

Faculty Workloads and the Innovation Agenda

Working Paper #4

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Abstract

This Working Paper provides a review of faculty workloads and explores some of the factors that led to an increased emphasis on research activity – including the impact of the ‘innovation agenda.

The 2015 Working Paper series is intended to provide a relatively brief review of some key issues that affect higher education – particularly university education – in Canada. Faced with the twin realities of financial constraint and a decline in the ‘traditional age’ PSE cohort, universities are faced with major financial challenges. As universities, and the PSE sector as a whole, grapple with the challenges the need for more in-depth analysis of particular issues is critical. The Working Papers draw on the observations and insights gleaned from years of hands-on experience in the PSE sector and the many consulting and research projects completed by Snowdon & Associates. All of the Working Papers will use excerpts from previous reports, updated, augmented and modified as necessary. The first Working Paper – “Cost pressures and cost theories” – sets the stage for working papers that examine key issues such as “Compensation in Academe” (April) “Understanding Research Costs” (May, 2015) and “Faculty Workloads and the Innovation Agenda” (May 2015). The intent is to complete the series over the summer 2015 with commentary and observations about ways to deal with the complex set of challenges that face higher education institutions. Comments and questions about the Working Papers are welcome. Ken.SnowdonandAssociates@gmail.com.

Introduction

The purpose of this working paper is to explore the topic of faculty workloads and, more specifically, the shift in faculty workloads associated with the 'innovation agenda'. It begins with a brief overview of Canadian universities and then an overview of the faculty 'job' – teaching, research, and service – in an attempt to provide a better, more in-depth view of faculty 'work'. Starting with the premise that workloads in the 1960's and 1970's were skewed more towards teaching than research, attention is devoted to chronicling some of the initiatives that began to emphasize the importance of research. Attention then focuses on the most recent 'shift' in workloads associated with the 'innovation agenda'. The paper concludes with some observations regarding the 'shift' in workloads and the implications for higher education.

From the outset it is important to acknowledge that the Canadian model of higher education has emphasized the importance of teaching and research for well over forty years.¹ In many institutions in Ontario the "advancement of learning and the dissemination of knowledge" was one of the main objects in the original enabling legislation along with a specific reference to the "intellectual, social, moral and physical development of its members and the betterment of society."² In the pursuit of those objects, faculty were expected to be involved in teaching, research and play a role in administrative matters – the latter loosely referred to as 'service'. However, in the 1960s and 1970s the teaching/research balance was firmly tilted to the teaching side for a number of reasons. While research was seen as important, many universities had limited research capacity; as late as 1976 only 60% of the full-time faculty had PhDs, graduate programs in many institutions were still in their infancy and the availability of external and internal research grants to support research was limited.

Fast forward to 2015. The capacity to conduct research has increased markedly – the PhD qualification is the norm in virtually all disciplines and the expected qualification for new hires. Graduate programs have increased significantly along with graduate enrolments. The availability of research funding is considerably different and the expectation of individual faculty and institutions is to compete and secure external research support – even though the research funding model represents a major negative disconnect (see Working Paper #3). Moreover, it is evident that governments (federal and provincial) expect universities (faculty) to be actively engaged in research.

¹ G. A. Jones , B. Gopaul , J. Weinrib , A. Scott Metcalfe, D. Fisher , Y. Gingras, and K. Rubenson, Teaching, Research, and the Canadian Professoriate, Chapter 18 p.354

² See, for example, the Act to incorporate Brock University (1964), York University Act (1965), An Act Respecting Lakehead University (1965), An Act respecting the Ottawa association for the Advancement of Learning, (Carleton, 1952), An Act to incorporate the University of Guelph (1964), An Act to incorporate Laurentian University of Sudbury (1960).

Ontario is on the cutting edge of discoveries and creating the jobs of tomorrow because we support a climate that fosters scientific excellence, attracts world renowned researchers and ignites fruitful collaborations between government, academia and industry.”

