



# Memorandum

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**TO:** Senate

**FROM:** Professor Morton J. Mendelson, Deputy Provost (Student Life & Learning)  
Professor Cynthia Weston, Director, Teaching and Learning Services

**SUBJECT:** Report on Teaching and Learning Spaces

**DATE:** April 27, 2011

**DOCUMENT #:** D10-59

**ACTION REQUIRED:**  INFORMATION     APPROVAL/DECISION

**ISSUE:** Improving teaching and learning spaces at McGill: A student centered approach

**BACKGROUND RATIONALE:**

Many classrooms on our 170-year-old campus do not reflect what we now know about student learning. Extensive research on post-secondary education emphasizes the importance of students' active cognitive engagement with course content and each other to achieve deep learning, especially in the early years of study.

The NSSE benchmarks provide a framework for a student centered teaching and learning vision at McGill that informs the improvement of classrooms and teaching labs in support of students' learning (For McGill's NSSE results see: <https://home.mcgill.ca/studentlife>). Features and technologies that represent these principles of active and collaborative learning are now intentionally designed into new learning spaces at McGill (See Appendix A).

The Teaching and Learning Spaces Working Group (TLSWG) was formed by the Provost in 2006. Intended to create a vision for innovative classroom development aligned with University directions, the group establishes standards, identifies needs, sets priorities, and recommends funding for improvements to classrooms at McGill. The TLSWG has 35 members from all Faculties, University-wide student associations, and stakeholder service units. These representatives submit requests for classroom renovations and instructional technology from their constituencies, ensuring broad consultation. The prioritization process is based on explicit criteria and has resulted in a collective approach to addressing classroom needs while stewarding limited University resources. In the past three years, over 200 (of the total of 472) McGill classrooms, now available to all Faculties, have been improved.

The University Teaching Labs Working Group (UTLWG), established in 2008, conducts a parallel process for University teaching labs. It has similarly broad input with representation from all Faculties and stakeholder service units. In 2009, Faculties were invited to submit up to three of their top priorities for teaching laboratory improvements. Over the past year, the 20 proposals submitted have been prioritized through a transparent process that uses explicit criteria. The first teaching lab renovations will take place in summer 2011.

This process supports the imperative that “the design of our learning spaces should become a physical representation of the institution’s vision and strategy for learning.” (UK Joint Information Systems Committee (2006). *Designing spaces for effective learning: A guide to 21st Century learning space design*, <http://www.jisc.ac.uk/>). The improvement of McGill’s classrooms and labs is grounded in McGill’s commitment to student centered teaching and learning.

This principled, proactive approach represents a fundamental shift in the way we do business and is resulting in a physical environment that supports our vision of student centered teaching and learning at McGill.

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**DISCUSSION  
POINTS**

How can the principles highlighted in space design be generalized to teaching and programs?

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**APPENDICES:**

Appendix A: Principles for designing teaching and learning spaces

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## **Principles for Designing Teaching and Learning Spaces**

The National Survey for Student Engagement (NSSE) is a respected indicator of student engagement that has been used by over 1450 universities across North America since 2000. Both first year and fourth year students are surveyed; results provide a sense of how a given university is perceived by both commencing and graduating students. Their five Benchmarks for Effective Educational Practice<sup>1</sup> are based upon extensive educational research. We have adopted four of these benchmarks as principles to be considered when designing or renovating learning spaces to support student learning.

### **Active and collaborative learning:**

Students learn more when they are intensely involved in their education and are asked to think about and apply what they are learning in different settings. Collaborating with others in solving problems or mastering difficult material prepares students to deal with the messy, unscripted problems they will encounter daily during and after college. Informal and formal learning environments should allow students to work together: learning by doing, reflecting and learning through conversation. Furniture should be easily moveable and sturdy enough to be moved often. Surfaces should be appropriate for student work and materials (may include writable walls). Acoustics should allow for productive interaction and collaboration: sound zones should support having multiple conversations without creating an unbearable din.

### **Student-faculty interaction**

Students see first-hand how experts think about and solve practical problems by interacting with faculty members inside and outside the classroom. Learning spaces should allow students and faculty to meet and share ideas. In class, instructors should be able to move easily throughout the room, interact with students 1-1, in small groups or in a large group. Screen-sharing encourages student-driven learning, and further enables interaction. Professors and students should be able to hear one another.

### **Enriching educational experiences**

Complementary learning opportunities inside and outside the classroom augment the academic program. Technological affordances such as document cameras, multiple sources/screens/surfaces, screen-sharing and writable walls substantially enrich the learning experience by allowing information to be shared or presented in multiple ways. Spaces outside of class can include offerings of informal computer stations and open access to computer labs.

### **Supportive campus environment**

Students perform better and are more satisfied at colleges that are committed to their success. Teaching and learning spaces must support student ability to effectively engage in their studies as individuals as well as through engaging with faculty and with one another. In terms of classroom design this providing a livable learning environment with proper ventilation, temperature, lighting, furnishings. Further, sustainability needs to be considered such that learning environments can support current and future students.

<sup>1</sup>These principles are freely adapted from: *Benchmarks of effective educational practice*. National Survey of Student Engagement. [http://nsse.iub.edu/pdf/nsse\\_benchmarks.pdf](http://nsse.iub.edu/pdf/nsse_benchmarks.pdf), Retrieved September 12, 2008.

# Translating principles into design decisions

## Encourage active and collaborative learning

- In class –
  - Flexible furniture promotes collaboration
  - Work surfaces are adequate for laptops and papers
  - Information sharing
    - Acoustics are appropriate for interaction and collaboration
    - Collaborative areas – writable walls
    - Collaborative technologies – screen sharing to encourage student-driven learning
    - Flexible computer access (laptops, desktops, internet)
- Outside class –
  - Spaces support informal pair/group work
  - Flexible study spaces

## Encourage interaction between students and faculty

- In class –
  - Diminish barriers
    - Smaller podium to reduce separation and power relationship
    - Professor not anchored to front of room
    - Professor and students can move about easily
  - Promote communication
    - Screen sharing to promote shared accountability for learning
    - Enhance acoustics so instructor can hear all students, and students can hear all other students
- Outside class –
  - Provide areas for informal interaction

## Enrich educational experiences

- In class – technology affordances
  - Document camera
  - Multiple sources, multiple screens, multiple surfaces
  - Internet access
  - Power for laptops
  - Networked computers
  - Screen sharing
  - Writable walls
- Outside class
  - Informal computer stations
  - Open access for computer labs

## Provide a supportive campus environment

- Livability
  - Effective ventilation
  - Appropriate temperature
  - Natural and variable light
  - Comfortable furnishings
  - Storage for coats and bags
  - Inviting, welcoming

## Translating principles into design decisions

- Sustainability
  - Design space for life cycle of building
  - Can be adapted to new uses at a reasonable cost
  - Re-use and recycle
  - Encourage use of sustainable materials, building practices, and technologies
  - Design with operating costs in mind for service and maintenance

