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## Creating Space in the Curriculum for Workplace and Generic Skills

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In this paper I argue that there are competing forces affecting university credibility. On the one hand there is credibility in the competitive academic environment that results in the expansion of the curriculum. And on the other hand there are the increasing pressures from outside the academy for university graduates to have economically relevant workplace skills. Below I analyze some of the difficulties that result from these competing pressures and speculate on how they might be resolved.

### Workplace Skills and the Relevance of University Education

We have always required our education systems to prepare our students for the worlds they will inhabit, although we may not always agree on the nature of these worlds and the best curriculum and pedagogy for this preparation. Whether appropriately or successfully our education systems have always aimed to be responsive to the segments of society that they serve. However being responsive is a moving target since these worlds and our perceptions of them keep changing. Our educational institutions adapt, more or less quickly, to changes over time and our stakeholders ultimately hold programs, institutions and educational systems accountable for their relevance. But the education-society relationship is not a simple passive adaptation of universities to societies. Education in modern western society has a dynamic relationship with societal change since education is a force for change at the same time as it adapts to change. When we refer to ourselves as living within modern knowledge or information societies we are claiming that our students are human capital in the economy and that university research plays a key role in innovation and ultimately in productivity.

Across the post-industrialized world we are constructing high access university systems with significant graduate footprints linked to research. We have an ever-expanding range of educational stakeholders and an increasing diversity of our student body at higher and higher levels of educational attainment. University education has become essential for employability for many in the working, managerial and business classes. In this context the purpose of education for students and other stakeholders is linked to the economy and the job market.

The fact that the general institution of the university stretches back before modern times speaks to the enduring value of universities as institutions. In part the credibility of universities is connected to this illustrious past but being connected to the past also can seem anachronistic in our fast paced contemporary society. Ivory tower and monastic

models of the academy were highly relevant in societies that valued towers and monasteries but can seem less so today. It is a myth that universities are static institutions but these changes and traditions are interpreted and reinterpreted from many vantage points and what is constant or changing is not always clear.

Over the last few decades there has been constant change in the scale and structure of the post-secondary sector. This massive expansion and investment has been accompanied by attempts to restructure university systems (see Hunt et al, 2011, Clark et al, Academic Reform 2011, Clark et al, Academic Transformation 2011, Fallis 2013 Rethinking Higher Education). These pressures for change are linked to an increasing level of accountability and government activism (Stensaker and Harvey 2011). In addition there are calls for curriculum reform especially at the graduate level (see especially Walker et al 2008). One of these curriculum reform movements encourages the development of greater workplace readiness skills for students within second and third cycle graduate programs, especially for PhD graduates. In Ireland the PhD reform is captured in the move to the structured PhD while in the UK there is a New Route PhD. These degree structural reform initiatives are meant to address generic and workplace skills, at least to some extent. Graduate degrees and especially PhDs are the focus of the discussion below.

The credibility of universities, university curricula and university graduates to the broader society hinges on their perceived relevance. In our market society relevance is predominantly about the connections that can be made to the economy and employment. There is a continuum of relevance ranging from tight to loose connections, with many opportunities for contention. Some university programs in formalized professions are directly focused on specific occupational outcomes and placements. Medicine or teaching degrees have a specific focus for the relevance of their programs. Science and technology related programs are understood to have a strong relevance to the economy but their application may require some translation and adaptation. The further away from simple associations with the economy the more contested the relevance. University advocates often rely on the general analytical strengths of university graduates to establish relevance when simple close ties are not explicitly apparent. For example, university graduates can be said to have critical reasoning and problem solving abilities even if the subject matter of their degrees are not closely linked with employment.

New universities are established within a strong rationale for the relevance of their programs. There are strong relevance arguments for new universities as part of the rationale for their development. New technological universities have an added degree of relevance given the present climate of importance of science and technology to the modern economy. Of course there can be other relevance dimensions such as cultural relevance or social relevance or political relevance but I will concentrate on economic and employment relevance in this discussion as this dominates the consideration of relevance for graduates in applied, professional, scientific and technological education.