Reza Moridi, Minister of Research and Innovation

<https://www.ontario.ca/ministry-research-and-innovation> (retrieved March 10, 2015)

The faculty job

Against the preceding background we now turn to the topic of the faculty ‘job’. The work of the professoriate is generally described as involving multi-tasking with responsibilities in three major areas – teaching, research, and service, with the latter encompassing activities categorized as service to the discipline and department, service to the academic community and service to the public.

The *proportion* of time devoted to each area of responsibility varies from institution to institution depending on mission and mandate and varies from individual to individual within an institution.³ While institution’s will have policies that govern faculty workloads (often addressed in collective agreements), the actual ‘mix’ of work assignments – teaching, research, and service – are usually the result of a blend of departmental requirements (e.g., breadth and depth of programs at the undergraduate and graduate levels, numbers of students, majors, courses, and representation on university governance bodies, etc.) and individual circumstance with the latter affected by factors such as the number of graduate students, external research awards, participation in collaborative research projects, commitments to disciplinary service (e.g., editor of a journal) and membership on various administrative / governance bodies (e.g., Senate or Senate committees, Governing Board, Faculty Boards, departmental committees etc.). The fact is in any given day a faculty member may well be engaged in all three of the major functions since all of the functions are part of the faculty ‘job’. Further, the categorization of activities into teaching, research, and service is a somewhat simplistic concept that does little justice to the breadth and depth of the activities and the synergies among the activities. To illustrate, the following table provides a brief summary of the activities within each function. The purpose is not to provide a full catalogue of activities but rather illustrate the kinds of activities in each category. While it is certainly possible to array the activities by the three functional categories, the reality is that there is considerable overlap. Classroom activity will be influenced by research activity whether the faculty member is engaged in frontier/discovery research or reflective inquiry. And when students are involved as research assistants what part of the ‘research’ includes mentoring and instruction/training? Similarly, if a faculty member is engaged in a departmental committee reviewing curriculum or a new program proposal how much of the activity is related to ‘teaching activities’ such as program and course development.

³ Task Force on Resource Allocation, The Structure of Academic Work, Ontario Council on University Affairs, August 1994, p.15.

Table 1: Faculty activities by major ‘function’

Teaching	Research	Service
<p>Program and Course development</p> <p>Class preparation</p> <p>Contact hours in the classroom:</p> <ul style="list-style-type: none"> • undergraduate • graduate <p>Grading / marking</p> <p>Contact hours outside the classroom:</p> <ul style="list-style-type: none"> • Mentorship • Letters of recommendation • Research supervision • Graduate student supervision • Office hours – general • Email and other on-line student support • Posting lecture notes • Faculty advising • Attendance at student events, university student events (e.g., scholarship awards functions) • Conducting independent reading courses <p>Professional development</p>	<p>Research plan development</p> <p>Preparing funding proposals</p> <p>Responding to RFPs (contract research, foundation research)</p> <p>Establishment of partnerships with external agencies</p> <p>Collaboration with other researchers - institutional, provincial, national, international</p> <p>Administration of research contracts / grants</p> <p>Supervision, training of graduate students (e.g., research methods)</p> <p>Hiring, supervision of research staff</p> <p>Conducting research</p> <p>Analysis and results</p> <p>Creating art forms</p> <p>Dissemination of research</p> <p>Publishing – papers, books,</p> <p>Presentations – conferences, symposia, artistic exhibitions</p> <p>Managing intellectual property</p> <p>Maintaining a high level of scholarship in the discipline and related disciplines</p> <p>Reflective inquiry</p> <p>Frontier research</p>	<p>Departmental / discipline</p> <ul style="list-style-type: none"> • Departmental and / or university committees: • Senate, Board, Faculty/School • Appointment committees • Admission committees • Scholarship committees • Chair of Undergraduate Studies • Chair of Graduate Studies • Department Chair/Head <p>Academic community</p> <ul style="list-style-type: none"> • Partnerships with public / private entities • Journal editorship, Conference chair, Conference organizer • Review and evaluation of the work of ‘peers’ – manuscripts, articles and creative expression • Peer review committees e.g. Tri-council <p>Public service</p> <ul style="list-style-type: none"> • Partnerships with local community • Public conferences / symposia • Providing advice, information to governments and non-profits

