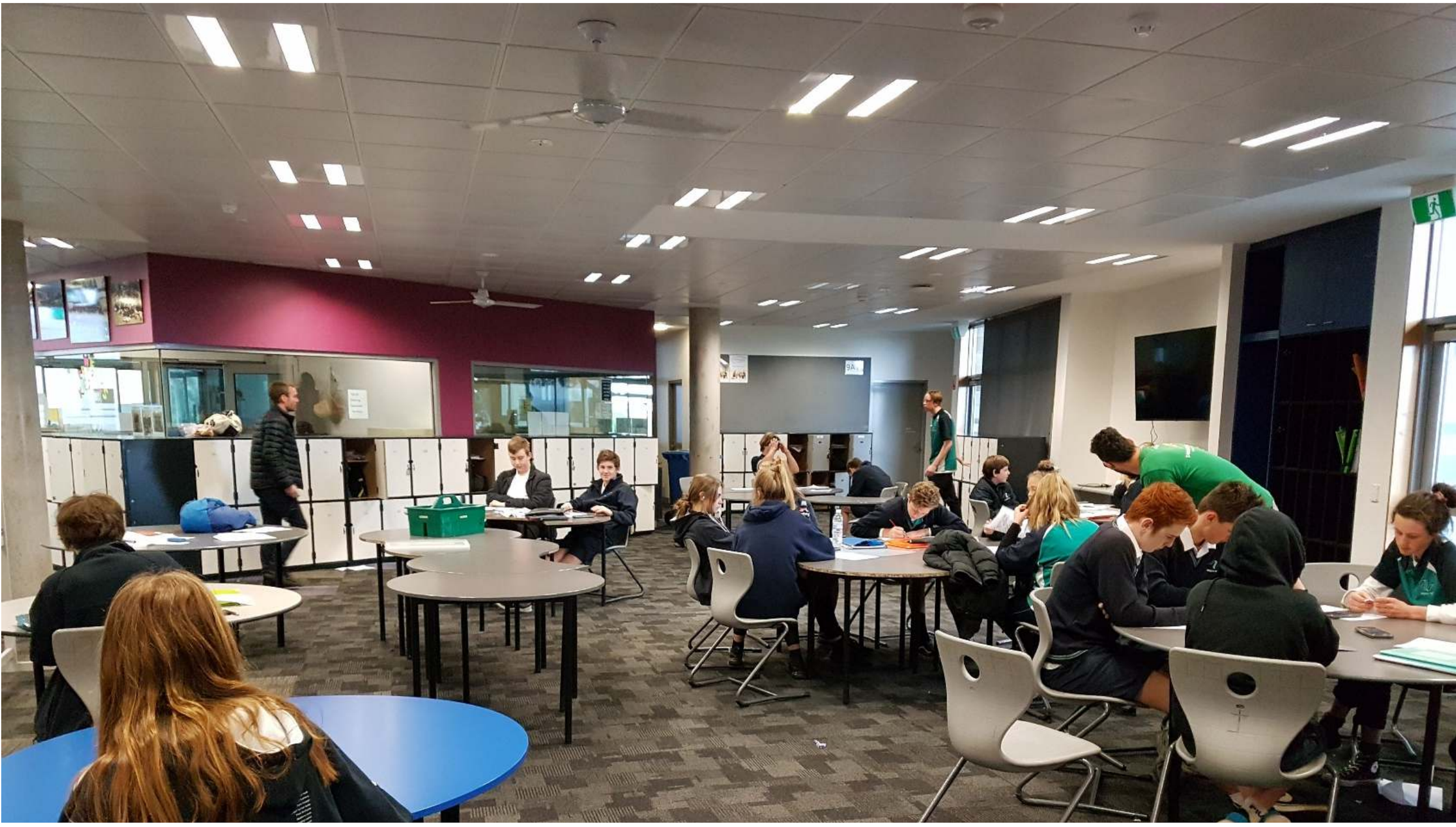
- What is the role of the teacher in these environments?
- What is the role of the student in the virtual environment?
- Within these settings, are students encouraged to enter reflective space?
- Is reflection considered important/relevant to the developing student?
- What happens when we allow people to reflect on their experiences?

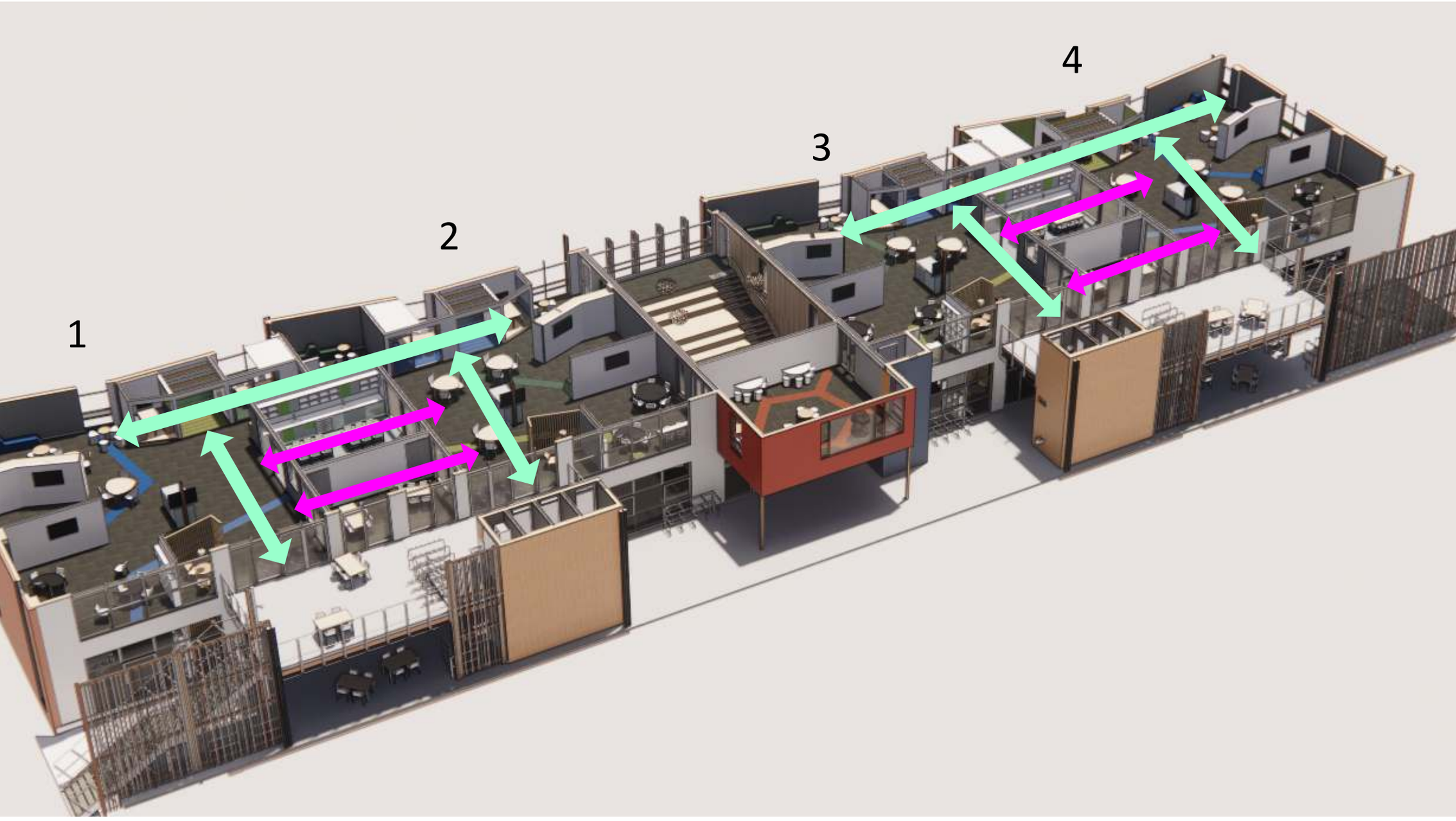
What is an **Innovative Learning Environment?**

What is **Innovative Architecture**?

What is **Innovative Education**?



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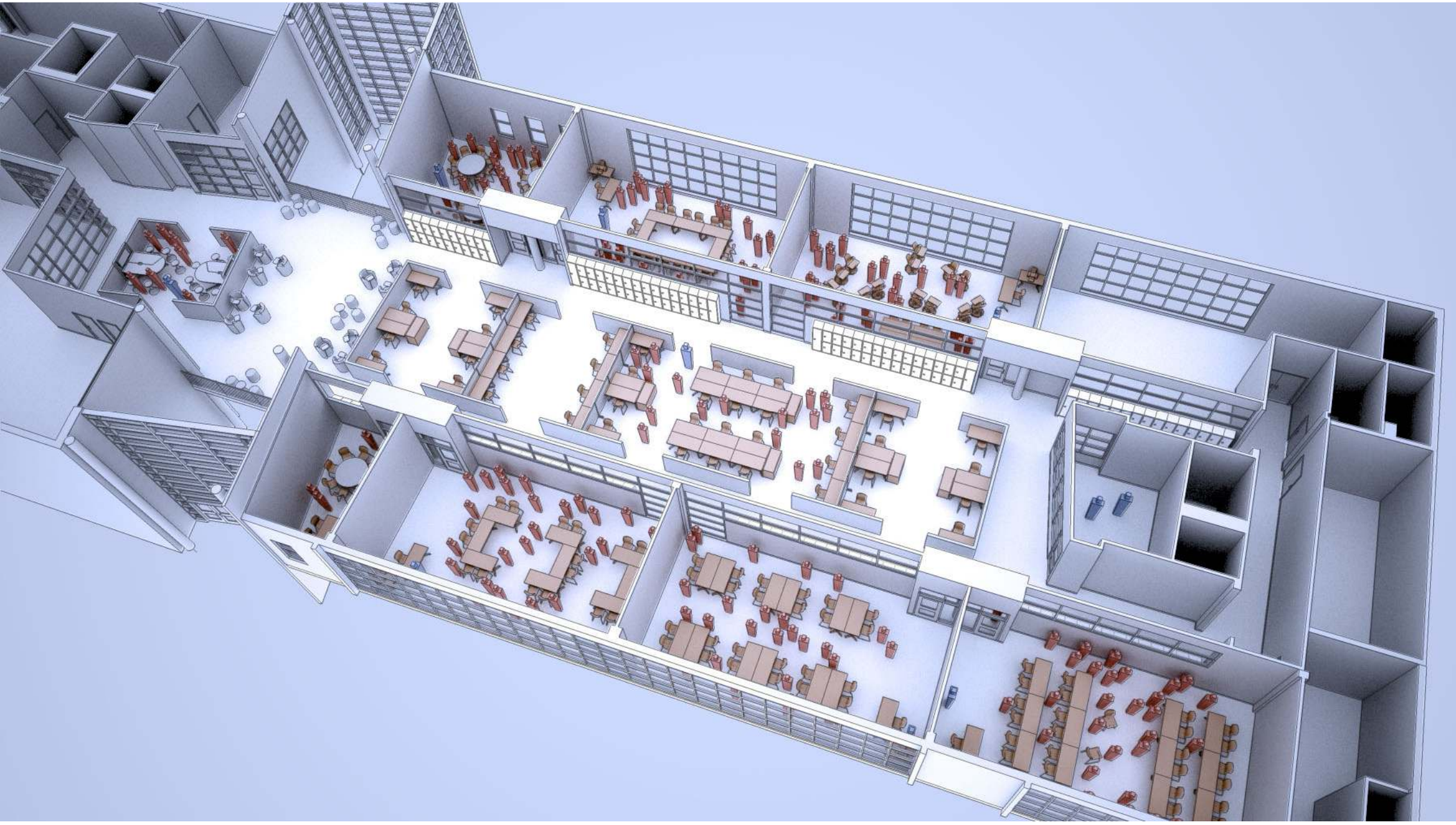
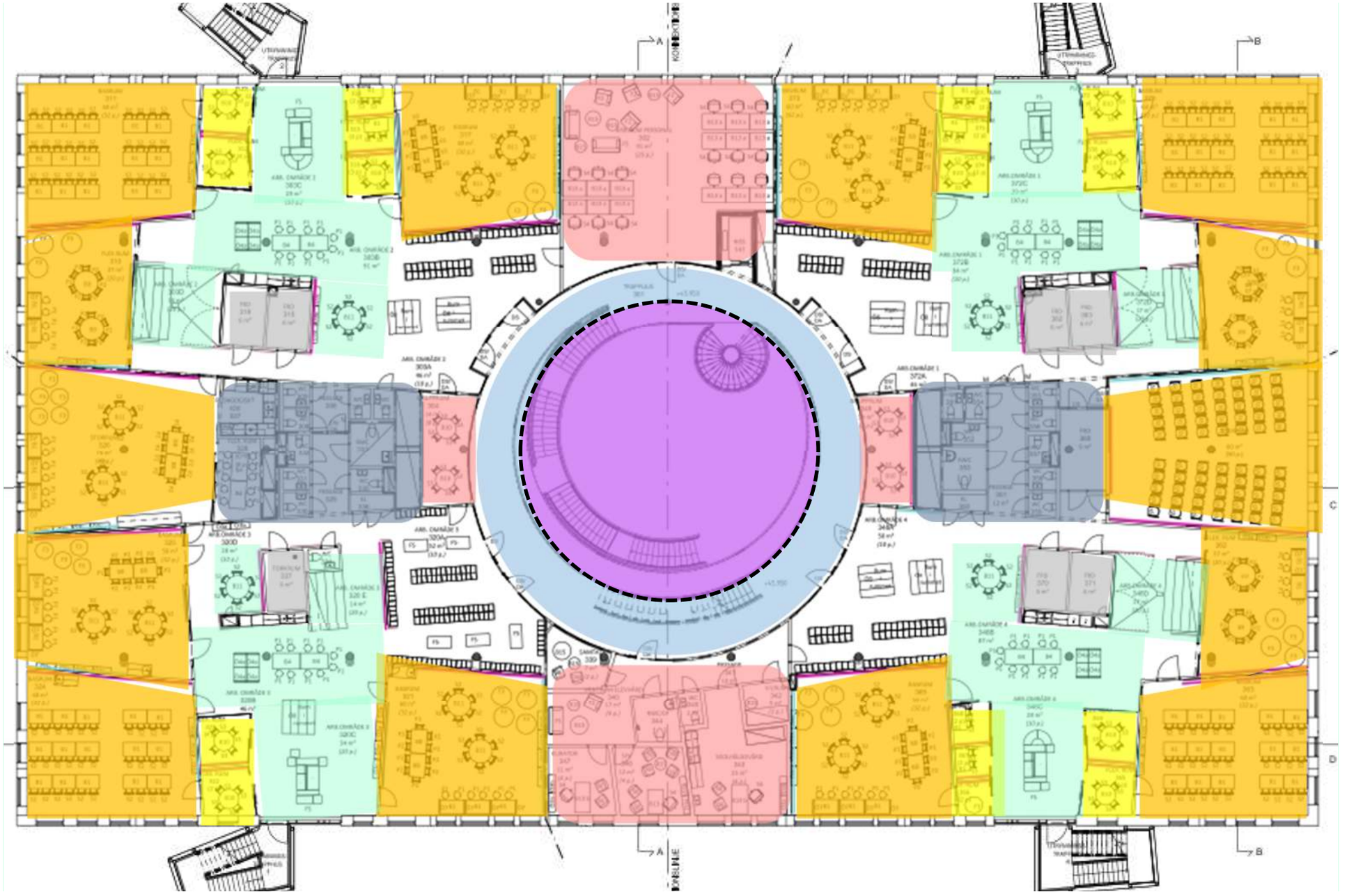