The skills problem for graduate student education refers to a perceived deficiency in personal and organizational skills. A key framing of this issue was accomplished in the "SET for Success" report for the UK Research Councils (Roberts 2002).

3.79 When recruiting SET<sup>1</sup> graduates for scientific jobs, 'technical/practical knowledge' and 'academic skills and knowledge/attainment' are sometimes more important to employers than candidates' personal qualities and inter-personal skills. Nevertheless, the latter are still sought after and employers often regard SET graduates as being poor at applying and developing the knowledge and the skills that they have acquired (particularly practical skills). (Roberts 2002)

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4.34 In addition to problems in the quantity of PhD students in some disciplines, there are complaints from employers – particularly in industry – that the quality of PhD students is too low and/or declining. This is a particular criticism of their broader interpersonal and management skills, although some concern has been expressed both about the technical skills and the creativity of many PhD graduates. (Roberts 2002)

The argument coming out of Roberts is that SET graduates with technical and scientific educations are highly relevant to employers but they are nonetheless often lacking in generic workplace skills.

Providing generic skills training opportunities for graduate students has been a priority agenda item in Canada for at least the last decade. The Canadian research councils worked together with the Canadian national graduate deans organization, the Canadian Association of Graduate Studies (CAGS) as well as the Society for Teaching and Learning in Higher Education (STLHE) to develop a statement on generic skills. This document was followed up with further reports and statements by CAGS (Rose 2012). Over this last year the larger research universities in the Province of Ontario have developed the MyGrad Skills program as the Ontario Consortium for Professional Skills Development (2015). This is an online program of self-paced tutorials and workshops that are available to all graduate students in the province. These online workshops have been based on those that have been developed internally by various universities as part of their support systems for graduate students. These types of workshops have evolved as ancillary support for the core academic curriculum and the academic skills deficits of graduate students.

All of these workshops are worthy and interesting for graduate student development. These are all good things that will help to enhance graduate student experiences. However, relatively few of these workshops address generic workplace skills. For example, career development is about how to find a job and not about having an expanded skill set. There are some generic skills in relation to mental health and communication and there are some specific entrepreneurial elements. The emphasis in this type of program is in supporting graduate students to succeed as students. Twelve of these 18 workshops are focused on teaching and academic skills support, from lesson planning to dealing with plagiarism. It is clear that these types of workshops primarily are ancillary support for core academic skills.

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<sup>1</sup> This acronym refers to science, engineering and technology. In North America the term STEM is used to refer to science, technology, engineering and mathematics. These terms refer to the same discipline clusters and are interchangeable.

This responds to a real and important need. Graduate students require this academic skill support. However, what has happened is that the requirements for academic performance have expanded beyond the standard curriculum into this ancillary space. Paradoxically this leaves less room for specific workplace skills training.

**Table 1 Ontario MyGradSkills Online Workshops in 2015<sup>2</sup>**

	Career Development	Communication	Entrepreneurship	Research	Teaching
Converting a CV to a resume	X				
Mental Health and Well-Being: Skills for Graduate Students	X	X			
Non-Academic Work Search	X		X		
The Versatile Graduate: Exploring Diverse Career Paths for PhDs	X				
Academic and Professional Communication for New Researchers		X	X		
Intercultural Competency		X			
Mentoring Undergraduate Students		X			X
Entrepreneurship and New Venture Creation			X		
Intellectual Property: An Entrepreneur's Guide			X		
Academic and Research Integrity				X	
Foundations of Community Engaged Scholarship				X	
Foundations of Community Engagement				X	
Research Management				X	
Understanding and Avoiding Plagiarism				X	
Lesson Planning					X
Teaching Dossiers					X
Teaching Online: Advanced Facilitation Skills for Graduate Students					X
Teaching Online: Basic Skills for TAs					X

The mandate for technological universities that comes from the Irish government aims at a more integrated approach to generic skills. Technological universities are meant to develop “Curricula that embed the full range of generic attributes linked to employability and citizenship” as well as “Curricula that embed engagement in the workplace as part of its programmes”.