The highlighted reference to ‘Reflective inquiry’ and ‘Frontier research’ under the research category reflects an important characteristic of the research activity that, perhaps, is not well understood outside academia. David Smith in his discussion paper on research in 1997⁴ wrote about ‘research’ in the following manner:

Research, along with teaching, are the twin functions on which all universities are based. Not all faculty members will be working on the frontiers of basic or applied research, but all should be active on another type of research, which some have called "reflective

⁴ David C. Smith, A Framework for a Research Policy for Ontario, A discussion paper prepared for the Ministry of Training, Colleges and Universities, 1997.

inquiry" (a term used by L-P Bonneau and J. A. Corry in *Quest for the Optimum*. AUCC, 1972), but which, I think, might better be called "integrative/interpretive research". Essentially this category of research refers to the activity of gaining a thorough understanding of the evolving body of knowledge in an area, of integrating it with added interpretive insights, and of communicating this work through publications or teaching. It requires that the researcher know about and understand advances in research in an area and can distil them for the greater understanding of students, other researchers and the public. In commenting on the related concept of "reflective inquiry", David Cameron states:

"It is serious and hard work, just as serious and just as hard as frontier research. It involves questioning accepted ways of organizing knowledge and it requires a mastery of one's chosen field so thorough that one can both order the importance of its elements and explain to others what is central and, more important, why. This is the inseparable combination: teaching and reflective inquiry. And all those who teach in universities should be committed to reflective inquiry and given the time and resources necessary for it." (David M. Cameron, "Issues in the Financing of University Research: Background Notes", prepared for the Nova Scotia Council on Higher Education (mimeo. Nov.18, 1994))

Cameron's argument about the "inseparable combination" is a critical component in understanding the work of the professoriate. Robaire⁵ argued that the notion of distinct pillars of activity (teaching, research, and service) is "misleading" suggesting that "actively interacting, intertwining, helical-like strands far more accurately symbolize how the three major domains of the activities of a university professor relate to each other." Gaffield⁶ builds on Robaire's thesis, suggesting that the notion of the three pillars is somewhat of an artificial construct that only emerged in the latter part of the 20th century and is fast falling away in the face of greater emphasis on active learning and the associated blurring of lines regarding teaching, research, and service.

Exploring the details of Smith's argument, or the more recent work of Robaire and Gaffield, is well beyond the scope of this paper. Readers interested in understanding more about the links between teaching and research, in particular, should refer to a 2008 Higher Education Quality Council of Ontario (HEQCO) report – *The Nexus of Teaching and Research: Evidence and Insights from the Literature*.⁷

The 'shift' in workload

To this point, the working paper has emphasized the importance of research as part of the faculty 'job' and noted that prior to the early 1970's the balance between teaching and research was tilted towards the teaching function. From the mid-1970s onward, however, the emphasis on research began to increase, albeit rather slowly. After

⁵ Robaire, B., (2006) *Challenges and opportunities in integrating teaching research and contributions to the community in a changing university*, Award Acceptance Address, Distinguished Academic Award, Canadian Association of University Teachers (CAUT).

⁶ Gaffield, C., (2007) *Embracing the New Metaphor for 21st Century Universities*, Award Acceptance Address, Distinguished Academic Award, Canadian Association of University Teachers (CAUT).

