



Canadian Association  
for Graduate Studies

Association canadienne  
pour les études supérieures

## **PROFESSIONAL SKILLS DEVELOPMENT FOR GRADUATE STUDENTS**

### **EXECUTIVE SUMMARY**

Professional skills development for graduate students has been a topic of discussion among university graduate communities and members of the Canadian Association of Graduate Studies in particular. The phrase “professional skills” is used in the broad sense to describe skills that complement the disciplinary knowledge and disciplinary technical skills that remain the most important aspects of any graduate training. By skills we mean behaviors that can be learned, that can be improved with practice, that require reflection, and that benefit from ongoing coaching.

There is no doubt that there already exists considerable expertise and opportunities for professional skills development across universities. Of course there are variations in how, what, or how much is available and there are very few, if any, institutions which have the resources to provide complete coverage of these skills to their students. In this report we seek to identify a core set of such skills to base a national inventory from which gaps and best practices can be identified, so that we can plan collectively to provide broad access to a core for all graduate students.

The objective of this document is to provide a springboard for the CAGS community to engage actively in this discussion, to develop a consensus on need for the further development of these programs, and potentially to propose a plan for action to explore how to provide a core set of skills across all institutions.

In the summer of 2007, a joint Tri-Council, STLHE, CAGS workshop kick started the discussion of professional development for new researchers. From this initiative, we have identified four areas of focus by consolidating ideas and striving for wide applicability. The broad areas are communication, management, teaching, and ethics in research.

Finally, in the Canadian context and with the reality of resource limitations at all academic institutions, it is clear that success going forward will be achieved only by capitalizing on current programs and current expertise as we identify priorities and gaps.

# PROFESSIONAL SKILLS DEVELOPMENT FOR GRADUATE STUDENTS

## I. INTRODUCTION

The Government of Canada has articulated the need to strengthen Canada's people advantage so that Canada can attract and retain the highly skilled people needed to thrive in a knowledge-based economy and to make meaningful contributions to society, both nationally and internationally. Increasingly, funding agencies, universities, employers of highly qualified people, researchers, and graduates themselves recognize the importance of professional skills that complement their disciplinary expertise.

To be competitive then, graduate students increasingly need to engage in ongoing development of their skills in areas that complement their academic programs and enhance their employability. The knowledge economy demands a high level of professional skills from all of its participants if they are going to increase the economic and social benefits for Canadians and for society in general. These new expectations are *complementary to* not *instead of* academic credentials. In 1998 Oblinger and Verville<sup>i</sup> made an observation still relevant today: "The problem is not that today's graduates are less skilled than those of previous generations, but that expectations for performance are much higher today than ever before."

Canadian graduate programs provide many opportunities for skills development but this aspect of graduate education has only recently been emphasized. Effective professional skills development provides our students with opportunities to reflect on and extend their expert knowledge and experience as they develop individual careers. Universities across the country recognize this and have risen to the challenge within the limits of their resources and expertise. The goal of this document is to begin a dialogue related to such skills so that institutions, departments, and individuals can identify gaps in their own offerings and so that as a community we can identify opportunities for filling the gaps. The long term vision is to provide a network of programs across the country so that all graduate students can develop these skills.

The following discussion is based on the premise that disciplinary knowledge and technical skills remain the most important aspects of any graduate training delivered at a

university. By skills we mean behaviors that can be learned, that can be improved with practice, that require reflection, and that benefit from ongoing improvement. The phrase professional skills is used here in the broad sense to describe skills that are complementary to disciplinary knowledge and that will enhance the graduate's ability to be successful in the transition from academic to work life.

Just as there are differences in academic expectations from masters to PhD programs, there are different expectations for professional skills for different career contexts, from the private sector to academia, to the government and public sectors, and to not-for-profit organizations. Initially, at least, we will concentrate on areas that have broad application.

While universities are clearly responsible for the discipline-specific skills, they have become more involved in the broader skill development, whether this development is overt and intentional or not. Currently, many of the resources, courses, and programs mentioned in this report already exist in pockets within university communities. By taking a more structured approach in the area of professional skills, universities can enhance their ability to help their graduate students achieve a higher level of competitive expertise.

The discussion is presented in the following sequence. First we present broad principles to frame choices and priorities. Second we propose a small core of professional skills that should be available to all graduate students, either in local or remote fashion. Finally, we consider how to move the agenda forward.

## **PRINCIPLES FOR DEVELOPING PROFESSIONAL SKILLS IN THE UNIVERSITY CONTEXT**

1. The university is responsible for providing graduate students with the best possible preparation for their future roles whether within academia or in other sectors. This responsibility extends to developing professional skills.
2. Professional skills development will be more successful and more efficient if it is formally recognized by the institution.
3. Professional skills components should not extend the length of the program of study.
4. Expectations for developing specific professional skills should be appropriate to the needs of different student communities, according to discipline and program, taking into account level of study (Masters/PhD), and considering the long-term goals of the student (i.e., academic / public sector / private sector / not-for-profit sector).
5. The university should have the willingness and be provided with the resources to invest in the capacity for developing such skills.
6. Programs for developing professional skills should be experiential and open ended in nature.
7. Academic programs and university resources continue to be responsible for the development of necessary academic skills including critical thinking and academic communication skills related to writing and presentation, in particular.

### **TARGET AUDIENCE**

The target audience for professional skills development includes all graduate students and includes the range of different career paths they may follow whether in the academic, private, public, or not-for-profit sectors.

