Principles for Designing Teaching and Learning Spaces

The National Survey for Student Engagement (NSSE) is a respected indicator of student engagement used by over 1450 universities across North America. Their Engagement Indicator themes and High-Impact Practices[1] (2013) are based upon extensive educational research. The indicators and practices have been adopted at McGill University as five principles to be considered when designing or renovating classroom spaces to support student learning. This permits the university to ground decisions about classroom features in research-based principles. The *Principles for Designing Teaching and Learning Spaces* below consider the classroom environment within the context of what is known about students' learning. These Principles are then translated into specific design features to guide design decisions, such that learning spaces become a physical manifestation of the university's teaching and learning vision.

1. Academic challenge

Learning spaces should allow students to actively engage with content and include a range of technologies that support multiple modes of teaching and learning.

2. Learning with peers

Learning spaces should provide features that permit students to work both individually and in collaboration with one another.

3. Experiences with faculty

Learning spaces should facilitate communication and interaction between students and faculty.

4. Campus environment

Learning spaces should be consistent with the university's culture and priorities as reflected in the campus master plan, follow university design standards, and be designed with future flexibility in mind.

5. High-Impact Practices (HIPs)

Learning spaces exist within a larger campus context; there should be an ease of transition between spaces so as to better support high-impact practices inside and outside the classroom.

[1] http://nsse.iub.edu/2013_Institutional_Report/pdf/Benchmarks_to_Indicators.pdf

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	Layout	Furniture	Technologies	Acoustics	Lighting/colour
Academic challenge: Promote individual, active engagement with content	☐ Work surfaces for notebooks, laptops, textbooks	☐ Comfortable furniture; ☐ Varied furniture to support different types of tasks and preferences	☐ Access to infrastructure (e.g., printing, power for student laptops) ☐ Access to resources (e.g., LMS, internet, virtual labs, specialized software) ☐ Multiple sources and screens for simultaneous display of different learning materials	☐ Acoustic design to avoid distraction from outside and inside sources	☐ Appropriate lighting for individual work ☐ Intentional use of colour to promote focus
Learning with peers: Promote active engagement with one another	☐ Promote face-to-face communication (e.g., two rows of students on a tier, small groups) ☐ Individuals can move about easily ☐ Unobstructed sightlines	☐ Flexible seating(e.g., fixed chairs that rotate, movable tables and chairs, tablet chairs on wheels) ☐ Intentional use of furniture of different heights and shapes	☐ Shared workspaces (e.g., writable walls, digital workspace)	☐ Sound zones support multiple simultaneous conversations ☐ Appropriate amplification available (e.g., student table microphones)	☐ Different lighting patterns to support different activities ☐ Using colour to define groups' use of space
Experiences with faculty: Promote interaction and communication	☐ Easy access to all students (e.g., multiple aisles, unobstructed sightlines)	☐ Podium doesn't interfere with sightlines, movement and interaction, while being large enough for instructional materials. ☐ Flexible furniture to support different teaching strategies (e.g., movable, variable heights)	☐ Screen sharing ☐ Ability to control classroom technologies away from the podium (e.g., remote mouse, wireless projection)	☐ Sound zones support multiple simultaneous conversations ☐ Appropriate amplification available (e.g., wireless audio amplification)	☐ Different lighting patterns to support multiple types of teaching tasks ☐ Colours distinguish purposes (e.g., where chairs go, what groups work on what surfaces/with whom)
Campus environment: Promoting high-quality learning spaces across campus	This category relates to the campus environment as a whole. It provides opportunities for supporting students' learning through consistently high-quality learning spaces through the application of standards and design principles. For example: ☐ University standards applied, e.g., classroom and IT standards; accessibility guidelines; recognized sustainability practices, materials and technologies; regulated building operations (e.g., temperature and ventilation). For further details and/ context, see McGill University Classroom Guidelines and Standards ☐ Design classrooms for flexible future use where possible (e.g., raised floors for conduits to permit future classroom reconfiguration). ☐ Design classrooms, consistent with the principles of Universal Design and Universal Design for Learning, to meet the needs of and be used by all populations using these spaces (e.g., natural light, sufficient storage, and universal control panels to simplify instructors' use of equipment in classrooms across campus). ☐ Design classrooms to integrate with surrounding space (informal spaces, etc.) ☐ All classrooms are thought of within the campus master plan.				
High-Impact Practices (HIPs)	Multiple types of campus physical environments are needed to support a variety of HIPs. Ensure availability of, and support for, a diverse range of affordances (both physical and virtual) to maximize HIPs for student learning.				

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