⁷ Halliwell, J. (2008), *The Nexus of Teaching and Research: Evidence and Insights from the Literature*, Toronto: Higher Education Quality Council of Ontario.

accommodating the first stages of the 'baby boom' enrolment expansion (mid-1960s to early-70s) more attention focused on graduate programs as many institutions began building capacity and the conditions necessary to support such programs. During an era marked by 'stagflation' considerably more interest in productivity and the factors influencing productivity garnered attention including the potential of investments in Research & Development (R&D). In the latter part of 1970s the federal government established the tri-council funding agencies – SSHRC, NSERC and MRC and within a few years considerably greater attention was being paid to R&D in general both inside and outside academe. By the mid-1980s Ontario had established the Premier's Council on Science and Technology which ultimately led to considerable investments in research and the establishment of a variety of research initiatives including the Ontario Centres of Excellence (1987) and the federal Networks of Centres of Excellence (1989). Among Ontario universities the 'costs' of the expanded research efforts were sufficient to warrant explicit reference in the Bovey Commission⁸ and led to the establishment of a Research Excellence Fund that evolved into the Research Overhead and Infrastructure Envelope in the latter part of the 1980s.

As the emphasis on research began to grow concerns also began to be voiced about the balance of teaching and research on campus and the impact of 'more research' of the undergraduate experience. Stuart Smith's report⁹ waded into the teaching/research debate and his pronouncements were clear and controversial arguing, essentially, that the emphasis on research was diminishing the role and value of teaching and negatively affecting the learning experience. Smith's report coincided with the severe economic downturn in the early 1990s which in turn led to a period of retrenchment as universities coped with absolute reductions in operating grants in many provinces, and reductions in Tri-council research grants.

While the early to mid-1990s were difficult times in higher education by the latter part of the 1990s the research function within universities took on new life as the federal government introduced a host of new and expanded R&D programs – some with requirements for provincial matched funding. Over the next decade the investment was staggering; in the decade from 1996/97 to 2006-07 research funding in Ontario increased more than three-fold from approximately \$750 million to almost \$2.4 billion. That investment triggered a new 'shift' in workloads as universities responded to the demands of the 'innovation agenda'.

The innovation agenda was a major contributor to an acknowledged shift in faculty workloads from undergraduate teaching to research/graduate education and community service. On average full-time faculty teach fewer undergraduate courses, although not necessarily fewer students, and spend more time on graduate student courses and supervision than in the past. Faculty also spend more time on research, now, than in the past, and there is some evidence that more time is spent on 'community service' – that

⁸ Ontario Ministry of College and Universities, Commission on the Future Development of the Universities of Ontario, (E. Bovey, F. Mustard, R. Watts, commissioners). 1984

⁹ AUCC. Commission of Inquiry on Canadian University Education, (Stuart Smith, commissioner). 1992.

is activities associated with technology transfer, partnership building, fund-raising, and public service.

To put the preceding in context, it may be useful to examine ‘workloads’ over time, keeping in mind that the underlying survey instruments often have methodology challenges of their own. The now defunct Ontario Council on University Affairs (OCUA) provided an analysis of various workload studies as part of its review of university funding in 1994 and the findings at the time suggested the following:

- Across the four major activity categories of teaching, research, external community service, and internal administration governance, there were “basic commonalities across jurisdictions.”
- ...on an institutional basis academic work is generally organized in much the same way across publicly funded universities in North America. The proportion of faculty time allocated to the universities’ three main activities (teaching, research and service) is roughly the same in all universities with similar missions.
- ...there is significant variation in the amount of time individual faculty members devote to each activity, particularly to teaching and research.¹⁰

OCUA’s Task Force determined the *average* allocation of faculty time across the four main activities as follows: teaching 40%, research 35%, community service 13% and administrative support 12%.¹¹ Findings from the more recent Changing Academic Profession¹² (CAP) survey (2007-08) indicated that faculty continue to spend the majority of their time on teaching and research with more time devoted to teaching and related responsibilities when classes are in session and more time devoted to research when classes are not in session. Other parts of the ‘workload’ – administrative duties, service and other academic related activities appear to be relatively similar throughout the year. Most recently (August, 2014) the Ontario Council of Academic Vice-Presidents reported on a project entitled ‘Faculty at Work’ that is based on the premise that, on average, faculty, devote 40% of the work effort to teaching, 40% to research, and 20% to service – where service includes service to internal and external communities.¹³