It seems quite possible and achievable to embed engagement in the workforce within the curriculum. However, embedding a full range of generic skills within curricula could be

<sup>2</sup> <http://mygradskills.ca> accessed May 14, 2015

more challenging. The generic attributes, the interpersonal skills around teamwork and program management, only will be addressed if there is a focus on these additional skill areas.

UOIT was developed with a “market driven” mandate. It has been innovative in many things but in some respects it looks very much like any other comprehensive style university in the Canadian and Ontario systems. There are many examples at UOIT and across the Canadian system where there are clear workplace links for students through cooperative programs and internships and there are many applied degrees with close industry partners. At UOIT all of the core undergraduate programs have coop or internship or practicum placement options. This level of engagement with the work world is quite strong. However, like other universities in Ontario we have not embedded workplace and generic skills across our curricula. At the graduate level our generic skills workshops look very much like the provincial online list. They are a collection of largely voluntary, short enhancements to the academic experiences of graduate students. This is valuable and important but it is not the same thing as a broad based effort in relation to generic and workplace skills.

### **Establishing Academic Credibility in the Case of UOIT**

UOIT was established to be a different type of university. Its mandate includes being focused on articulation programs from the Colleges of Applied Arts and Technology within the province of Ontario. This college articulation mandate was quite strong and the movement to establish the university was spearheaded by the president of Durham College, Gary Polonski, who became the founding president of the university while still retaining his college presidency. The development of the university was not an effort to evolve the college into a university. Rather it was an effort to establish a sister institution to the college that would facilitate college transfers to the university sector. From the beginning there has been overlap with the college in some shared infrastructure and support staff and there continues to be some shared governance at the board level. However, over time the ties between the college and the university have loosened and the university and the college are clearly separate academic entities. The most significant shared academic program is with nursing where the college and the university jointly offer a nursing program with a university degree on its completion. This type of structure with nursing taught jointly between colleges and universities is common in Ontario and does not distinguish UOIT. UOIT has a higher proportion of its programs than the Ontario norm in the SET disciplines, but it has many students in education, business and the applied social sciences. It is distinguished by the lack of arts programs organized around traditional disciplines. In this it is innovative in the Ontario context.

UOIT was established without a government policy framework to distinguish it. The provincial government simply has had one broad approach to universities. Within this broad approach bilateral agreements have been made with individual universities. Over the last decade there has been a move by the province and the larger established universities to consider a more differentiated approach to university relationships by government, but at its founding UOIT began with a different mandate but no structures to help it to

differentiate. This meant that the standards and assumptions by which it has been evaluated are the same standards as those for other universities in the Ontario and Canadian system. This ends up being a critical issue for commonality in the structure of academic programs.

Another element that is important to understand about Canadian university systems is the degree to which they are decentralized. Canada is a federal state that was founded on the principal that cultural matters and education were local provincial matters. This grew out of the détente between French catholic Quebec and the early mostly protestant English speaking populations in the other provinces. As a consequence Canada is a country with no federal ministry or department of education. The federal government injects itself into the post-secondary system through its research councils and through spending on infrastructure, which sometimes involves capital expenditures at universities. The older central and eastern provinces have a template for university development where institutions in the 19<sup>th</sup> century were typically established as church run with a charter that recognized their independence. When the university systems were dramatically expanded and all of these denominational institutions became public in the mid twentieth century this independent model of university governance was maintained and duplicated in the establishment of newer public institutions. The western provinces have a stronger role for government in universities and in overall system design since the dominant pattern was one where government established the template for universities. In Ontario the provincial government has many levers in its relationships with universities, mostly through various forms of funding and its ability to decide whether to fund individual new degree programs.