What is **Innovative Education**?

ADVANCING NOTIONS ABOUT 21ST CENTURY LEARNING

21st Century Learning Principles

1. Critical Thinking
2. Collaborating
3. Creating
4. Communicating
5. **Connecting**
6. **Curating (the classroom)**
7. **Cultivating (teachers' practical knowledge)**

ENVIRONMENTS FOR LEARNING

OR

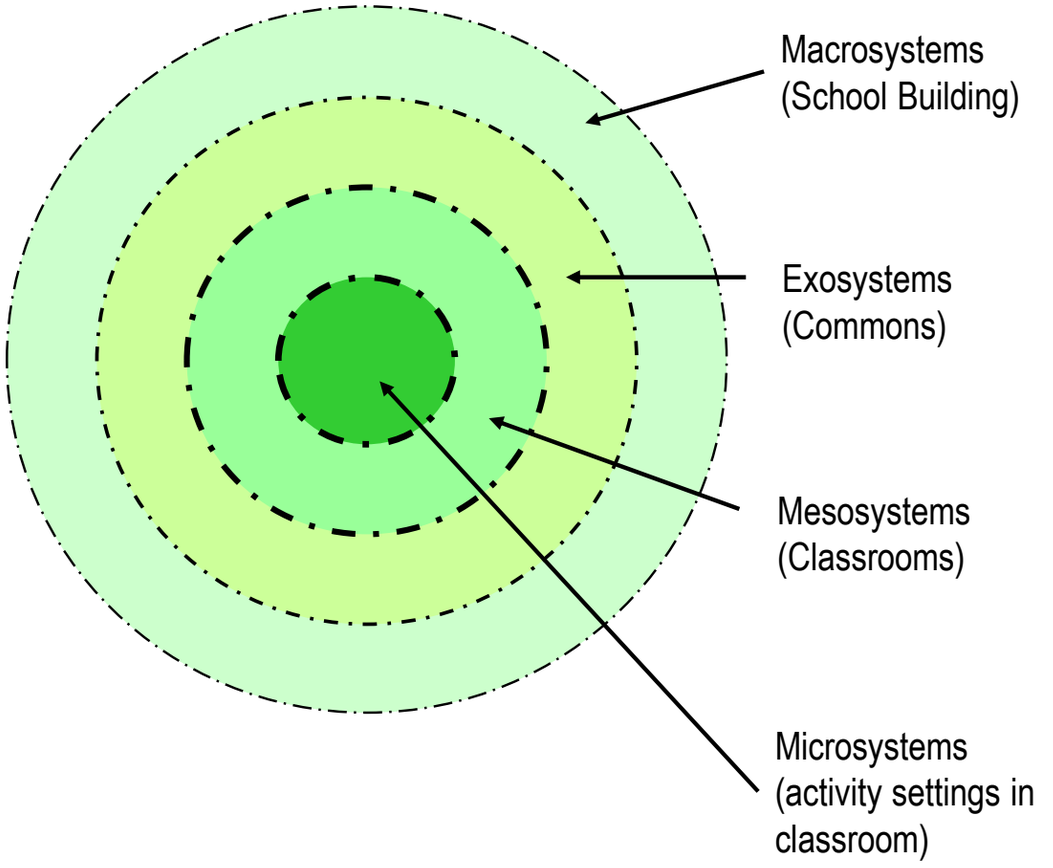
Historically

- Should we Fit the learner to the learning environment?
- Should we design the learning environment to support the learner?
- Should we design the learning environment around the learning?

After COVID

- How do we use our learning environments?
- What do they look like?

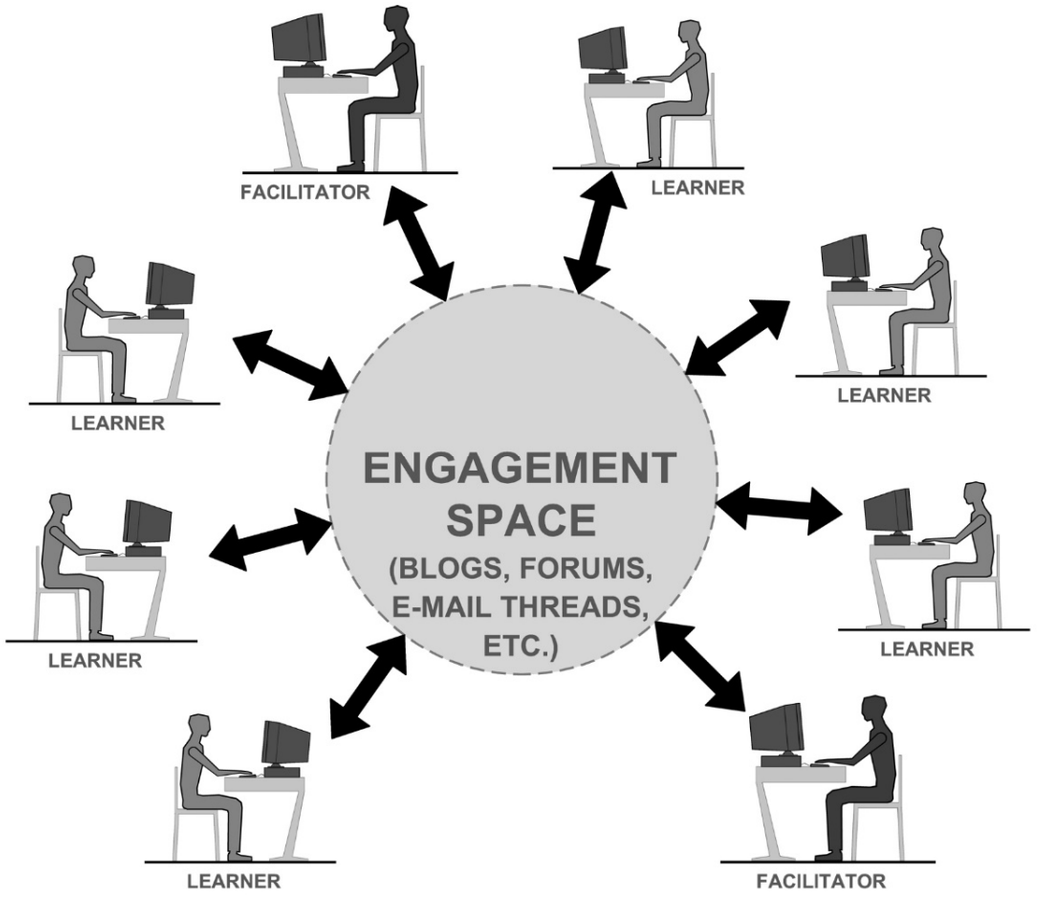
Environments for Learning



*The **challenge** for creating dynamic learning environments is synthesising the evidence from environmental psychology, developmental psychology, architecture, and education.*

*This **integration of evidence** offers a narrative about how the learning environment may be designed to positively impact learning.*

Environments for Learning



Distance Learning

- What kinds of places are needed?
  - Safe
  - Comfortable
  - An area of retreat
- How and why do we need to support and develop:
  - student and teacher engagement; and
  - Students' and teachers' practical knowledge?
- Time:
  - Are people constrained by time these
  - places constrained by time?