## **II. ESTABLISHING PRIORITIES**

### **CRITERIA FOR SELECTING PROFESSIONAL SKILLS AREAS FOR NATIONAL INVENTORY**

1. These skills must have a demonstrable high impact for a broad range of graduate students.
2. These skills must have a high potential for successful development and delivery in the university context. That is, we must be able to define specific components and students need to be able to show that competency has been achieved to a minimum standard, i.e., competency must be measurable.
3. Students must be able to develop competency in these skills in a reasonable timeframe during their graduate programs. Specifically, the student's progress to degree cannot be delayed or compromised by additional non-academic requirements or opportunities.
4. Skills that are necessary for the achievement of academic success should be integrated into academic programs and supplementary services rather than depending on separate professional skills programs.

### **IDENTIFYING PROFESSIONAL SKILLS AREAS**

As a starting point we considered the list of nine areas for professional skills development proposed by the TriCouncil/STLHE/CAGS workshop in 2007:

- Communication and interpersonal skills
- Critical and creative thinking
- Personal effectiveness
- Integrity and ethical conduct
- Teaching competence
- Leadership
- Research management
- Knowledge mobilization and knowledge translation

- Societal/civic responsibilities.

From this list we propose a shorter set of skills areas for our purposes that have high likelihood of success in implementation in the university context. The four areas we propose are: communication, management, teaching, and ethics. These four areas contain many, but not all, of the concepts spread across the nine and meet our stated criteria related to potential for implementation. This is not to downplay the other topics but as a practical matter to focus our attention on what is most doable going forward. Many universities, of course, already provide programs specifically for some or all of these skills. Almost every Canadian university, for example, provides training and support for developing teaching and pedagogy skills.

### **1. Communication Skills**

All graduates need to be able to communicate effectively, concisely, and correctly in written, spoken, and visual forms to a variety of audiences using a wide range of media. Communication includes the effective sharing of knowledge and expertise in a variety of situations (to peers, to the general public, and to decision makers). Graduates need to be confident in giving oral presentations at team meetings, seminars, and conferences just as they need expertise in the preparation of scholarship proposals and grant proposals for submission to external funding agencies.

### **2. Management Skills**

Management skills include knowing how to manage people and constrained resources successfully in research settings including the setting of research goals and milestones, preparation and management of budgets, and even contract negotiation. Graduate students need opportunities to develop suitable organizational skills and appropriate knowledge of financial management, people management, and project management. These skills will allow them to work efficiently in a wide range of situations involving projects with different objectives, different timelines, and different stakeholders.

### **3. Teaching and Knowledge Transfer Skills**

Graduates are expected to be able to explain complex concepts related to the content, skills, and processes of their discipline in various workplace contexts. Graduate students planning on a variety of careers need experience in identifying the learning outcomes as well as in selecting appropriate content and delivery models. They also need experience adapting their instructional, outreach, and dissemination activities for different contexts to address different learning styles, motivations, backgrounds, and experiences.

### **4. Ethics**

Graduate students need to acquire skills to assist them in making sound judgements based on an accurate grasp of basic ethical principles. Researchers at all levels must be aware of and adhere to professional codes of conduct and standards in and beyond their disciplines. Graduates need comprehensive information about and experience in ethical considerations in situations involving conflict of interest, authorship, and intellectual property attributions, especially in multidisciplinary and multicultural situations, taking into account social and environmental considerations.

## **III. OPERATIONALIZING: MOVING THE AGENDA FORWARD**

The data from students, alumni, post-doctoral fellows, junior faculty, and employers strongly supports the current approach that Canadian universities are taking to provide skills development among graduate students. This presents us, as a community, with opportunities and challenges. The benefits to graduate students are many: increased confidence in approaching their first job<sup>ii</sup>, personal reflection on managing the academic to work life transition, and engagement in a process of self-motivated learning of professional skills.

Challenges to the universities include:

- Avoiding extending the length of graduate programs,
- Being explicit in the learning objectives and expectations,
- Balancing voluntary with compulsory programs,

- Identifying the unit or units on campus responsible for development and delivery of programs,
- Finding the necessary resources.

## **MOVING FORWARD**

To move forward we suggest that CAGS take a leadership role to:

1. Create an up-to-date inventory of resources, practices, and methods at the individual university level, including programs delivered by professional faculties, such as business, education, and health professions.
3. Identify gaps in coverage and barriers to success.
4. Develop a comprehensive and detailed description of specific core skills and competencies in those areas, taking advantage as much as possible of existing literature and best practices.
5. Decide how best to deliver core skills nationally in a comprehensive manner taking into account resource considerations.

## **SUMMARY**

The expectations on our graduates are beginning to shift, with a greater emphasis on developing the graduates both personally and professionally to support their individual academic to work- life transition, whether the profession of choice is going to be in the private sector, the public sector, or not-for-profit sectors. Ultimately, each university makes the final determination, within its own context, of how to select, resource, and implement the development and delivery of individual professional skills programs. The goal of this discussion paper is to begin the process of understanding the current landscape of professional skills programs in Canadian universities, to identify a small core of areas of common interest, to identify gaps in the current delivery of such programs, and to begin to develop a national strategy for ensuring that all graduate students have access to at least a core set of programs.

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<sup>i</sup> Oblinger, D.C. and A.L. Verville, 1998. *What Business Wants from Higher Education*. American Council on Education /ORYX, Phoenix, USA.

<sup>ii</sup> Jaschik, Scott. 2008. Confidence Gap for New Profs. Inside Higher Ed. July 11. [[www.insidehighered.com](http://www.insidehighered.com)]