

## Interdisciplinary Learning in Graduate Education and Research

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The Canadian landscape of interdisciplinary research and education is a forest of diversity. Canada lacks a national department or ministry of Education. We are unusual for an OECD country in this regard. Responsibility for education, which is publicly funded, falls to the regions, specifically to the provinces which receive allocations for education in the form of transfer payments. Provinces are more or less free to administer that allocation whichever way they wish. Provinces also oversee their own quality assurance boards and assessment/review processes.

Consequently, as with other areas of post-secondary education curricula, there is no national model for interdisciplinarity in Canada. Variations exist from sea to sea to sea. There is, however, a remarkable amount of consistency in the kinds of graduate programs that identify themselves as interdisciplinary. Canadians find order and good government appealing. We are nothing if not reliable. Not surprisingly, then, our programs aim for a certain tacit uniformity, even while they are tweaked differently. So it is that the programs tend to fall broadly into two categories: those that are stand-alone, as interdisciplinary master's and doctoral programs without defined subject areas, and those that bring together a number of specific disciplines to define a unique field (e.g. biopsychology; ethnomusicology; computational and systems biology; engineering and management). The former group tends to report directly to the Dean of Graduate Studies while the latter reports to one or more faculty deans, appropriate to the subject area.

The Canadian Association for Graduate Studies serves an important function in bringing graduate student leaders into conversation with each other to share best practices and solidify expectations and standards across the country. We keep an eye on each other in this way. We are too small a country not to. For at least a decade we have been convening with a view to how best to accommodate interdisciplinary studies into our universities. While interest in and support for interdisciplinary graduate programs has strengthened in this period, with few exceptions the ease with which they can be deployed remains as vexed as ever. Institutions have trouble budging from fixed discipline-based positions. Institutional infrastructure—the foundational ways departments and faculties are constructed—rests on a discipline-based model. Our university leaders usually give a lot of lip service to interdisciplinary studies but have trouble carving autonomous budgets for such programs from their academic envelopes. They are more like stubborn, cranky elders who cling to their fetish objects long after they are capable of producing pleasure.

Arguably, deans of graduate studies have had the greatest influence at the institutional level in promoting interdisciplinary learning. Overseeing university-wide programs, graduate deans often more easily see the value in cross-pollination. And it is deans who can irrigate the system, even without resources, to generate new approaches to scholarship. In Canada, influence is also

extremely important from our national funding agencies. The Tri-Council, as it is called, sets the tone for inter- and multi-disciplinary research, inviting such scholarship through special funding packages awarded to the most innovative teams of researchers. Here, for example, is the Social Sciences and Humanities Research Council (SSHRC) on its partnership grant:

Partnership Grants support formal partnerships between academic researchers, businesses and other partners that will advance knowledge and understanding on critical issues of intellectual, social, economic and cultural significance. By fostering mutual co-operation and sharing of intellectual leadership, the grants allow partners to innovate, build institutional capacity and mobilize research knowledge in accessible ways.<sup>1</sup>

Inter- and cross-disciplinarity are implied. Here, too we see the increasing influence of the private sector on such research. Expectations are growing that solving the world's problems—social and material—require many experts, from within and beyond the academy. Ultimately, the real drive to develop interdisciplinary approaches to learning comes from our students, those multi-tasking, finger-texting, attention-challenged conduits for and vessels of information. In Canada, at least, it is graduate students who have pushed for interdisciplinary programs to feed their intellectual appetites; when and where we have been wise we have nourished them.

Einstein is often cited for having famously said “We can't solve problems by using the same kind of thinking we used when we created them.”<sup>2</sup> Any self-respecting dean of graduate studies well knows the value of interdisciplinary research, and the vitality such an approach to problem-solving brings not only to a particular program but to the university at large, and beyond. The benefits have yet to be fully measured, however. Resistance still exists among traditionalists, and there are many, in Canada. A major obstacle, beside sheer monodisciplinarianism, is unevenness of crediting supervision or teaching in these programs. Most Canadian universities calculate faculty workload according to single disciplinary unit duties. Letters of appointment often define a faculty member's duties in strict terms, and so deviating from those terms to teach beyond the stated contract takes will and interest, which fortunately many faculty members do possess.

Things are changing—slowly. Canadian science and biomedical programs tend to incline more naturally to interdisciplinary studies than humanities and social sciences do. A certain myth of purity dominates those fields, but the emergence in the last few decades of legitimate research areas such as culture, film, and media studies, by nature interdisciplinary, has challenged that conservatism. Our universities would be shrewd if they followed student interests a little more closely and considered curricula change more seriously. That's where the future lies.

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<sup>1</sup> [http://www.sshrc-crsh.gc.ca/about-au\\_sujet/partnerships-partenariats/partnership\\_grants-bourses\\_partenariats-eng.aspx](http://www.sshrc-crsh.gc.ca/about-au_sujet/partnerships-partenariats/partnership_grants-bourses_partenariats-eng.aspx)

<sup>2</sup> <http://icarus-falling.blogspot.ca/2009/06/einstein-enigma.html>