UNDERSTANDING OUR LEARNING ENVIRONMENTS

Are we designing classrooms to support:

1. **Operant Conditioning & Observational Learning (passive)**

2. **Contemporary Learning Theories (active) ....**

LEARNING, THEORY AND PRACTICE

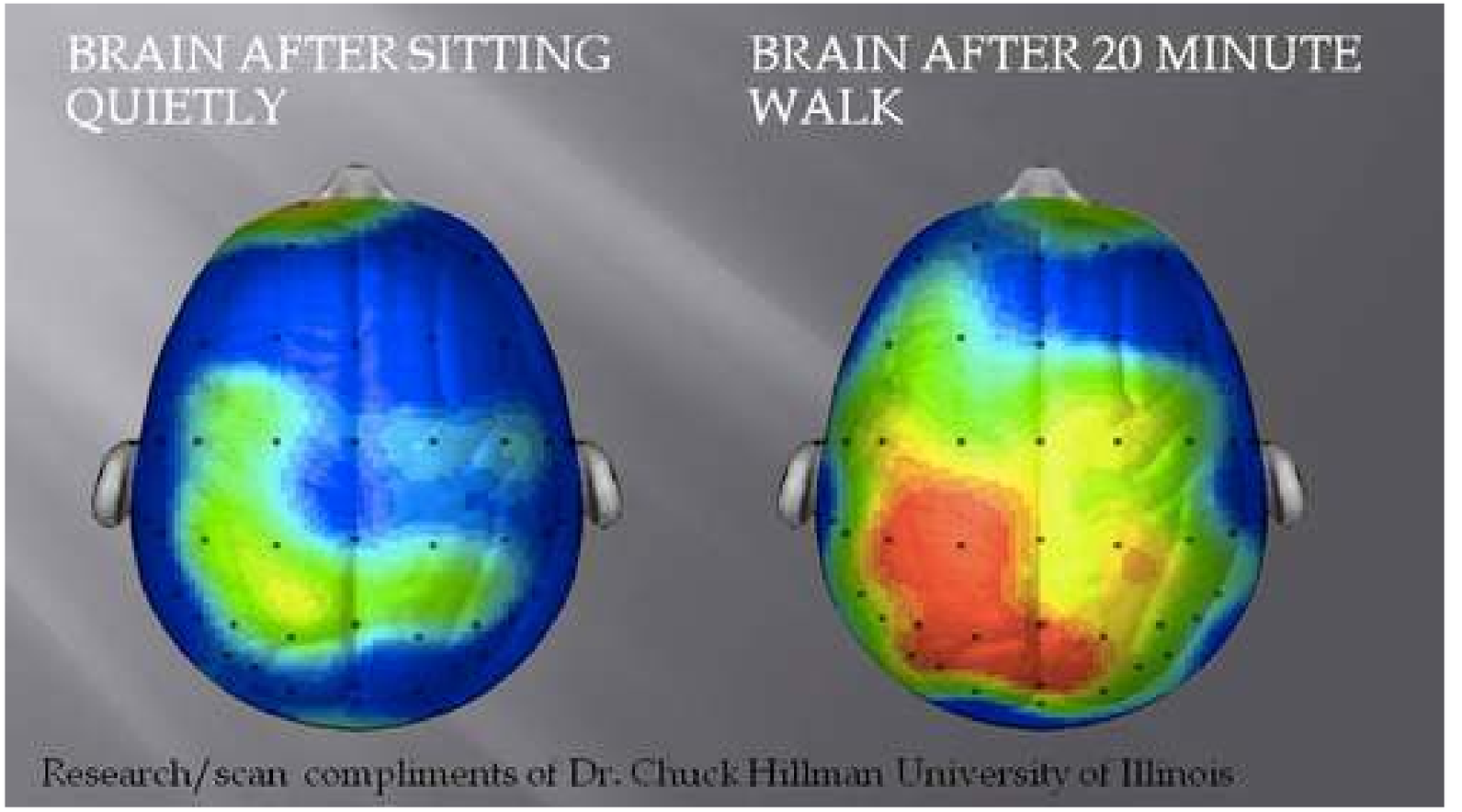
Personalized Learning: *Each student is unique and learns in different ways*

Embodied Learning: *Being in the world*—learning involves exploration and an understanding of how things relate to one another and ourselves.

Experiential Learning examines total person (thinking, feeling, perceiving, and behaving)

Situated Learning considers how individuals participate with others as they acquire knowledge and master skills.

ENVIRONMENTS FOR LEARNING (NO CLUTTER & MOVEMENT)



PART 5: BREAK

Lunch .....

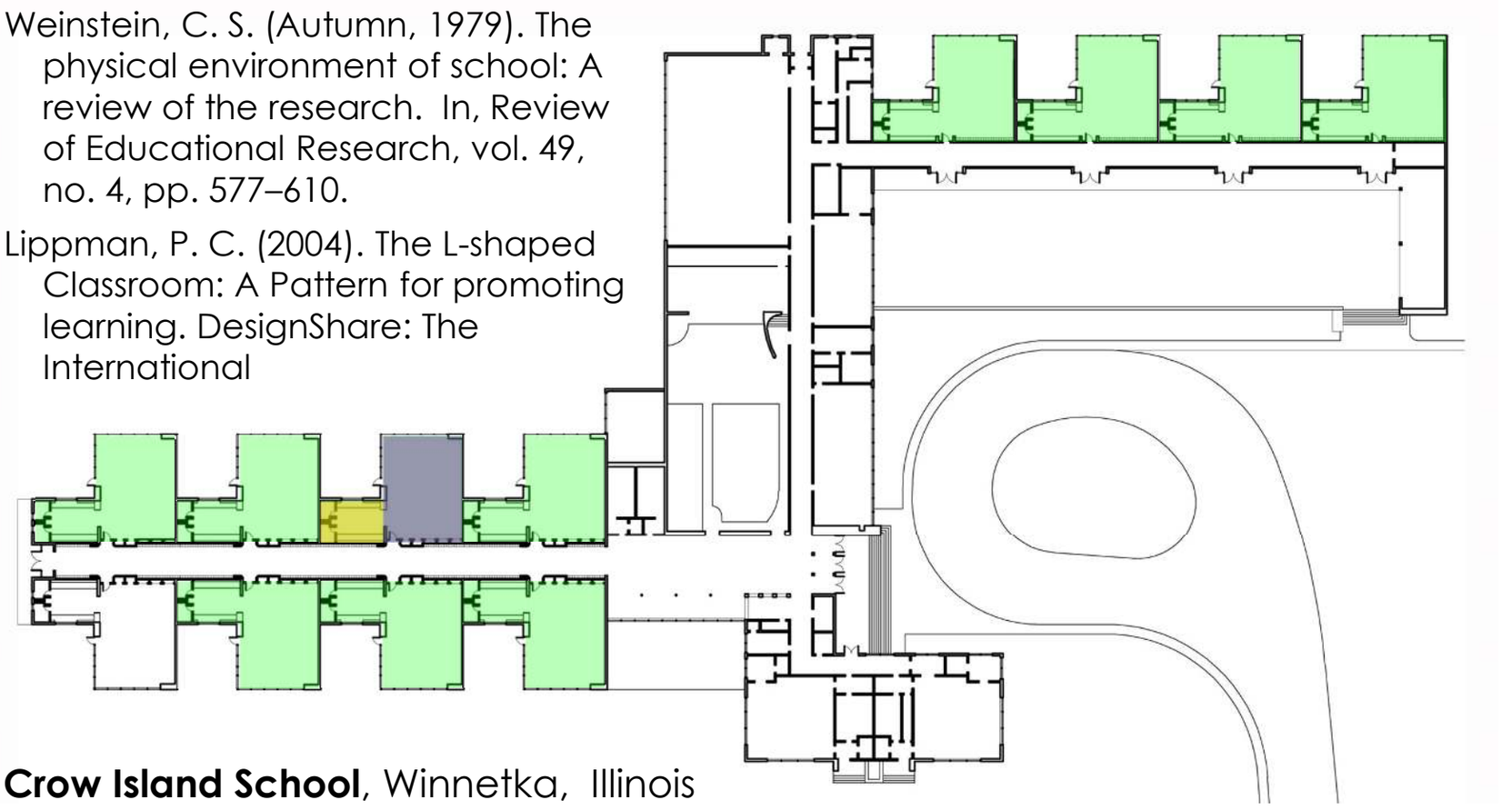
Normative Mindsets for Classrooms

L-SHAPED CLASSROOM: NORMATIVE MINDSETS

Barker, R.G. & Gump, P. (1964) Big School Small School.

Weinstein, C. S. (Autumn, 1979). The physical environment of school: A review of the research. In, Review of Educational Research, vol. 49, no. 4, pp. 577–610.

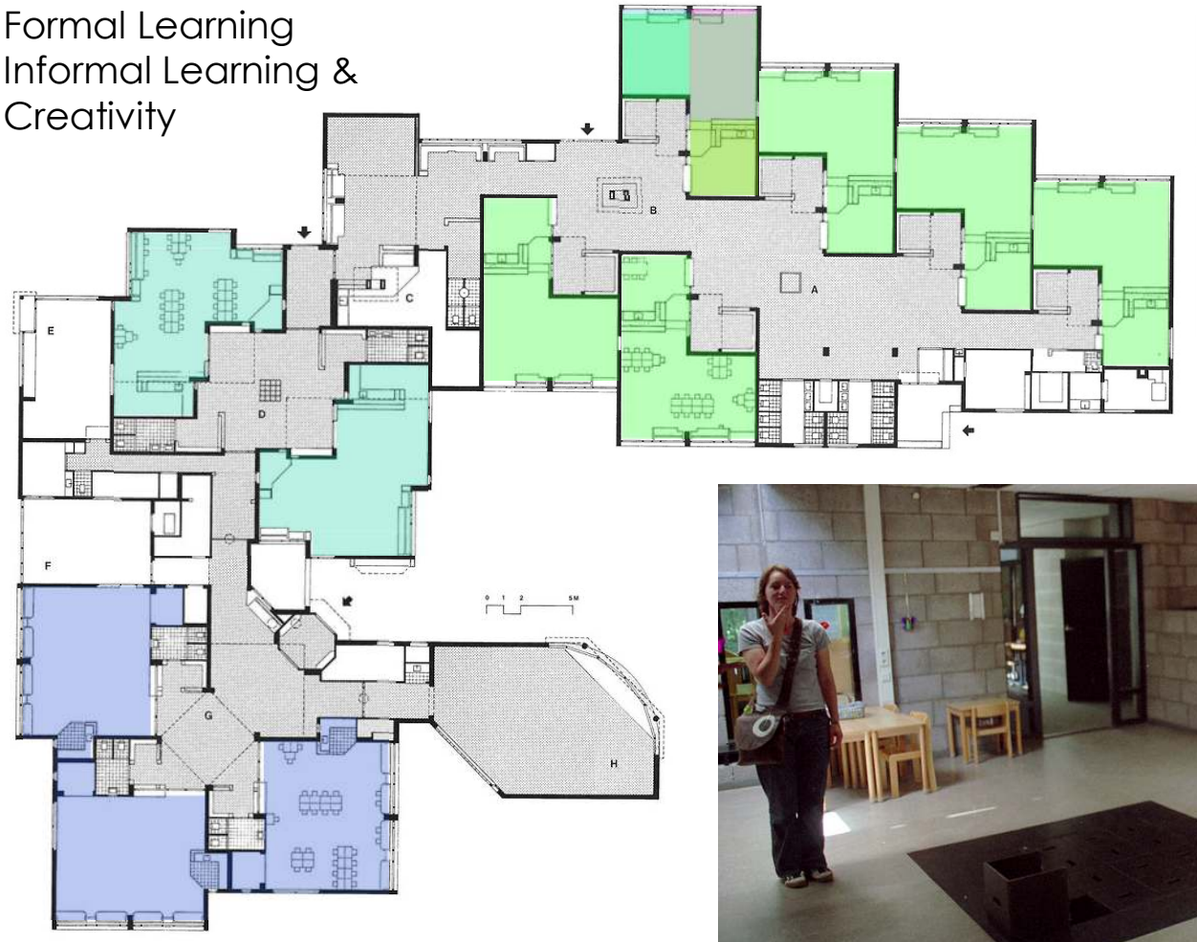
Lippman, P. C. (2004). The L-shaped Classroom: A Pattern for promoting learning. DesignShare: The International



