

## ***Taking Stock: Research on Teaching and Learning in Higher Education*** **Executive Summary**

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The book is available for purchase at <http://mqup.mcgill.ca/book.php?bookid=2425>.

This book is based upon a HEQCO-sponsored research symposium that was held in the spring of 2008. The symposium brought together leading experts to “take stock” of the research on teaching and learning in higher education and to explore the implications of key findings. The symposium was based on the premise that, while much is known about student approaches to learning, and the relationship between how faculty teach and how students learn, common teaching practice does not reflect this knowledge. “*Taking Stock*” attempts to redress this situation by calling for an evidence-based approach in our classrooms, and the wide-scale adoption of effective teaching practice.

*Taking Stock* suggests that despite the best efforts of many dedicated and hard working faculty and administrators, much of our current approach to teaching in higher education might best be described as practices of *convenience*. Such practices involve lecturing to large numbers of students, providing little opportunity for dialogue or meaningful engagement, and assessing student learning through multiple-choice exams that test for short-term recall. As far as learning effectiveness is concerned, however, such practices are decidedly *inconvenient*, as they fall far short of what is needed in terms of fostering “self-directed” learning (Brookfield 1986), “transformative learning” (Kitchenham, 2008; Mezirow, 1981, 1991, 2000) or “learning that lasts” (Mentkowski and Associates, 2000).

Drawing on research findings that were first put forward over 30 years ago (Marton, 1976; Marton and Säljö, 1976), the book’s contributors argue that there is an association between the teaching-learning environment (created by the faculty member) and the approach students take to their learning, and between the student learning approach and the quality and nature of the learning outcomes achieved. Specifically, the authors argue that when faculty teach in traditional, information-transmission oriented ways, students tend to adopt what is referred to as a “surface approach” to learning, investing minimal effort in the learning process or narrowly focusing on developing the ability to repeat what one has been told or read. When faculty teach in more engaging ways, such as adopting problem-based learning, case-based teaching, or community-based learning approaches, students tend to become more actively involved in the learning process and adopt what is referred to as a “deep approach” to learning. Deep learning is also fostered through facilitating student mastery of threshold or pivotal concepts, and teaching students how to engage in processes of inquiry related to those concepts, rather than trying to cover everything that is known about the subject. In other words, rather than focusing on covering content, teachers that create learning contexts conducive to deep learning, help students develop essential skills so that they can uncover content for themselves. With a deep approach to learning, students are excited by the material, work hard at achieving

a personal understanding, share what they are learning with others, are motivated to apply what they have learned to novel situations and contexts, and develop essential skills for independent and life long learning.

Several of the book's authors review research on the implications of the surface and deep approaches to student learning. In particular, they suggest that surface learning has been associated with a number of disappointing learning outcomes, such as little retention and poor understanding of material, as well as less awareness of one's discipline and oneself as a learner. In contrast, deep learning has been associated with a variety of positive outcomes, such as enhanced retention and understanding of the material and the discipline, interpersonal skill development, and self-awareness as a learner.

Given that these findings have been known for some time, the book also attempts to identify why change has not been more forthcoming. Amongst the many issues identified is the suggestion that faculty approaches to research may be associated with faculty approaches to teaching, and that the research norms of a discipline may be particularly important to understanding the pedagogical inclinations of faculty. Other barriers include the fact that few faculty or graduate students are exposed to the pedagogical literature of their disciplines, or are required to participate in professional teaching development opportunities prior to beginning their teaching careers – or during it for that matter. Faculty selection and promotion processes also continue to give preference to research productivity as opposed to teaching effectiveness, which can affect how faculty prioritize their time. Declining resources and increased student/faculty ratios are also very real and increasing barriers to innovation.

Presenting a more hopeful perspective, other research has focused on the attributes of academic departments in which teaching and learning innovations are broadly embraced. These attributes include:

- changes in curriculum and learning outcomes – including the explicit recognition of the need to help students develop skills and values (beyond disciplinary knowledge),
- external pressures for change (both crises and opportunities),
- changing expectations of professional associations and accrediting bodies,
- effective leadership (at many levels),
- extensive consultation with stakeholders (including students and employers),
- the establishment of a clear vision for learning,
- open communication,
- celebration and reward,
- adequate and sustained resources (time and money),
- a commitment to the scholarship of teaching and learning and evidence-based practice, and
- vigilance (to ensure the changes stick).

*Taking Stock* ends by reviewing the pressures for change that are confronting higher education today, such as the advent of the Internet and the ubiquity of information, concerns with the employability skills of graduates, accessibility and funding issues, demographic changes within the student body, and challenges within the K-12 system. The book argues that given the enormity of these pressures, it is more essential than ever that we adopt an evidence-based approach to teaching within higher education. It also suggests however, that while helping faculty and administrators to become better informed of the research on teaching and learning

is important, such a step is likely to be insufficient in bringing about broad-scale change. The reform of teaching and learning in higher education is a complex, systemic issue, and as such a complex, systemic response is required. Such a response would ideally include:

- Effective pedagogical leadership at all levels;
- Departmental cultures in which teaching and learning are valued, and in which an ethos of pedagogical creativity and experimentation is encouraged;
- Professional-development opportunities that are offered in collaboration with educational developers and local teaching centres and that encourage faculty to engage with discipline-specific pedagogical;
- Literature, to identify threshold concepts, and to participate in research projects with respect to their own pedagogical practice;
- Support for the scholarship of teaching and learning, including the provision of grants and the establishment of teaching chairs;
- Faculty recruitment, selection, promotion, and tenure processes where teaching and learning competence and scholarship are adequately assessed and valued;
- Pedagogically sound physical and virtual learning spaces; and
- A focus on curriculum assessment and development and the achievement of generic program-level learning outcomes.

Throughout this book the point is consistently made that research suggests there is an association between how faculty teach and how students learn, and how students learn and the learning outcomes achieved. Much of this research has been known for decades, yet many faculty continue to teach in ways that are not generally supportive of deep learning.

An important first step has been “taking stock” of the evidence. Explanations for why dissemination and uptake have been so limited have also been suggested. We need to further explore these issues and develop a collective understanding of *why*—given what we know—so many well-intentioned and committed faculty members continue to teach in sub-optimal ways. Then we need to develop a multi-faceted strategy for addressing the situation. Several components of such a strategy have been suggested. It is our hope that these ideas will take root and in so doing help to create systems and cultures in which deep learning is more likely to occur for the benefit of our students and society as a whole.