

Question

TO: Senate

FROM: Professor Terry Hébert (Faculty of Medicine)

SUBJECT: Question Regarding the Incorporation of Research into Undergraduate Teaching

MEETING DATE: February 18, 2015

PREAMBLE: At the November 19th, 2014 meeting of Senate, there was a lengthy discussion of how to integrate a research experience into the education of undergraduates at McGill. Students, staff and faculty all more or less agreed that this is a good thing despite the obvious impossibility of giving every student access to research labs. Thus, other modalities must be explored in order to do this. For several years, Teaching and Learning Services ran a program called the Inquiry Network, a collaborative group of academics that looked into doing just that. They created a series of university-wide resources and made recommendations to the Board of Governors and the Senate at the joint meeting in 2011. Please see the attached links for more details and in particular their report presented to Senate.

<http://www.mcgill.ca/tls/projects/nexus/network>

[Using Coursework to Enhance Students' Understanding of Research/Scholarship](#)

It seems to me that is precisely in line with expectations and desires of a research-focused, student-centered university.

QUESTION: What is McGill doing to build on the work of Inquiry Network, to engage undergraduates in research as part of coursework?

Response submitted by:
Prof Anthony C. Masi, Provost
Prof Ollivier Dyens, Deputy Provost (Student Life and Learning)

We would like to thank Fellow Hébert for his question.

McGill's two most recent strategic academic plans, "Strengths and Aspirations" and "ASAP" have highlighted the importance of professorial research for undergraduate education at a research-intensive university like McGill that also wants to emphasise student centeredness. Established by APC's Subcommittee on Teaching and Learning in 2009 and under the guidance of the Teaching Services, the

Inquiry Network is a cross-disciplinary group of faculty exploring the teaching-research nexus at McGill in terms of undergraduate education.

The Inquiry Network is a cross-disciplinary group whose members work together tackling serious general pedagogical issues and at the same time developing solutions that take into account unique McGill-specific constraints experienced across our Faculties. The resources the Inquiry Network creates and the events they host are consistently received with enthusiasm.

One of the most interesting aspects of the group's efforts to date is working with instructors to **help students think like researchers as part of coursework**. Many, but not yet all, McGill undergraduate students have an opportunity to engage in hands-on research experiences. Several Faculties have already designed explicit programs to facilitate such experiences, e.g., **Office for Undergraduate Research in Science (OURS)**, **Summer Undergraduate Research in Engineering (SURE)**, **Undergraduate Arts Research Internships Awards (ARIA)**

Naturally, one of the best ways to reach **all** students is to encourage professors to draw on their own research experiences in designing **coursework** that will help students to think like researchers. A well-designed course as part of a well-structured program of study is an ideal forum for teaching the core skills used by academics: asking questions, evaluating evidence, drawing conclusions based on evidence, communicating results, and, where appropriate, deciding on an action plan.

The Inquiry Network supports instructors to enhance students' ability to think and to act like researchers in their chosen field of study, in classes of all sizes, subject areas, and levels. Members of the Network work toward this goal by: collecting examples of McGill instructors who already integrate research into their classes in this way; developing pedagogical resources; and holding events to engage instructors and administrators in the discussion of these ideas.

For the last five years, the Inquiry Network has been meeting monthly during the academic year. Some of the outcomes of their work include:

- a university-wide workshop series for faculty on pedagogical strategies for improving students' ability to think like researchers
- print and online resources available on the TLS website or as workshop materials
- two symposia with internationally renowned guest speakers held in March 2009 and November 2012
- recommendations to the 2011 Joint Board Senate Meeting on how to scale up efforts to enhance undergraduate research at McGill
- a set of learning outcomes that can be integrated into courses and programs to enhance students' ability to think like researchers
- a survey of undergraduates to uncover their perspectives on research.

Helping undergraduates to think like researchers is a complex task. Instructors must have the support necessary to develop strategies suited to diverse contexts, from discipline to class size, from level of instruction to level of student motivation). Based on their experiences, members of the Network recommend that this work continue in cross-disciplinary learning communities led by the pedagogical specialists in Teaching and Learning Services, however, placing even greater emphasis on the emergence and diffusion of creative approaches.

The key question at this time is not “What **is** the University doing...” but “What **must** the university do to build on the work of the Inquiry Network?”

We believe that McGill must take a fourfold approach:

1. The broad university community has to engage in a broad general discussion on the ways in which each instructor can build on existing inventory of tools that help students learn how to think like researchers based on the work of the Inquiry Network and Faculty initiatives.
2. More specifically, we can already build on the recommendations that the Inquiry Network made to the 2011 Joint Board Senate Meeting. Teaching and Learning Services will be mandated to submit a five-year plan incorporating these recommendations.
3. In light of the McGill Commitment as part of Principal’s Five Priorities, local level initiatives, specific to disciplines, Departments, and Faculties, that focus on undergraduate research initiatives must be supported in order to overcome the constraints faced by faculty and students.
4. University policies and guidelines regarding expectations and evaluations of faculty members need to be clearer that the “teaching-research nexus” is an integral part of a professor’s academic duties, not an add-on to them.

For more information on the Inquiry Network, please consult the website:

www.mcgill.ca/tls/projects/nexus