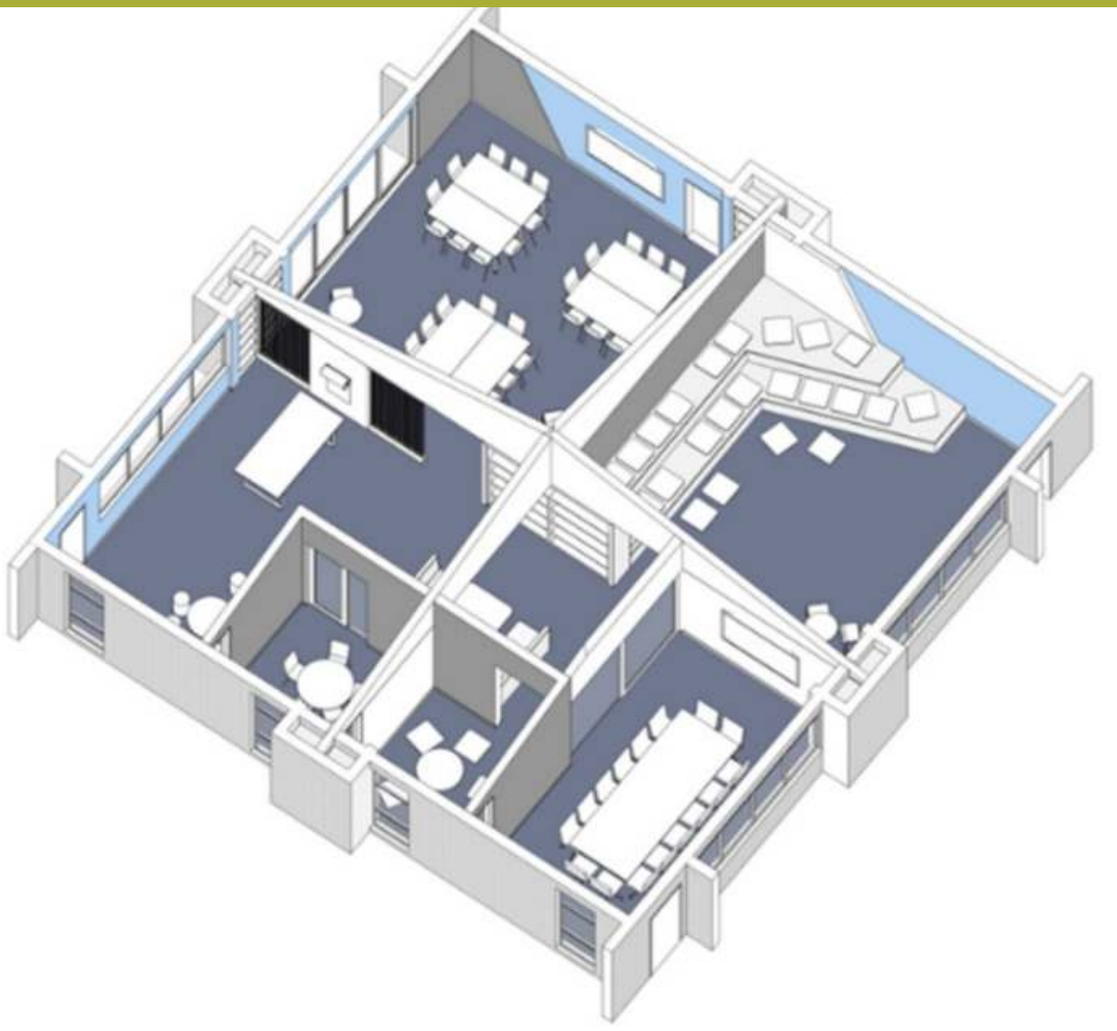
Crow Island School, Winnetka, Illinois

RESEARCH – L-SHAPED CLASSROOM

Formal Learning
Informal Learning &
Creativity



AFFORDANCE THEORY: NORMATIVE MINDSETS



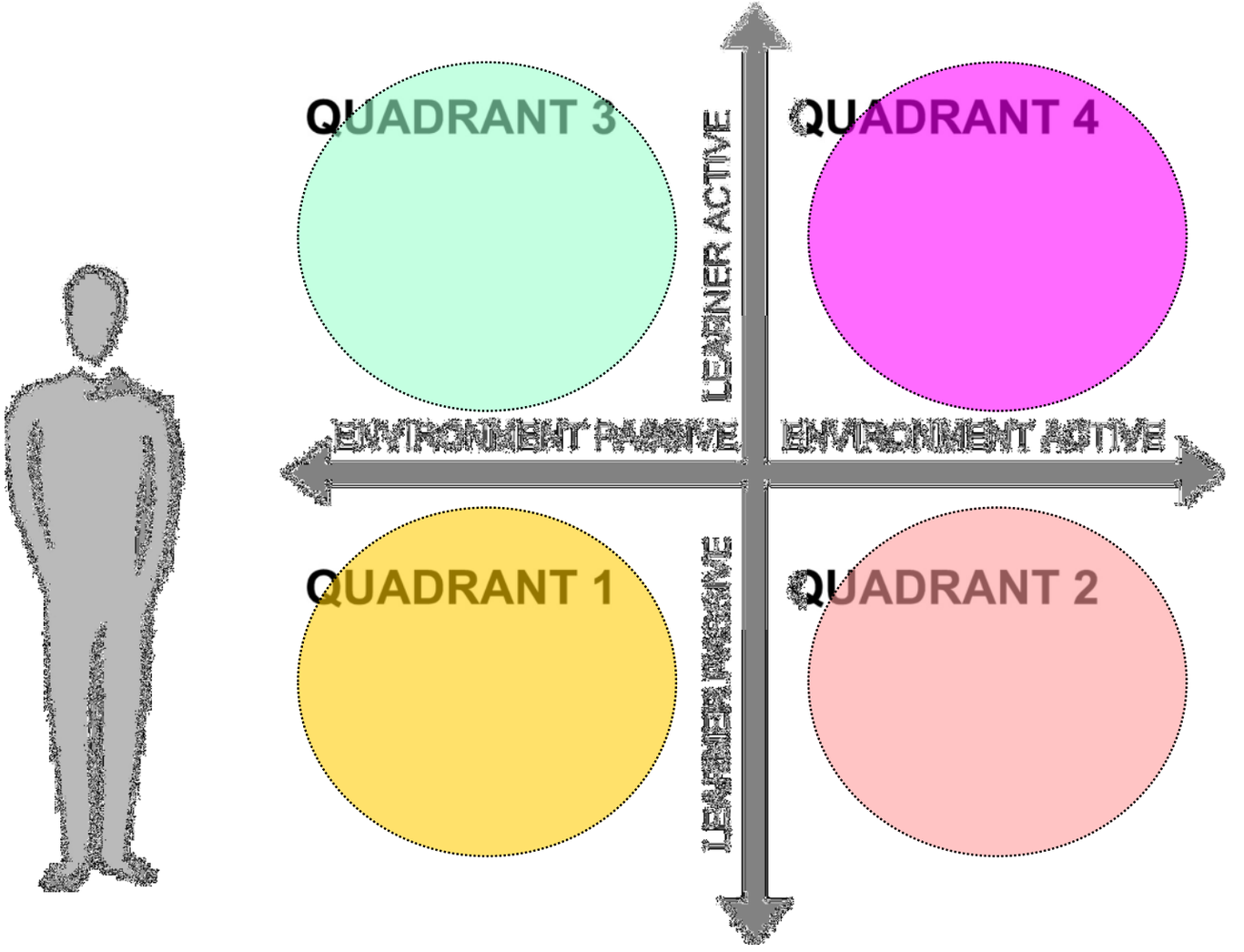
How are these spaces operationalized for120 students?

When will the classroom, the Gradang, the group rooms, and the seminar rooms be used, and how will the L-shaped space be activated?

Will there be 4 teachers moving throughout the settings?

Developing a Growth Mindset

PEDAGOGY


QUADRANT 3
QUADRANT 4
LEARNER ACTIVE
ENVIRONMENT PASSIVE
ENVIRONMENT ACTIVE
QUADRANT 1
QUADRANT 2
LEARNER PASSIVE

PEOPLE

- How would you describe your learning environments:
  - student-centred?
    - Why?
    - Why not?
  - teacher-centred?
    - Why?
    - Why not?

LET'S CONSIDER THE PEOPLE

Draw a Cognitive Map of the daily experiences of a student at St. Columba School?

- Who is the child (m/f, age, do they have siblings at the school)?
- How and when do they arrive?
- Where do they go first thing in the morning?
- From the moment the day begins to recess, what activities occur?
- What occurs during recess to lunch?
- What types of activities occur after lunch?
- When do they go home / how do they go home?

PEDAGOGY

- Are the settings inside the buildings congruent (supportive) with the formal learning activities?
  - How do they support learning?

- Are the settings outside the buildings incongruent (disruptive) with the formal learning activities?
  - How don't they encourage learning?

  - How do they discourage learning?

Normative Mindsets for Classrooms

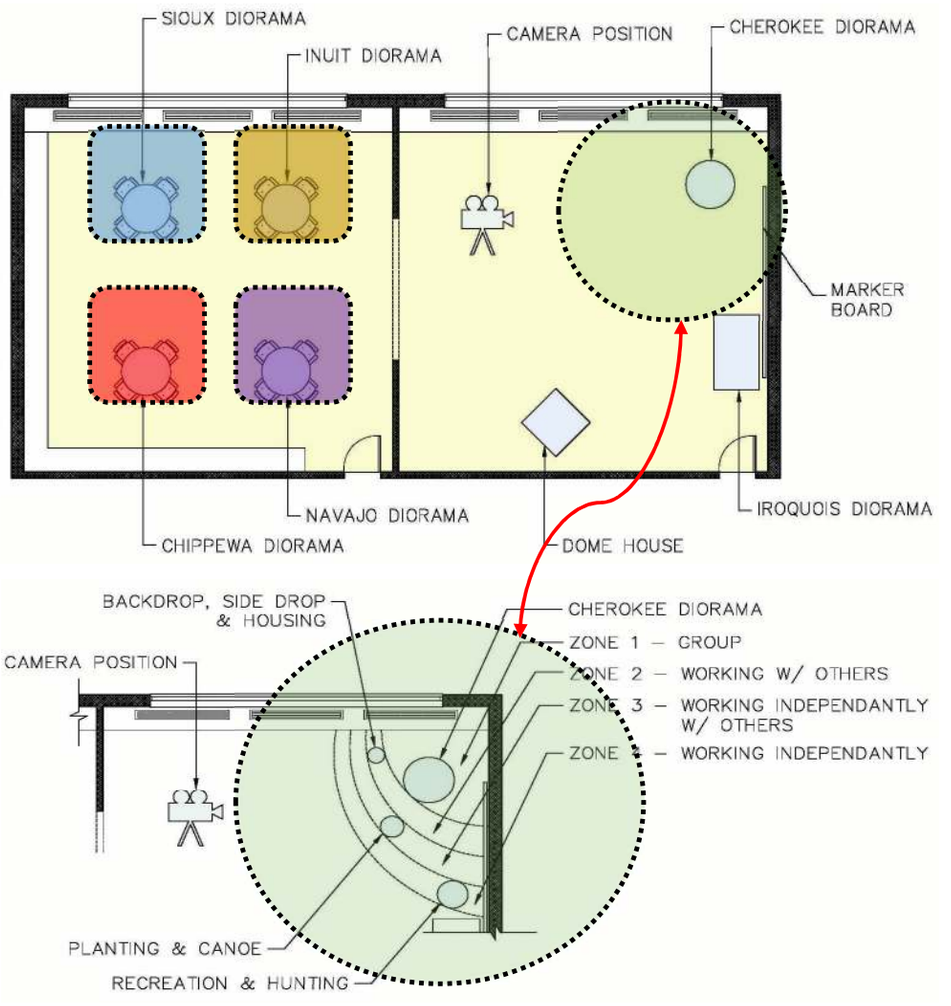
Or…..

Evidence?

And ….