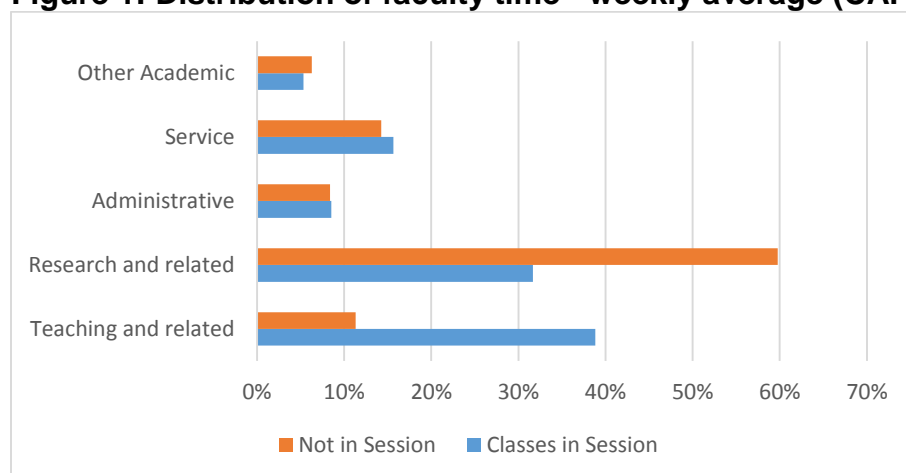
¹⁰ Ontario Council on University Affairs, (1994) Sustaining Quality in Changing Times: Funding Ontario Universities. p.40

¹¹ Ontario Council on University Affairs, Task Force on Resource Allocation, (1994) “An Analysis of the Costs of Teaching, Research and Community Service”, Ontario Council on University Affairs, August 1994, p. 12. It was recognized, that the allocation of faculty time would differ by institution according to mission and disciplinary mix.

¹² Gopaul, B., Jones, G.A., and Weinrib, J., The Changing Academic Profession Canada: Perceptions of Canadian University Faculty on Research and Teaching, Paper presentation, Canadian Society for the Study of Higher Education, May 2012.

¹³ Ontario Council of Academic Vice-Presidents, Faculty at Work, Council of Ontario Universities, August, 2014. http://www.cou.on.ca/publications/reports/pdfs/ocav_facultywork_august26

Figure 1: Distribution of faculty time - weekly average (CAP)



The OCUA study and the CAP survey also provide an indication of the total *amount* of time that faculty devote to fulfilling their responsibilities. OCUA’s Task Force noted that

“One of the striking features of these estimates of the total hours worked is their stability across institutional types and over time. On average, faculty report that they work between 50-60 hours per week during a teaching term...”¹⁴

Findings from the CAP survey indicated that, *on average*, faculty in Canada reported working a little over 50 hours per week during the ‘teaching term’ and close to that when classes were not in-session. International results from the Changing Academic Profession project indicated that there are similarities in the *proportion* of allocated time of Canadian faculty and their counterparts in the United States and the United Kingdom. The same comparisons suggest that Canadian faculty worked more hours per week than their counterparts in the other two countries.¹⁵

In 2001, as part of its effort to develop estimates of Higher Education Research and Development (HERD), Statistics Canada commissioned a survey of faculty to update estimates of time devoted to research. The Statistics Canada survey indicated there are differences in the distribution of faculty research time by size of institution – which, perhaps, could be interpreted as differences in institutional role and mission. The Statistics Canada survey also suggests there are major differences by discipline with the ‘Sciences’ faculty (engineering, health professions, biological and physical sciences) generally reporting more time in research activities than their colleagues in the

¹⁴ Ontario Council on University Affairs, Task Force on Resource Allocation, p. 6.

¹⁵ Research Institute for Higher Education (RIHE), “The Changing Academic Profession over 1992-2007: International, Comparative and Quantitative Perspectives”, Report of the International Conference on the Changing Academic Profession Project, 2009, RIHE International Seminar Reports, Number 13, September 2009, Hiroshima University, Hiroshima, Japan.

