

**The Completion
of Graduate Studies
in Canadian
Universities:**

Report & Recommendations

October 2003

(revised in November 2004)



**Canadian
Association for
Graduate
Studies**

REPORT

The Canadian Context

The present economic and educational context in Canada indicates that close attention needs to be paid to the education of graduate students in Canadian universities. Two major factors call for an increased number of students to obtain graduate degrees. The recently proposed federal innovation strategy with its goal of increasing Canada's ranking in research and development from 14th in the world to 5th predicts that Canada will require as many as 50,000 highly qualified personnel by the year 2011. By that same year, the Association for Universities and Colleges of Canada (AUCC) estimates that there will be openings for as many as 30,000 to 40,000 new professors in Canadian universities. Half of these positions will be in the humanities and social sciences. Taken together, these predictions mean that Canadian universities need to supply as many as 80,000 to 90,000 more people with graduate degrees within the next decade. This is approximately twice as many graduate students as Canadian universities would normally graduate in that time period. As a result there is an urgent need for our universities to pay close attention to how they can increase the number of master's and doctoral students that graduate with a quality education. Canadian universities are faced with a number of alternatives: (i) they can increase the number of students they admit; (ii) they can graduate more of the students that they admit; and/or (iii) they can reduce the time to degree, thereby increasing the number of students completing their degrees in a given period of time. Given certain limitations in space and funding, the last two alternatives are important to consider. Both of these alternatives are central factors in the retention of graduate students.

For the purpose of this report "completion" refers to three factors in graduate education:

- i. graduation rates
- ii. the time to degree or completion, and
- iii. the time that it takes a student to withdraw or leave a program of study.

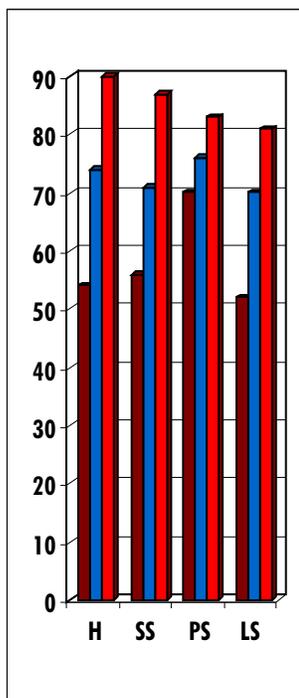


Some Facts about Retention in Canadian Universities

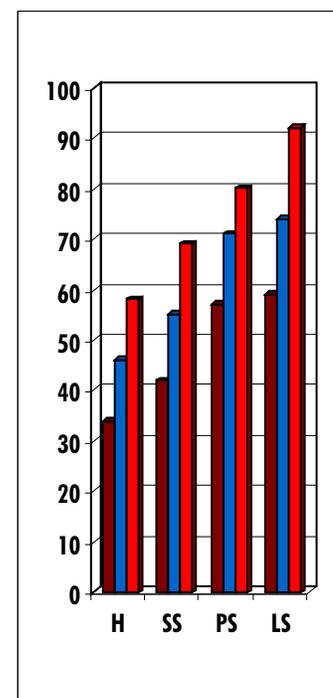
A cohort study assessing the ten year outcomes of 66% of the graduate students admitted to Canadian universities in 1992 has shown that both graduation rates and times to completion are problematic in certain institutions and in certain disciplines (Crago, 2002; Berkowitz, 2003). This is the only cross-university comparative data available in the world at this time.

The results of the Canadian cohort study revealed that at one of the universities in the study only 54% of the master's students in the humanities had graduated after ten years. This low graduation rate contrasts sharply with a 81% graduation rate for master's students in the life sciences at another university. Hence, the minimum graduation rates for master's students varied widely across the disciplines as well as across the universities involved in the study. At the doctoral level, the university with the lowest graduation rate was one that graduated only 34% of its doctoral students in humanities after 10 years. The social sciences had higher graduation rates and the physical sciences were even more successful with the median university graduating 71% of its students. The life sciences graduated the most students in a ten year period of time. Overall, the minimum graduation rates, particularly in the humanities and social sciences, were alarmingly low, especially considering the national need to graduate highly qualified personnel in all disciplines.

**Master's
Percent Graduated**

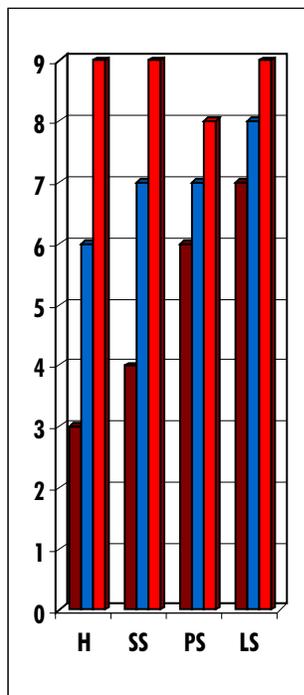


**PhD
Percent Graduated**

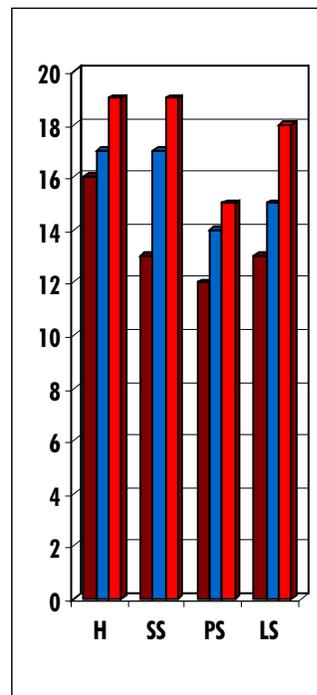


The same cohort study showed that in many of the universities, times to completion were longer than desired. Measured in semesters (NB: some Canadian universities only register their graduate students two semesters in the year), at the master's level, median times to completion were 6 semesters in the humanities, 7 semesters in social and in physical sciences and 8 semesters in life sciences; however, at the doctoral level, median times to completion were higher in the humanities and social sciences than in physical and life sciences. American data from the Council of Graduate Schools confirm that times to completion in the United States have become longer over the last few decades.