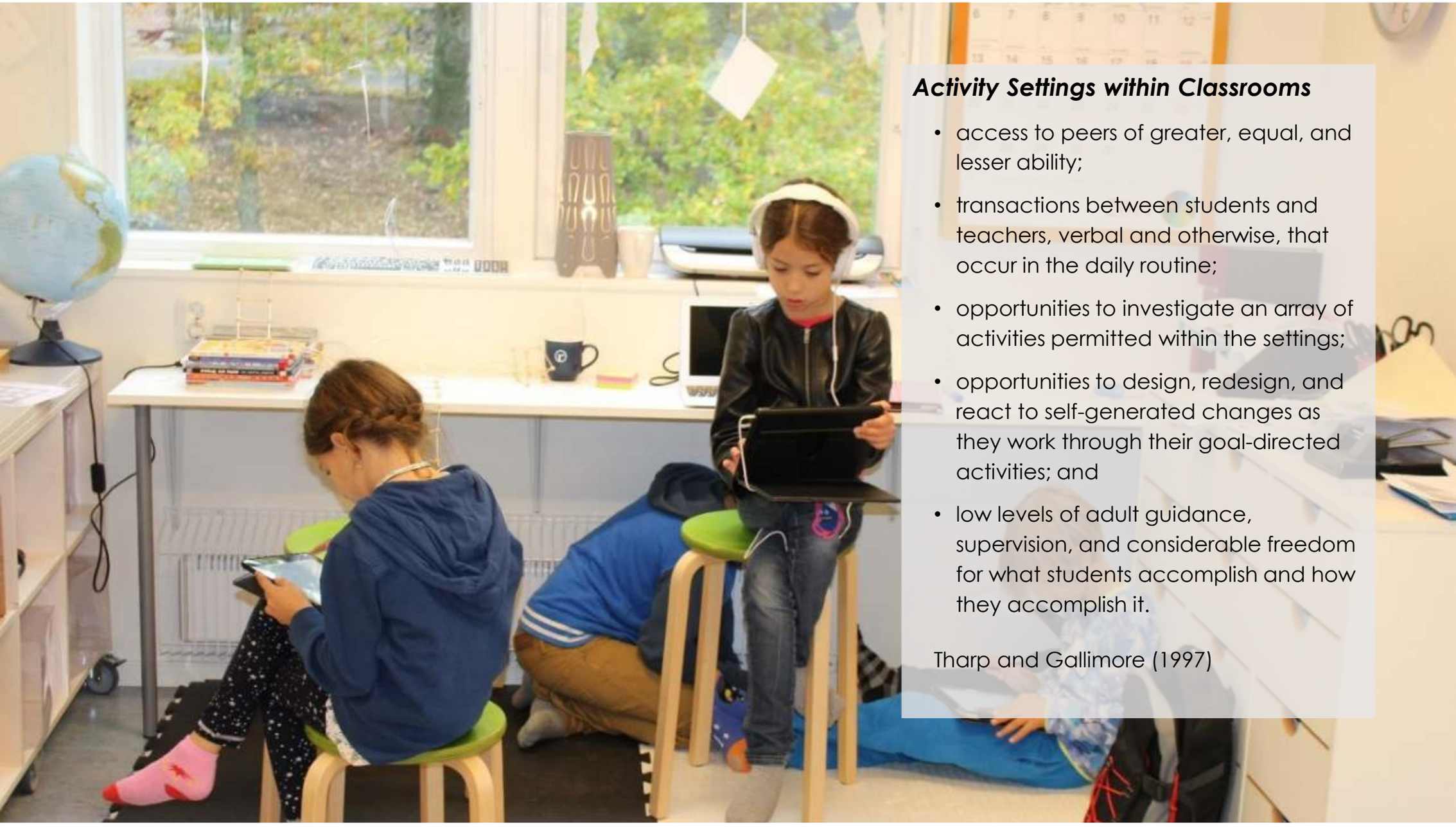
What does the Evidence tell us?

Research – On the meaning of Created Objects (Activity Settings)



Situated Learning Theory

- Authentic
- Affordances
- Cooperative Group Work
  - **Group Work** Brainstorming about the project and Planning
  - **Independent work** when working on aspects of the projects
  - **Work is** formal—activities are informal

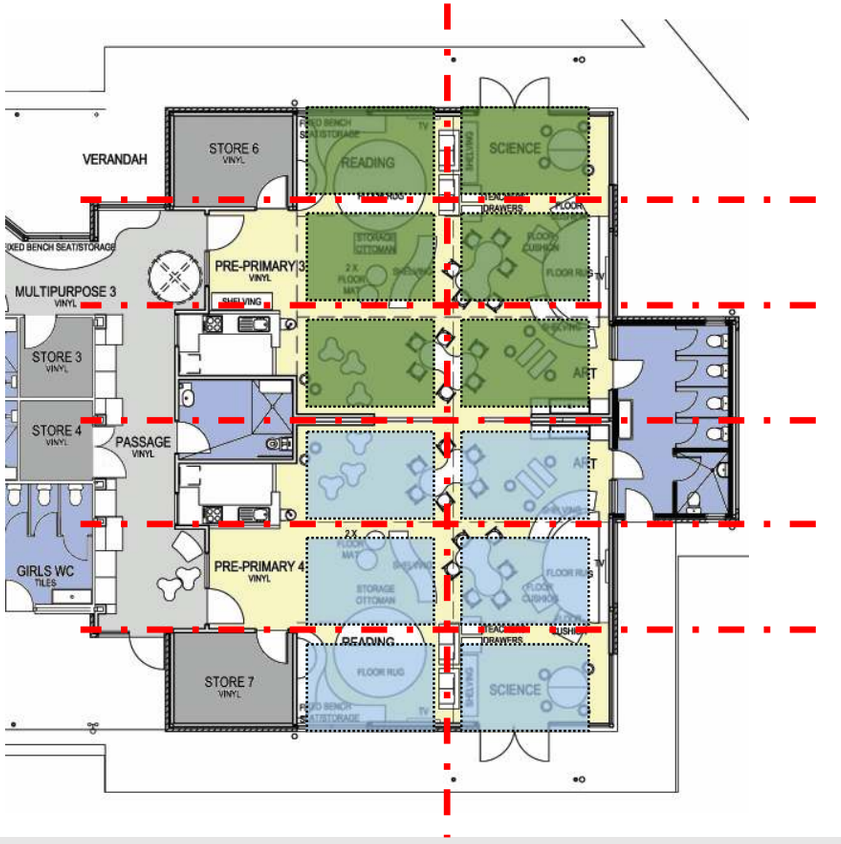


Activity Settings within Classrooms

- access to peers of greater, equal, and lesser ability;
- transactions between students and teachers, verbal and otherwise, that occur in the daily routine;
- opportunities to investigate an array of activities permitted within the settings;
- opportunities to design, redesign, and react to self-generated changes as they work through their goal-directed activities; and
- low levels of adult guidance, supervision, and considerable freedom for what students accomplish and how they accomplish it.

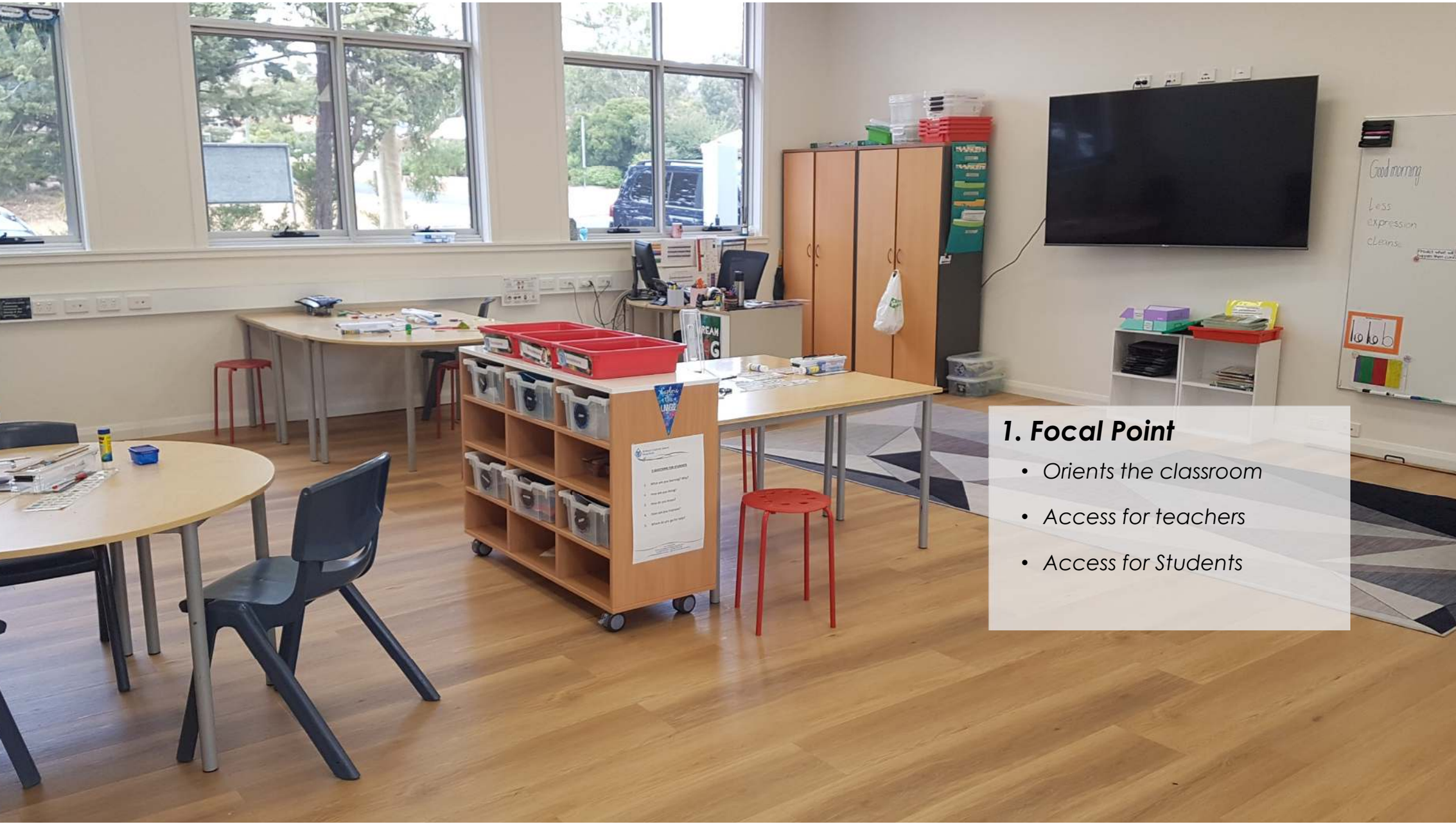
Tharp and Gallimore (1997)

ACTIVITY SETTINGS



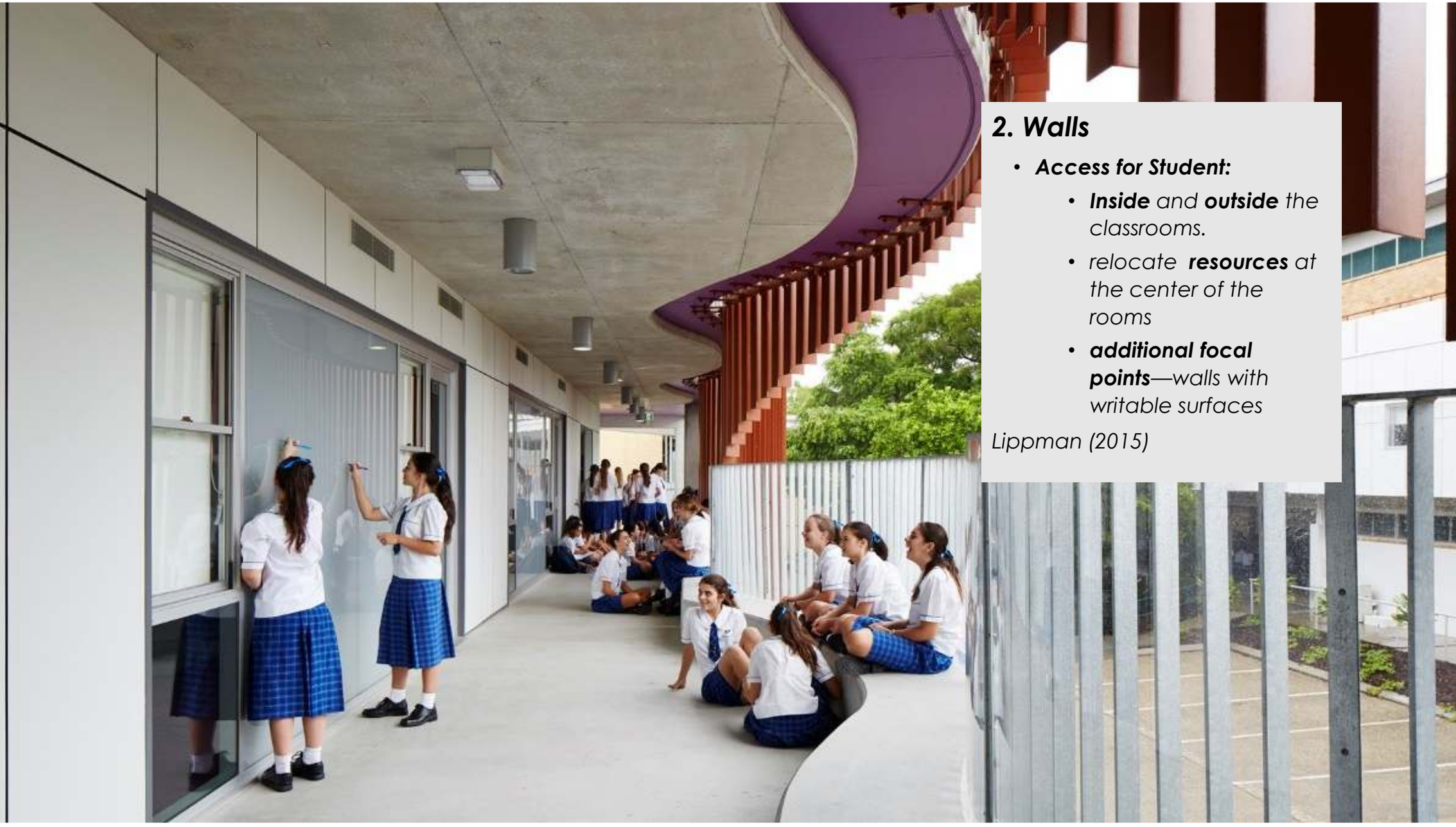
Block, Art, Reading, Construction, Creative Play, Science