Humanities, Fine Arts, Education and Social Sciences – a finding also reported in the earlier OCUA effort.¹⁶ Table 2 is an excerpt from the Statistics Canada publication.

Table 2: Faculty Time Coefficients for Research¹⁷

Table 2 Faculty time coefficients for research								
Institution size	Education	Fine arts	Humanities	Social sciences	Agriculture and biological sciences	Engineering and applied sciences	Health professions	Mathematics and physical sciences
Small	0.20	0.20	0.25	0.25	0.30	0.35	0.30	0.30
Medium	0.25	0.20	0.25	0.30	0.40	0.35	0.40	0.35
Large	0.25	0.20	0.30	0.35	0.45	0.40	0.45	0.45

Conclusions and Implications

What to conclude from the ‘workload’ information? In the 1980s and early 1990s the teaching, research, service attribution was roughly 40-35-25 and the various surveys and studies indicated there was considerable variation by institution depending on discipline ‘mix’ and institutional size. In more recent times many institutions have adopted a 40-40-20 attribution and the fact that it now appears to apply to a broader range of institutions is of key significance. In fact it may well be the case that the ‘shift’ in workloads is more pronounced in small and medium sized institutions – and hence the resource implications are greater. Also, it could be argued that since a major part of the sponsored research funding is in the sciences and health sciences, the actual amount of time allocated to research in large institutions with those disciplines is higher than 40% and, given the nature of the research, considerably more resource intensive.

The shift in ‘service’ and the expansion of the definition is of interest as well. It aligns with analysis that suggests at least part of the rationale for the increases in professional staff in areas such as Academic support and Student services, is related to faculty spending less time on academic administration and less time on student engagement, or at least undergraduate student engagement (see Working Paper # 1).

This working paper suggests that research has long been an integral part of academia. While there is evidence that institutions (and faculty) were slowly placing greater emphasis on the research function in the over the years from 1970 to the early 1990s, the increased emphasis was seen as a natural part of institutional missions and the

¹⁶ Task Force on Resource Allocation, (1994) “The Structure of Academic Work”, p. 18 (the “percentage of time allocated to research is highest among faculty in the agricultural and biological sciences, and in mathematics and physical science.”)

¹⁷ Science, Innovation and Electronic Information Division (SIEID), Estimation of Higher Education Research and Development Estimates, 2005/2006, Science and Technology Surveys Section, Statistics Canada

faculty job. Clearly, however, from the latter 1990s onwards the significant investment in research contributed to a further 'shift' in workloads – partially related to the sheer volume and scale of research investments, but also related to increased complexity in research processes – internal and external. Moreover, for a variety of reasons having to do with institutional aspirations, government expectations, and the availability of funding¹⁸, smaller to medium-sized institutions made conscious decisions to place greater emphasis on research. In general the 'shift' in workload towards research was not accompanied with additional income to allow the teaching void to be filled with new full-time faculty. The result has been greater reliance on part-time faculty and a professionalization of administrative and student support services that, at one time, would have been the purview of faculty or at least had considerably greater faculty involvement.

Expressed concerns about teaching loads in academia need to be seen in the context of developments in higher education and the faculty member's total workload; a workload that includes teaching, research and service. To the extent that universities are expected to play a key role in the 'innovation agenda' the underlying funding construct needs to be addressed.

¹⁸ This particular aspect has at least two dimensions: 1) the decision at the federal level to help 'build capacity' across the Canadian university community by setting funding minima and ensuring small to medium sized institutions received some research support; and 2) the general increase in operating funding, particularly the funding associated with the double cohort in Ontario, provided sufficient 'cash flow' to finance the cost of the shift in workload. However, as the rate of increase in grants and fees slowed, and as federal research funding levelled off and became more targeted, the structural 'base' cost of the 'shift' could no longer be masked by the level of income growth.