The Council of Ontario Universities (COU) is the collective organization for the publicly funded universities in the province. The COU controls the program review and quality assurance processes for Ontario through its Quality Council. The provincial government has no direct role in these processes but there is an agreement that the province will not fund any degree that has not first received approval by the COU's Quality Council. Government's accountability measures are not connected to program reviews. The upshot is that the quality and standards for degrees are established by collegial peer review from within the university sector. However, the province does have a review body called the Postsecondary Education Quality Assessment Board (PEQAB) that approves degree programs in the college sector as well as for out of province institutions and private universities and colleges. The PEQAB processes are virtually identical to the COU based processes so in effect PEQAB ensures that the COU standards are applied to these non-core university level providers. During UOIT's first phase of degree development all degree proposals initially had to be approved by PEQAB while all our graduate level degrees also had to be reviewed twice by also going through the COU process.

As a new university UOIT had to establish itself in relation to the university organizational and curriculum standards of COU and the broader academic community. This put enormous pressure on UOIT to conform to this broader general university standard. Although not part of the initial plans, tenure was implemented immediately with the first faculty recruitment cycle. The teaching load also immediately was pegged at the general comprehensive university standard instead of one that was closer to the college sector. A

research mandate was expanded and integrated into faculty member position profiles. All faculty members were required to have a PhD. The governance structure also was amended to be quasi-bicameral. This was necessary in order for UOIT to be accepted as a member of COU as well as being recognized by the Association of Universities and Colleges of Canada. The pressures for conformity were enormous.

Academic curricula are constantly under competitive pressure to expand. A general rule could be stated that academic curricula will expand to fill, and sometimes exceed, program timeframes. On the surface this looks similar to Parkinson's law, where "work expands so as to fill the time available for its completion" (Parkinson 1955) but Parkinson's law refers to inefficiency, bureaucracy and idleness. In short Parkinson refers to situations with a lack of competitive pressures. In academia there are considerable competitive and inflationary pressures in establishing credibility. Some of these inflationary pressures are credentialism (see Collins 2011) but many of these pressures are the result of competition. This can mean the expansion of core academic requirements at the expense of broader skills training.

When UOIT degree programs were put out for review the external review panels were drawn from faculty members at other Ontario, Canadian and international institutions. UOIT was and is aspirational and competitive and so our degree proposals have met or exceeded the academic requirements in the prevailing standard. I have shepherded over 30 degrees through review approval and periodic evaluation processes and I have never seen a review recommend lower academic requirements. The pressure always is for more in order to compete. In many professional programs the undergraduate degree requirements for a 4-year undergraduate degree of 120 credits are more than 120 credits and student typically must take longer in order to complete the program. The general pattern of requiring a 4-year honours degree, as the foundational undergraduate degree in Ontario is an expansion from an original 3-year degree standard of several decades ago.<sup>3</sup> One example at the doctoral graduate level is comprehensive exams. PhDs in Canada and the United States are what might be called structured degrees using the Irish terminology. So unlike the traditional English and Irish research doctorates there are significant taught components to North American PhD research degrees. The standard set of these components includes courses that can stretch out over one or two years. In addition there is often a thesis proposal and then there are comprehensive exams that typically take a year to complete. Comprehensive exams are meant to show that the student has a broad grasp of the discipline. Then there is the thesis. There has been considerable debate over the last two decades to deal with the completion rate problem because of the great lengths of time it can take to complete a PhD. Nominally, the PhD is supposed to be 4 years. The actual average length of time for PhD completion in Canada at the large research universities varies from just over 5 years in the health sciences to over 6 years in the humanities (Tamburri, 2013).