Building on the Evidence: 5 Things to consider



1. Focal Point

- *Orients the classroom*
- *Access for teachers*
- *Access for Students*



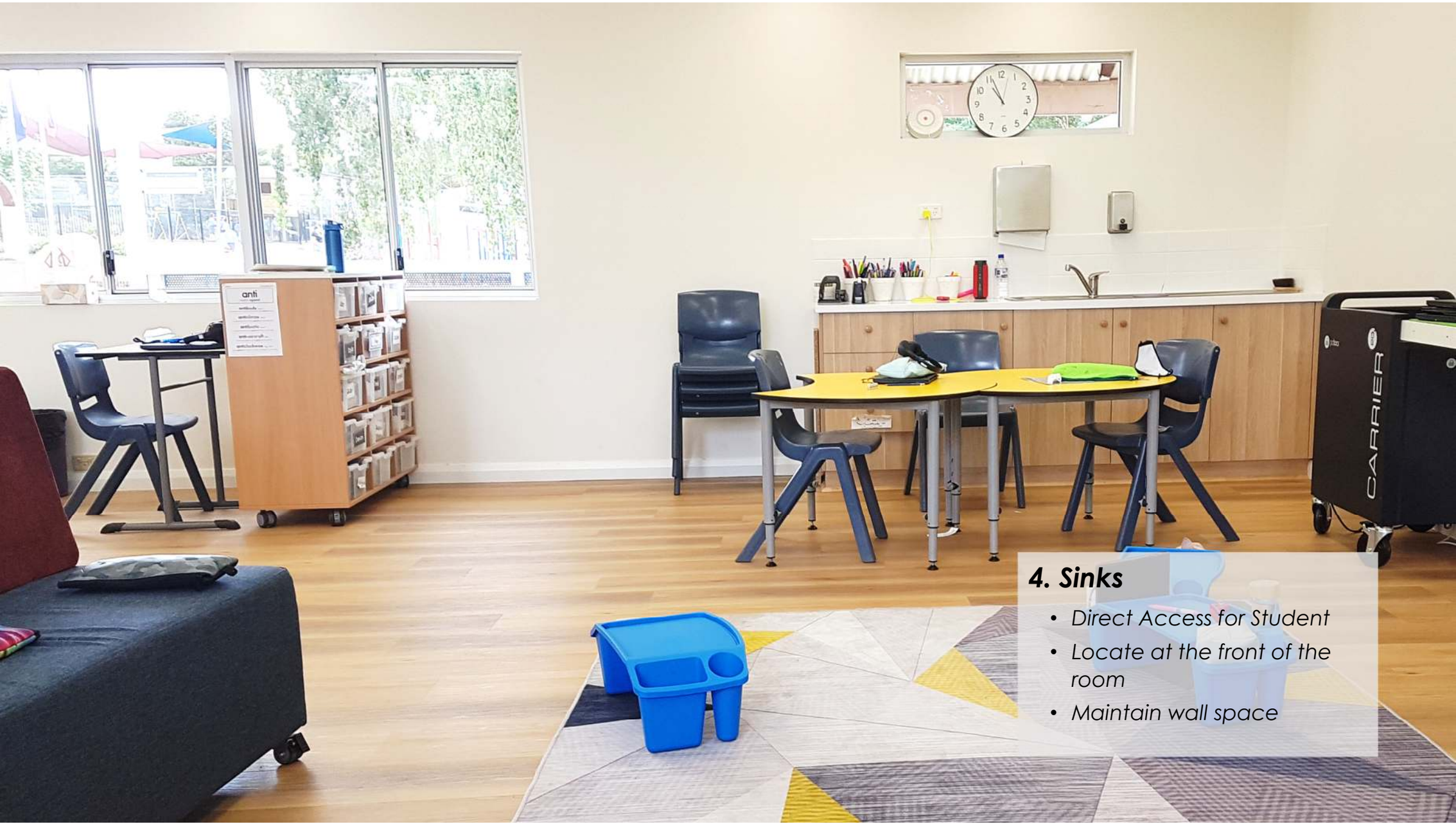
2. Walls

- ***Access for Student:***
  - ***Inside*** *and* ***outside*** *the classrooms.*
  - *relocate* ***resources*** *at the center of the rooms*
  - ***additional focal points****—walls with writable surfaces*

Lippman (2015)

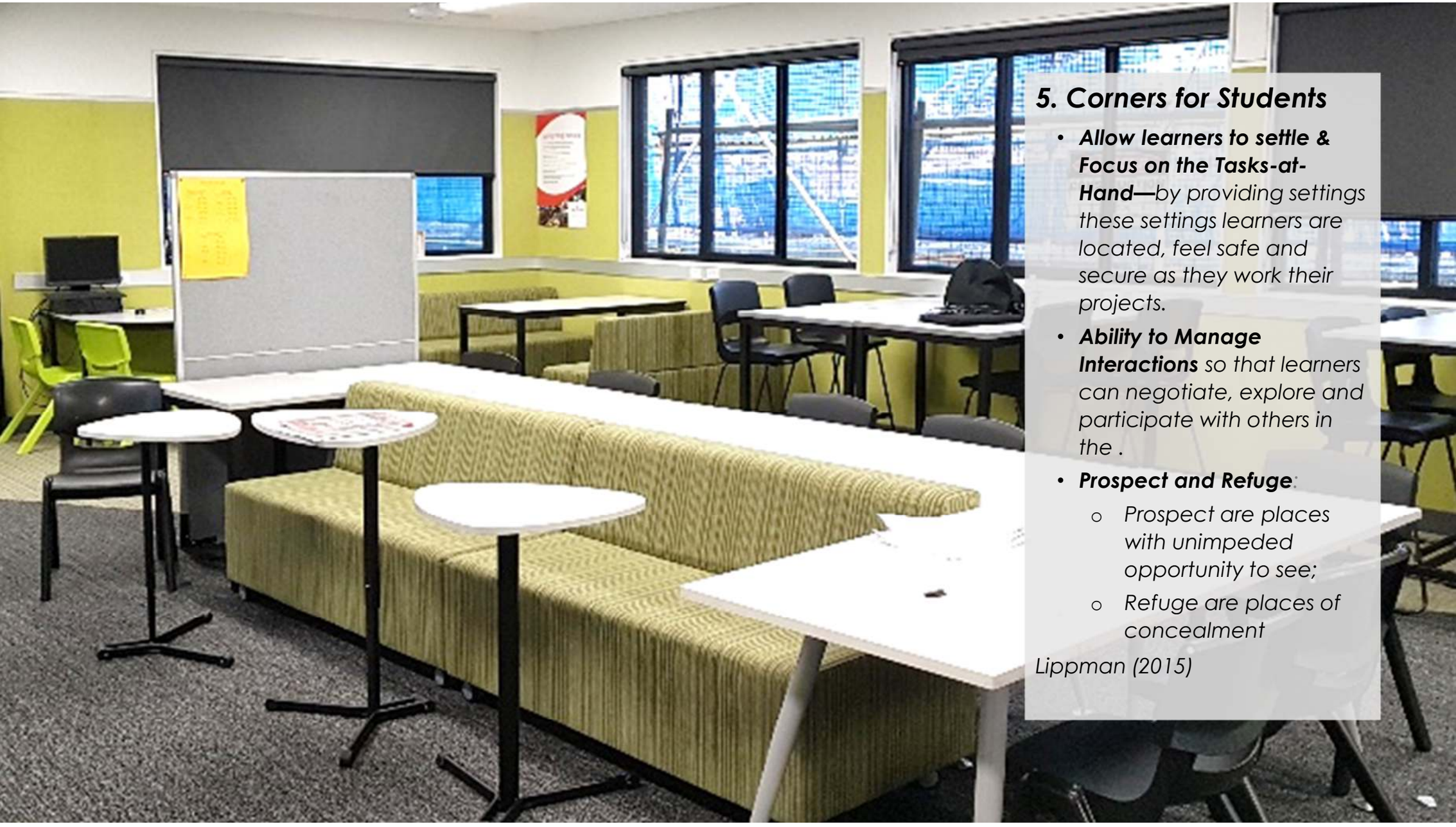
3. Doors

- ***Cavity Sliding Doors*** *between rooms (glazed or gnashed with whiteboard.*
- *Doors into classrooms with glazing*



4. Sinks

- *Direct Access for Student*
- *Locate at the front of the room*
- *Maintain wall space*



5. Corners for Students

- ***Allow learners to settle & Focus on the Tasks-at-Hand—****by providing settings these settings learners are located, feel safe and secure as they work their projects.*
- ***Ability to Manage Interactions*** *so that learners can negotiate, explore and participate with others in the .*
- ***Prospect and Refuge****:*
  - *Prospect are places with unimpeded opportunity to see;*
  - *Refuge are places of concealment*

Lippman (2015)

Curating the built environment


Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll
Ää Öö
måndag
tisdag
onsdag
torsdag
fredag


Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm
SAMLING
LUNCH
KOJAN
LÄSIS
SKRIVAN
PROJEKTER
RUM I RUMMET
ENSAMTALTER
TRIVATA YTOR
"GAMLA BANKAR"


RETURPAPPER
svt

Personal Space *within work zone(s) affords learners to allow invisible bubble around them to expand and contract, depending on the activity and with who they work.*

Access to Resources *involves individuals being able to obtain, retain and use the variety of the tools in the learning environment to solve the problems at hand.*

Ability to manage interactions *so that learners can negotiate, explore and participate with others in the*

***Prospect and Refuge**:*

- *Prospect are places with unimpeded opportunity to see;*
- *Refuge are places of concealment*

***Flexibility** is the ability:*

- *of the learner and the learning environment to meet changing demands of the group process. In other words, and*
- *of learners to move through the learning environment and discover different places to work and complete the task at hand.*

