Common Learning Spaces Performance-Based Design Considerations

Learning Places Matter- It's the Third Educator in the Room | January 22, 2026

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Performance-based design is founded on the premise that [built] systems must meet specific **research-informed performance objectives**. Specific performance expectations are set for the **completed design**. *The central question is what design and affordances ensure the **best human experience**?* Performance-based design, therefore, reverses the design process by ***defining the end goal*** as the starting point.

EIGHT KEY CONSIDERATIONS FOR LEARNING PLACES

Researchers have identified eight key considerations of performance-based design for learning places. Learn more about each below, including ways to address the element through the design process.

Performance-Based Design Element	Address Via
Universal Design: I can access the spaces and materials needed to work, learn, grow.	Building Design + Affordances
Lighting: I have to see to be able to work, learn, grow.	Building Design + Affordances
Acoustics: I have to hear to be able to work, learn, grow.	Building Design + Affordances
Physiological: I need indoor air quality comfort and exposure to nature to be able to work, learn, grow.	Location/Setting of Building + Building Design + Affordances
Ergonomics: I have to have postural comfort to be able to work, learn, grow.	Affordances
Emotional Safety + Belonging: I need to be able to connect with others to have a sense of community to be able to work, learn, grow.	Building Design + Affordances
Physical Safety + Security: I need to feel safe via hardening features of the building and softening features of affordances.	Building Design + Affordances
Sustainability + Stewardship: I need flexible spaces and durable affordances that also provide options for sustainability initiatives.	Building Design + Affordances

UNIVERSAL DESIGN

- Universal Design (UD) goes beyond basic accessibility to create spaces everybody can use.
- By incorporating UD principles into design, schools maximize the investment in educational, work and community spaces.
- *Considerations-UD Spaces allow for:*
    - Equitable use
    - Flexibility in use
    - Simple and intuitive use
    - Perceptible information
    - Tolerance for error
    - Low physical effort
    - Size and space for approach and use

LIGHTING

- Natural lighting improves well-being.
- Indoors, optimal lighting is a combination of natural light and tunable light for enhanced attention and long-term memory.
- *Considerations*:
    - Energy efficiency
    - Balancing natural and artificial light
    - Ability to darken rooms for instruction/safety
    - Glare and light level control through fixture and controls selection

ACOUSTICS

- Poor acoustics lead to increased stress + vocal strain for staff.
- Many classrooms have speech intelligibility of 75% or less challenging student ability to hear the lesson:
    - HVAC systems
    - Reverberation of noises within classroom spaces
    - Outside noises-within and outside of the building- impact classroom acoustics
- *Considerations*:
    - Window quality
    - Voice amplification systems
    - Acoustical treatments
    - Strategic furniture selection and placement

PHYSIOLOGICAL

- The human thermal comfort range is 68-74°F.
- Good Indoor Air Quality (IAQ) increases alertness, reduces asthma and respiratory illnesses, and decreases absenteeism.
- Create a strong connection to the environment through the use of natural and nature-inspired elements.
- Research shows biophilic design can:
    - Reduce stress
    - Enhance creativity and clarity of thought
    - Improve well-being
    - Expedite healing
- *Considerations*:
    - Interconnectedness of IAQ and thermal comfort
    - Quality HVAC with moisture control
    - Pest management, cleaning chemicals + protocols
    - Building materials selections
    - Biophilic elements can be achieved via:
    - Natural building materials
    - Windows
    - Paint accents
    - Artwork
    - Carpet tile with natural and varied textures, colors, and shapes

ERGONOMICS

- Furnishings (and all affordances) should allow a range of users to use items as intended or provide varied sizes to accommodate all users.
- Poor site lines cause ergonomic issues when people must contort themselves to see what is being taught or explained.
- *Considerations*:
    - Room design, layout, and zones for intendent purposes
    - Specialized flooring
    - Functional technology
    - Adequate task lighting to prevent physical/visual strain
    - Appropriate furniture based on physical size–one size does not fit all for chairs, desks

EMOTIONAL SAFETY + BELONGING

- Inappropriately sized spaces increase crowding, aggression, and concentration due to noise.
- *Considerations*:
    - Well-designed learning environments and affordances create connection, which is fundamental for belonging via wide corridors with views of nature, spaces for activities that are interactive and support pro-social behaviors and flexible spaces with doors connecting classrooms.
    - Larger spaces for groups to pass between classes or events lessens the chances of negative verbal and physical interactions.

PHYSICAL SAFETY + SECURITY

- School safety depends on hardening the building and grounds while 'softening' the affordances to be welcoming- both visually and physically.
- Through explicit staff training, building inhabitants can be screened for safety purposes while also being made to feel welcome through interpersonal interactions.
- Creating conditions for positive territoriality will grow safety and a positive culture.
- *Considerations*:
    - Building hardening features such as exterior fencing, lighting, and access controls.
    - Affordances that use school and community logos, colors, and showcase points of pride.

SUSTAINABILITY + STEWARDSHIP

- Schools can be designed to showcase stewardship and sustainability by creating flexible spaces and purchasing durable affordances.
- Working with the community to establish sustainability goals at the start of any project allows for a synergistic design approach that stakeholders will feel more ownership in and are likelier to support becoming reality.
- *Considerations*:
    - What are the school and community's goals regarding sustainability?
    - How can spaces be designed for flexibility of use?
    - What affordances best support sustainability goals and flexibility of space usage?

IN SUMMARY

By starting your design process with the end in mind, you can ensure that these critical factors are at the heart of final spaces and the affordances within them. These, coupled with implementation of research-based features in support of Universally Designed spaces and district specific programming spaces provide building inhabitants with a foundation for success.

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