



Canadian Association  
for Graduate Studies

Association canadienne  
pour les études supérieures

## **Notes for a Presentation to the Senate Standing Committee on Social Affairs, Science and Technology**

May 6, 2010

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The Canadian Association for Graduate Studies (CAGS) is a national organization of 60 institutions engaged in graduate education and research in all academic disciplines. It includes the graduate student associations that together represent 165,000 graduate students. It is dedicated to the advancement of graduate education and university research.

I would like to thank the Senate Standing Committee on Social Affairs, Science and Technology for the opportunity to be here today.

In the Science and Technology Strategy the federal government argues convincingly that “world-class research excellence is Canada’s standard” and that we need to create “the best-educated, most skilled, and most flexible workforce in the world”. Achieving these aims, however, means that we need to further increase research funding, increase the number of young researchers, attract more top international students and promote graduate student mobility.

The government of Canada plays a critical role in supporting university research and graduate education through its three research-granting councils. They provide support for direct research grant programs, scholarship support for graduate students, fellowship support for postdoctoral scholars, and a portion of the indirect costs of research. Our universities play a major role in the creation of new knowledge and in the preparation of the next generation of researchers and knowledge economy workers. As you know, universities account for more than one-third of our national research effort. Graduate education is the engine that drives university research. Graduate schools train the scientists, researchers, engineers, public policy makers, health professionals, and other experts in the wide range of disciplines that are crucial to the competitiveness and prosperity of Canada in the 21<sup>st</sup> century. We are at a crucial moment for research and graduate education. Further investment in the research councils will be needed to provide the level of innovation required for prosperity. Other countries are stepping up their commitment to higher education and research, not only the United States and the European Union, but also emerging countries like China and India. The return on investment from these funds is outstanding based on any measure: highly qualified personnel, academic research, patents and benefits to private and public interests. Independent international reviews of Canada’s funding agency model cite it as a highly effective resource allocation mechanism for research funding. The government’s approach to funding for research should be balanced, including both basic and targeted research. By a balanced approach we mean, for example, that new funding to the federal research-granting councils also be directed toward basic research. Indeed, your Committee recommended that the government of Canada not limit additional funding in S&T to priority areas.

We also need to increase the number of young researchers, i.e. graduate students and postdoctoral scholars. Graduate education in Canada went through an unprecedented expansion in recent years. Despite these increases, our participation rate at the graduate level remains relatively low. Similar enrolment increases in higher education are experienced in most other OECD countries and this trend is expected to continue in the next twenty years. The need for advanced skills provided by graduate studies is increasingly clear. If Canada is to capitalize on this increased demand for a highly skilled workforce then increased support at all levels for this training is essential. Graduate student funding needs to be a government priority. Our best graduate students are funded directly through a range of scholarships from Vaniers to the Canada Graduate Scholarships (CGS). Inadequate support greatly compromises both the quantity and quality of research in Canadian universities as graduate students who are sufficiently funded devote their time and energy to their studies, complete their programs faster, and are more productive. Long term stable increases in the number of scholarships available to graduate students are essential to the development of long term research agendas across broad range of disciplines.

Research in Canada depends on the output of graduate students and increasingly on the postdoctoral fellows working in our academic institutions and with our industrial partners. The postdoctoral population has grown rapidly in recent years as increased requirements for advanced skills and training are required for entry to the profession. There are approximately 6,000 postdoctoral scholars in Canadian universities, of these 39% are international researchers.

This number will grow while universities are under increased pressure to hold hiring into the faculty ranks until the economy recovers. Postdoctoral fellowships are typically 2-4 year assignments designed to provide additional training in research for recent PhD graduates. The fellows work full-time under the supervision of a faculty member at their university contributing to the research productivity of their lab and often doing substantial independent research of their own. These young researchers make significant contributions to their field and enhance their chance of securing a more permanent position in academia and in the public and private sectors. Currently, most post doctoral fellows are funded by the federal granting councils (directly as a fellowship or through a research grant) or the private sector. They are more than contributing members of the Canadian research enterprise. Postdoctoral fellows are the next generation of researchers in the final stage of training. We have, as a nation, invested heavily in these people, whether Canadians or from abroad, and we need to be prepared to complete their training, keep them integrated in Canadian research, and retain the best in Canada to provide the research leadership we will need as the economy evolves. It is important for Canada to invest directly now in postdoctoral fellows to help both universities and private enterprises hold onto the talent that will enable us to compete more effectively through innovation and discovery.

It should be noted that there are close to 30,000 international graduate students in Canada. The proportion of international graduate students has steadily increased in the past 15 years they are now more than 15%. International students in tertiary education are highly concentrated in a few countries. Two-thirds of them are studying in only seven destination countries, and Canada is the 6<sup>th</sup> of these countries (after the US, UK, Germany, France and Australia) with 5.1% of international students, reflecting our world-class graduate education system. The competition for top graduate students worldwide is very stiff. These international students make an important contribution to Canadian society, helping us deal with our demographic and economic challenges, and we should strive to increase their number. Many international students remain in Canada after they complete their studies. They are a prime source of immigrants: they are well-educated, familiar with the language and culture, and are already recognized as a valuable resource by the private sector. Those who return to their home countries become leaders there and maintain good connections with Canada.

In today's knowledge based society, mobility is increasingly important to the education of graduate students. They should have the opportunity to experience and to contribute to research excellence at the national level. Direct involvement in research at places other than their home institution will provide this insight, broaden their skills, help them to mature as researchers, and build networks of personal contacts at a national scale to provide the basis for broadly based collaborative efforts in their subsequent developing research careers. In addition, their experiences in different regions of Canada will increase their understanding of the nation and its heterogeneity, making them more enlightened Canadian citizens. Relatively few Canadian students, in comparison with U.S. and European students, choose to pursue graduate studies abroad. In a context of globalization, we must urgently encourage students to pursue graduate studies in other countries for their own development and to enhance the international reputation of our universities.

I thank the Senate Standing Committee on Social Affairs, Science and Technology for its attention to this matter. Please contact me ([fqsdean@yorku.ca](mailto:fqsdean@yorku.ca), T: 416 736 5329) if you need any further information.

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