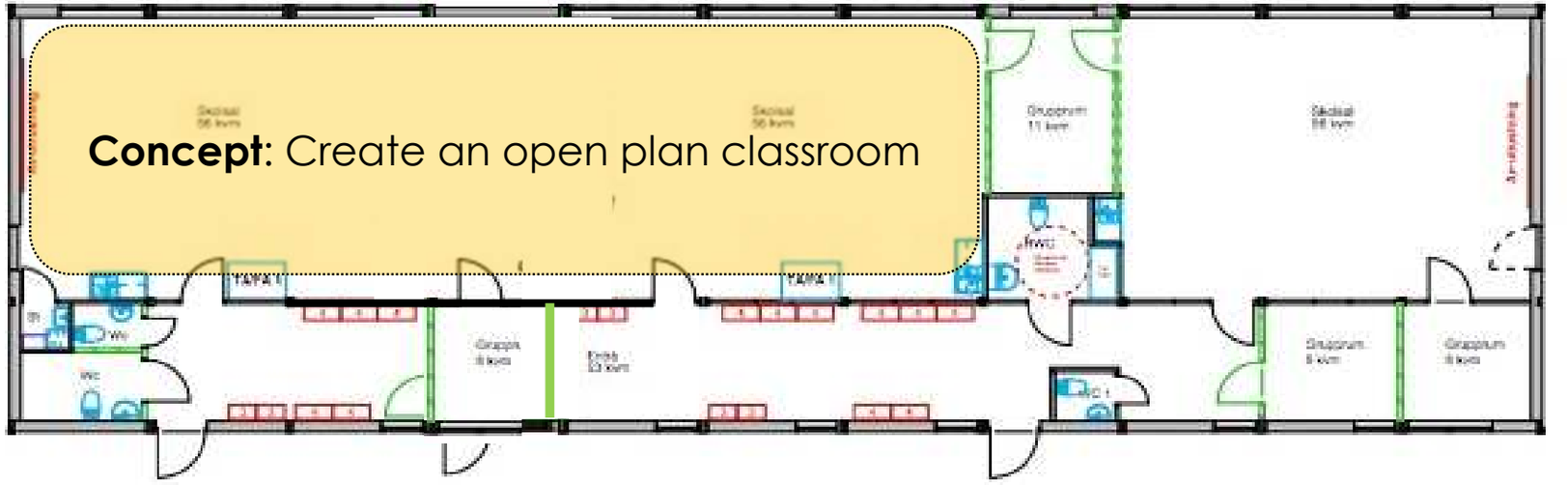
THINGS

- From your perspective, to make ***your school*** the ***most outstanding school in Sweden***, make a list of the ***things*** needed to accomplish this.

    - From this list what are the **five** things necessary to make this happen?

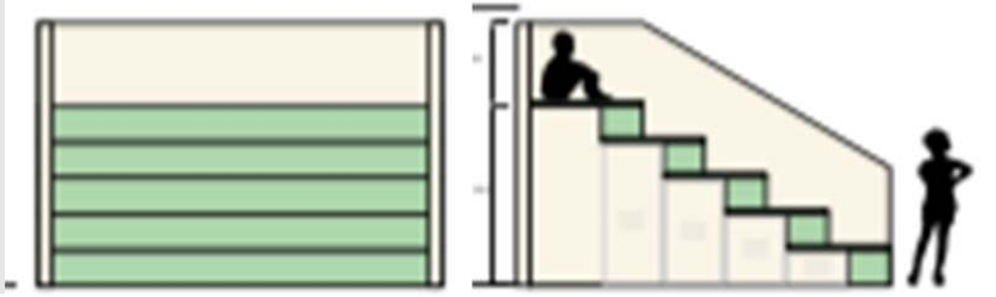
Crafting the built environment

GROWTH MINDSET

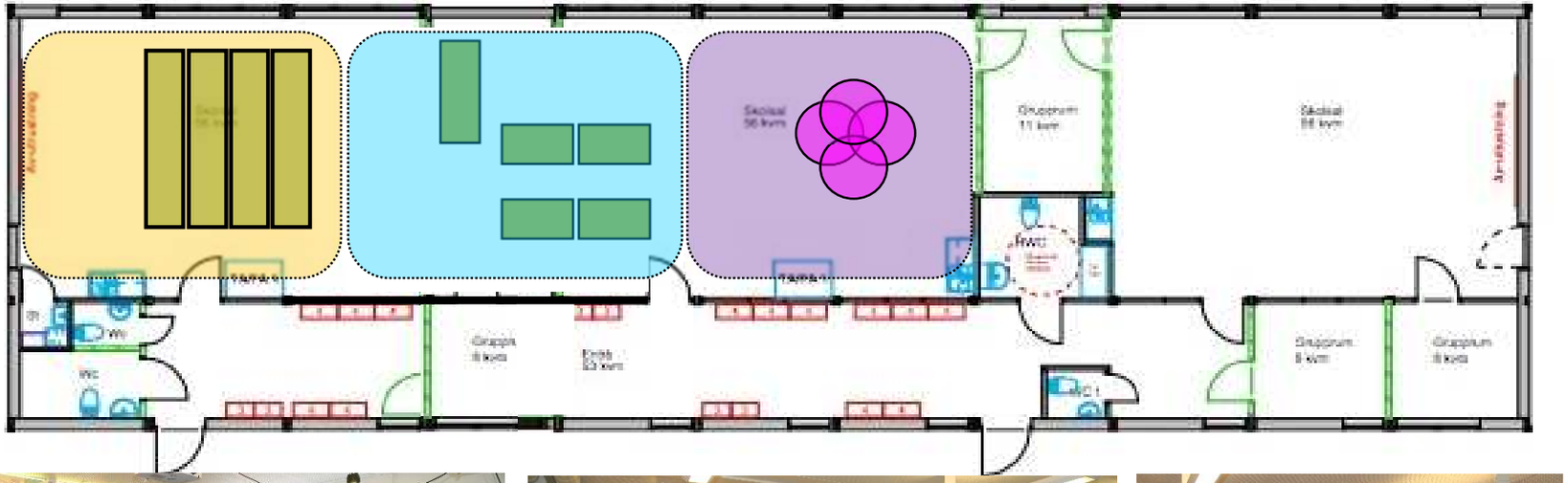


Personalized Learning Theory

- Cognitive, Emotional, and Behavioural Engagement—levels low
- No focus to Classroom.
- What is an open learning environment?



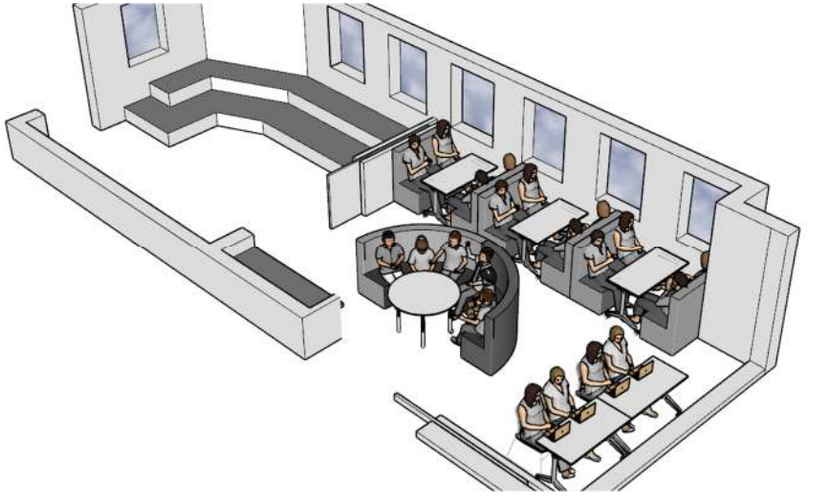
Culture



Dynamic Learning Environment

- Places defined for Whole Class Gatherings, Cooperative Group work, and Independent work
- Students have different places to work
- Students can easily move through the setting—from peripheral, guided, to full participation.

HOW DO WE CREATE PLACES FOR LEARNING?



Can we integrate these ideas outside the classrooms?

What does the research tell us?

Research – The Gateway Schools, NYC

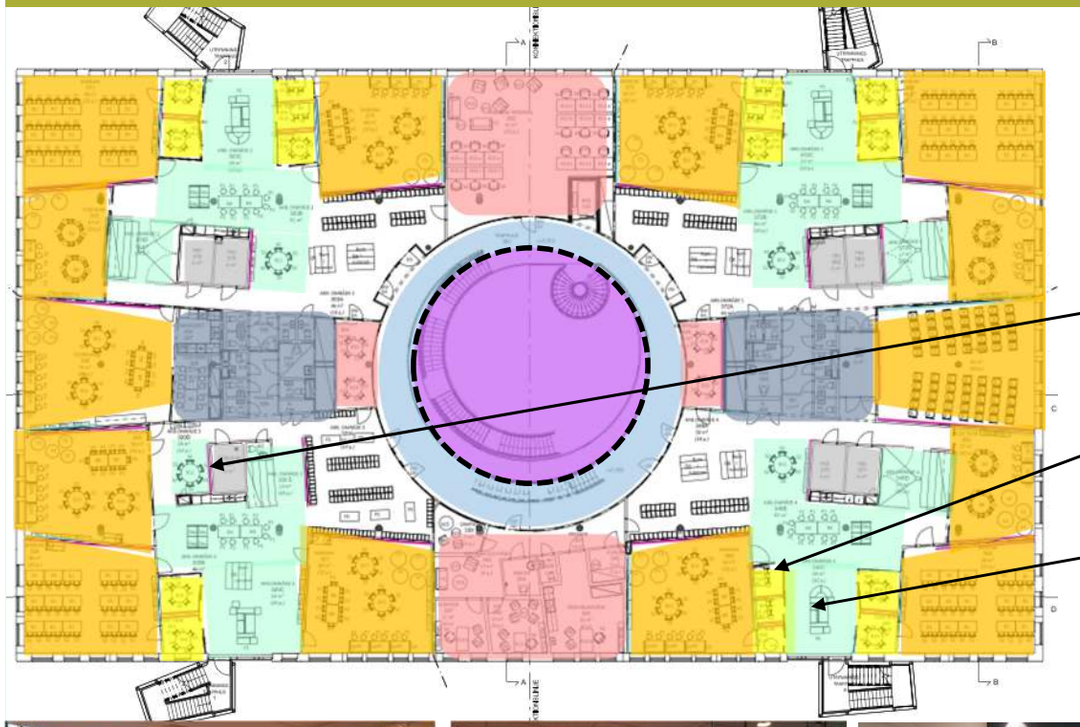
Action Research – The Gateway Schools, NYC

Findings: Affordance Theory

*Niches–**Complementary Settings** outside Classrooms)*

- *Alcoves / Nooks*
- *Group/ Seminar Rooms*
- *Nodes*

Glomstaskolan



Findings: Affordance Theory

*Niches–**Complementary Settings** outside Classrooms)*

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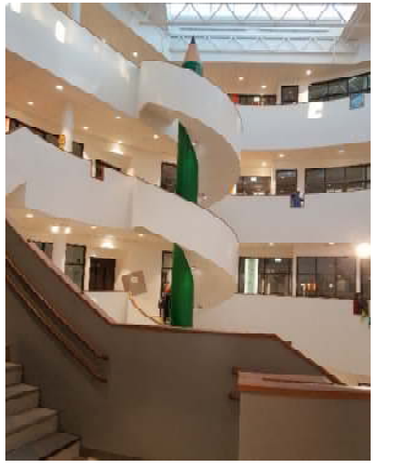


Kvibergsskolan

Findings: Affordance Theory

*Niches–**Complementary Settings** outside Classrooms)*

- *Alcoves / Nooks (?)*
- *Group/ Seminar Rooms*
- *Nodes*

Kvibergsskolan (Potential Contributions)

Extends the classroom

1. *Classroom won't be crowded*
2. *Students learning responsibility*
3. *Classrooms less noisy*

Can we re-imagine the hemvist?

Kvibergsskolan (Potential Contributions)

Extends the classroom

1. *Classroom won't be crowded*
2. *Students learning responsibility*
3. *Classrooms less noisy*

How can this be Accomplished?

Creating Places with:

1. *Differentiating and/or defining Complementary settings*
2. *Walls*
3. *Corners*

Evidence-Bbased Design

Misunderstandings about the Hemvist

The common learning area and the complementary settings did not work….

when there were 120 students occupying the common learning area.