At UOIT we considered various PhD models and settled on a more slender candidacy exam structure where the thesis proposal and comprehensive exams could be combined and we

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<sup>3</sup> This author has a 3-year general BA attained in 1974.



set out that this should normally be completed 18 months of full-time study. Some of our early PhD degree proposals did not have this component since the faculty members preferred to keep their research students focused on faculty directed research problems. The example where this first occurred was in a discipline where research productivity is the primary purpose of graduate degrees from the point of view of most faculty members. External reviewers insisted on having a comprehensive type of exam and so in order to get approval for our degrees through the COU process we instituted the candidacy exam structure. This finally gained us approval for our PhD degrees. External reviewers periodically question this structure because it is still shorter than the traditional comprehensive exam model but we have made the argument successfully for our approach. However, internally groups of faculty members have tried to expand the requirements and institute comprehensive exams as part of their programs. I opposed this on every occasion, but holding the line on this structure is not broadly embedded in our culture, and has had to be argued anew many times. Because of the lack of an established curriculum culture on these matters there was a slip when I went on a 6-month leave. During this time a degree proposal attained internal approvals with a full comprehensive exam structure. When I returned from that leave there was a battle over this element and I managed to push back on some key components for the final proposal. The faculty members involved expressed the opinion that not to have a full comprehensive exam structure was falling short of the standard in their discipline. These faculty members pointed to strong competitive pressures to expand requirements and conform to disciplinary norms in establishing the academic credibility of their program.

### **The Curriculum Space Challenge for Embedding Workplace and Generic Skills**

In all degrees there is rarely any curriculum space. Faculty members and collegial program reviewers push to maximize the academic curriculum. At the PhD level if faculty members in a discipline follow a more purely research degree model they will limit non-thesis requirements and see any additional requirements as a diversion. If faculty members in a discipline see their established norms as requiring additional academic hurdles such as comprehensive exams then these structured requirements will expand. In either case there will be limited available time and resources for additional workplace and generic skill requirements that do not support the core academic curriculum. The pressures are to push these additional elements to the periphery. In addition, as a new university these pressures are felt especially because of the lack of established reputation. New universities can be vulnerable to the perils of being eager to please and thus being conformist in adhering to established disciplinary models.

UOIT, along with some other universities in the Ontario system, has been innovative and successful in its work related internship, practicum and coop options. The pressures from core academic requirements have not squeezed out these elements of our degrees. Herein may lie the way forward for generic and broader skills training. The importance of work experience and placements has its own deep set of rationales and supports and champions. Workplace experience programs could be expanded to incorporate more generic and workplace skills training. This can be a strong way to move forward for undergraduate and many professional model graduate degrees with large taught components. However,

graduate degrees with a strong research component, and especially PhDs, may be a more difficult challenge because of the concentrated focus and funding around research. Perhaps external partners in research may be a way to help with pairing workplace experience and research.

In this paper I have suggested that collegial review processes and culture will expand academic requirements to fill the available time and resources in the curriculum. I have also pointed to a problem with innovation in curricula if the benchmark for program structures and quality assurance is a generalized university standard. The proposed Technical University of Dublin has an advantage in the government mandate for an integration of generic skills into the curriculum. However it will remain to be seen whether the pressures to attain credibility lead to curriculum expansion. If universities are to add additional components to degrees this will put pressure on the amount of time available for core academic programming as well as on the structure of that programming. The most likely result is expanded degrees since the credibility of the academic programs would have to be maintained. The result will be pressures to expand the scale of programs. In this context the tight timeframes of the Bologna model with 3-year first and third cycle degrees appear unrealistic. It is interesting to see that the new structured doctoral degrees in the Irish system appear to be adopting a 4-year model. In Canada we have lived with “structured” PhD research degrees for a considerable time and we have found that the extra structured taught elements have been taken up with academic requirement expansion leaving no spare space for workplace skills. Perhaps there will be an opportunity to non-academic skills training during the developmental stages of these new structured PhD programs. The same opportunities may present themselves at the undergraduate level. Perhaps a focus on mandate and outcomes that integrates generic and workplace skills in degree level outcomes will help to exert sufficient pressure to create the curriculum space necessary for this ambitious result.

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