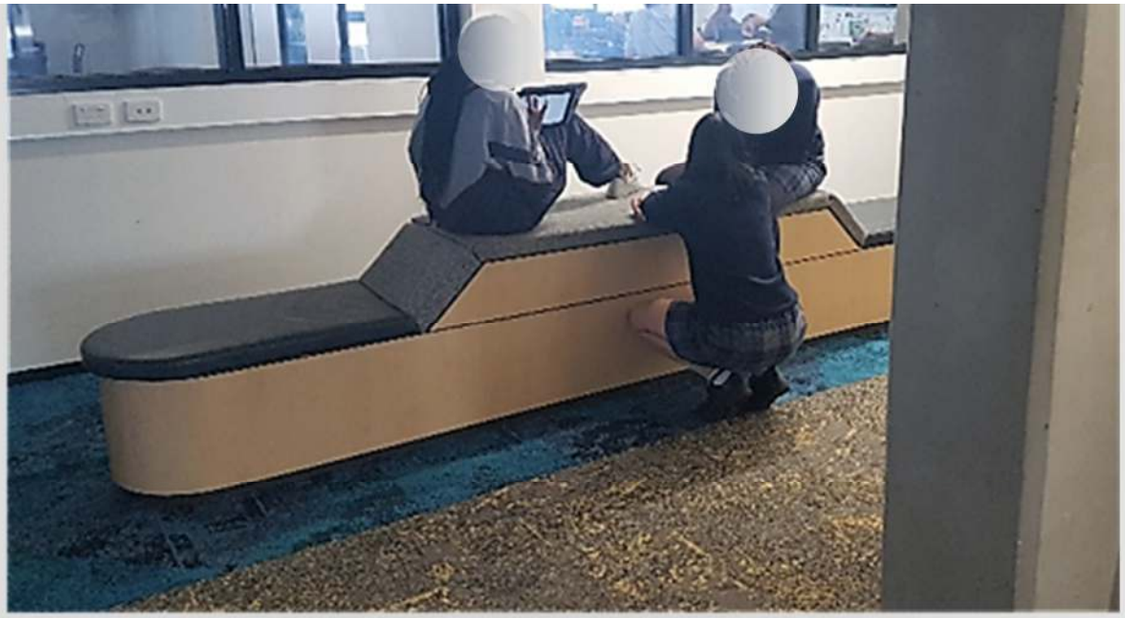
Why?

- Students competed for Space to work
- Noise was concerning
- Teachers felt the setting were too distant from their classrooms

FIXED MINDSETS AND ABSOLUTIONS

1. Differentiated Places (and/or Defined Spaces)

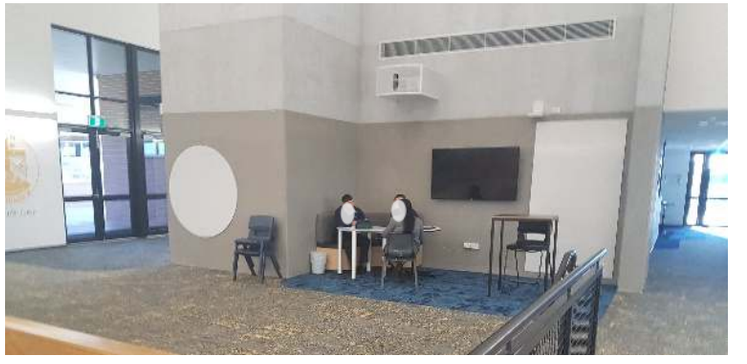
- *Differentiated places are intentionally crafted by the architect (alcoves). Defined spaces created within these settings with furniture).*
- *These settings work best when they are outside and adjacent the classrooms.*
- *Support approximately small social groupings. Each classroom should have their areas.*



EVIDENCE-BASED DESIGN

2. Corners

- *Places of safety*
- *Places that support—Creativity*
- *Places that support Independent work but can expand to support small group work.*



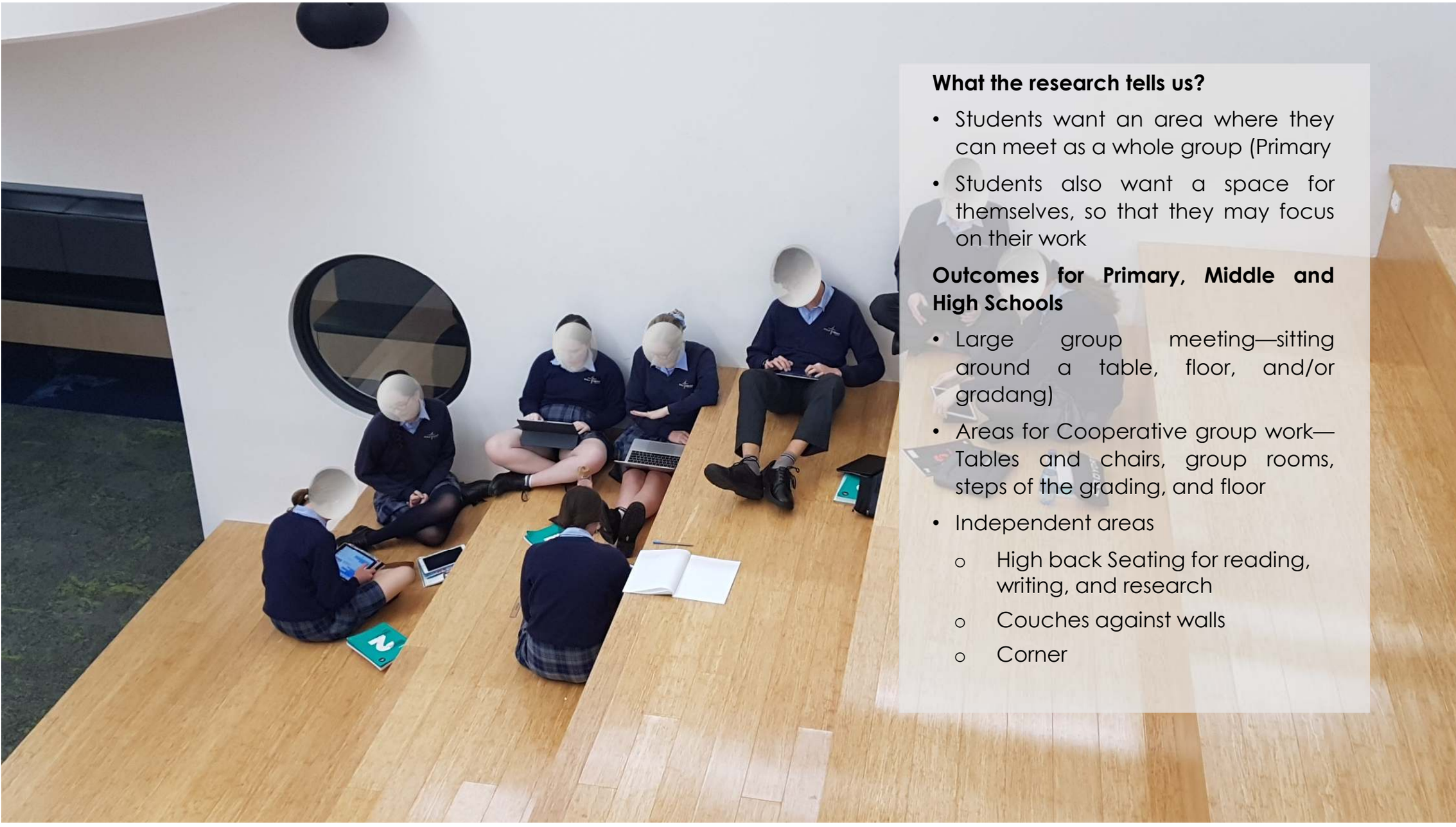
Evidence-Base Design

3. Walls

- A gathering place
- A place of safety
- Places to locate white boards for students to work

4. Teachers

- Engagement
- Practical Knowledge
- Shared and Collective practical knowledge



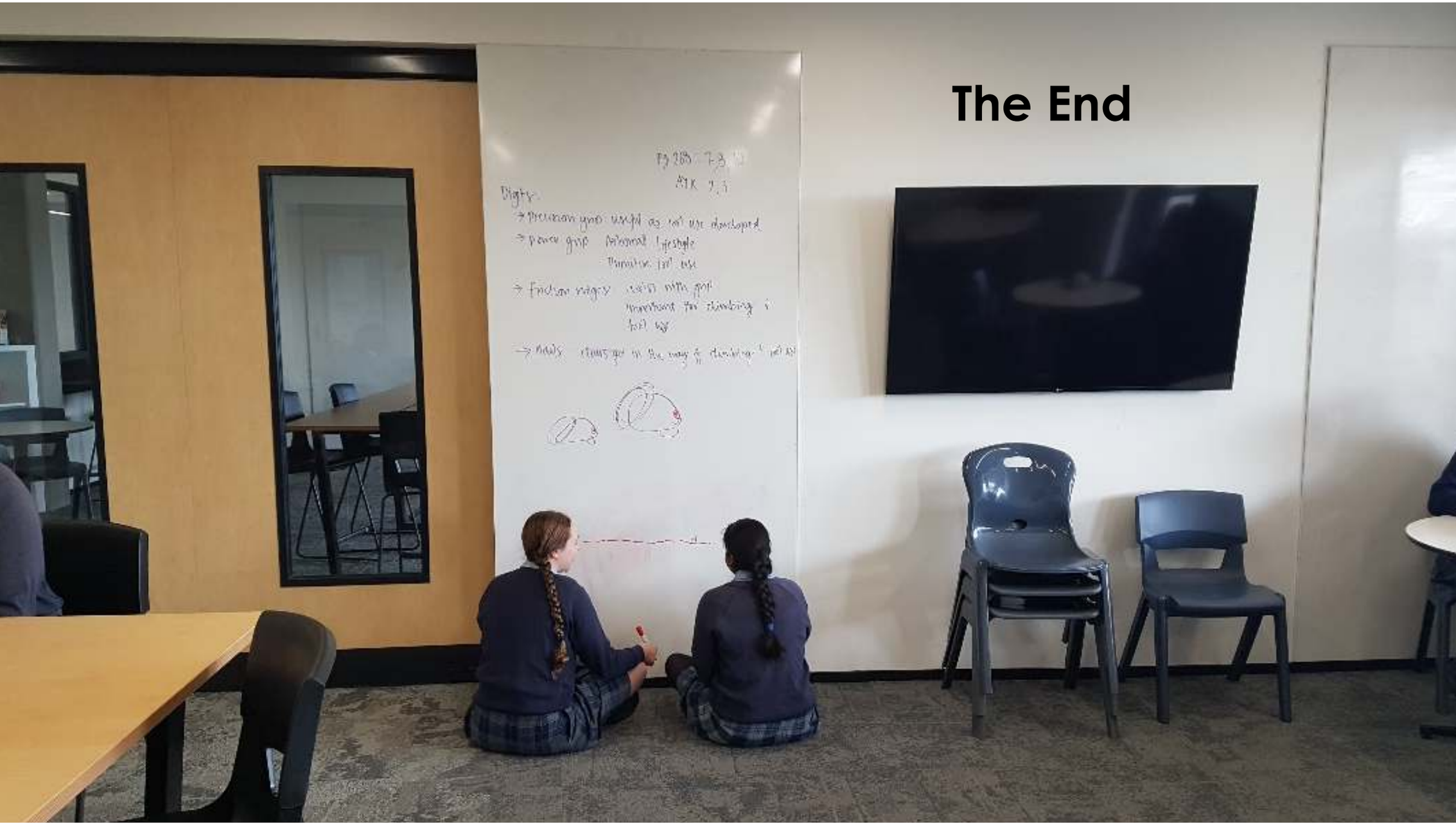
What the research tells us?

- Students want an area where they can meet as a whole group (Primary
- Students also want a space for themselves, so that they may focus on their work

Outcomes for Primary, Middle and High Schools

- Large group meeting—sitting around a table, floor, and/or gradang)
- Areas for Cooperative group work—Tables and chairs, group rooms, steps of the grading, and floor
- Independent areas
  - High back Seating for reading, writing, and research
  - Couches against walls
  - Corner

The End



Understanding Learning Environments

Presentation: Foxway, Gothenburg

Date: October 13, 2022

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