**Master's
Time to Completion
(in semesters)**



**PhD
Time to Completion
(in semesters)**



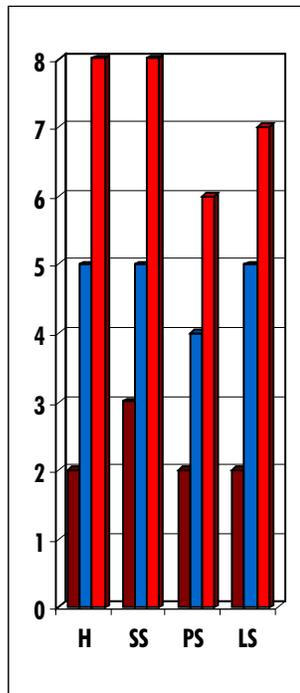
minimum ■
 median ■
 maximum ■

 H = Humanities
 SS = Social Sciences
 PS = Physical Sciences
 LS = Life Sciences

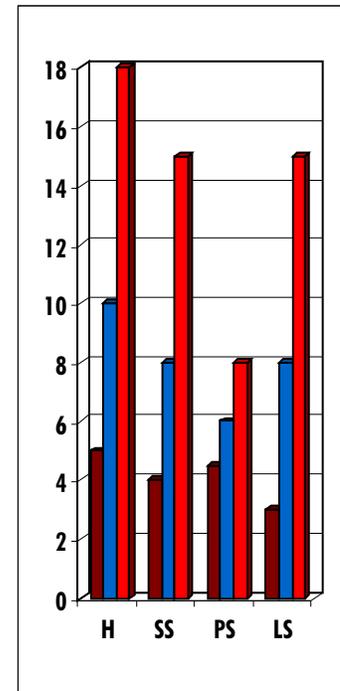


Finally, the time it took students to leave their university, either from free or forced choice, was investigated. The surprising aspect of these results is that the times it took for students to leave a university were, in some cases, nearly the same as the times to completion. At certain universities students left without a degree after 8 semesters of studies at the master's level and after 18 semesters at the doctoral level. Previous work by Nerad and Miller (1996) has indicated that there are two patterns of leavers. One group decides, often for good reasons, to leave relatively early; the other group who appears to run out of steam or money leaves without a degree after as many as 8 or more years of studying.

**Master's
Time to Leaving
(in semesters)**



**PhD
Time to Leaving
(in semesters)**



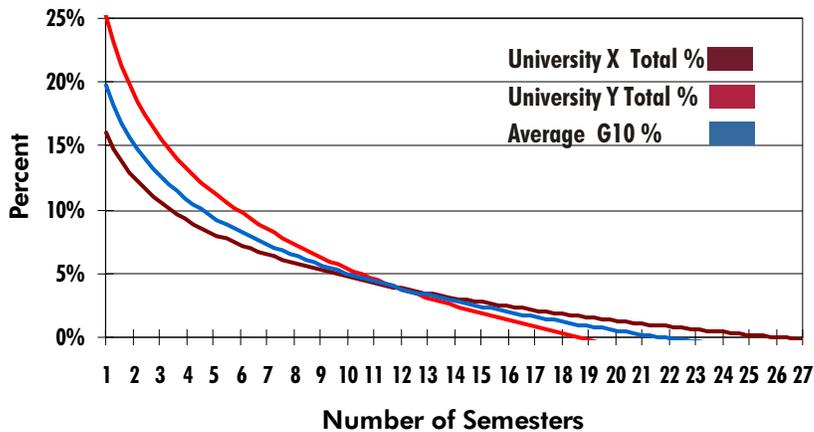
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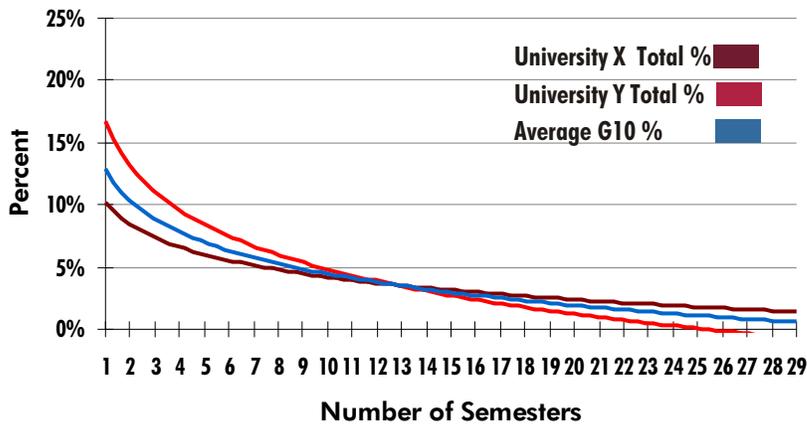


Note the two graphs with smoothed curves depicting one university with more early leavers and another with more late leavers. The personal and institutional expense of graduate students leaving without a degree after more than 8 years of study is truly problematic.

Percent of Total Leavers (all disciplines) - Master's



Percent of Total Leavers (all disciplines) - Doctoral



Factors Influencing Attrition

Recent research on why students do not complete their degrees or why they complete them in an unreasonably long time indicates that there are a number of factors associated with higher attrition and longer times to completion (Golde, 2000; Lovitts, 2001). Primary among these factors are the following:

- i. Insufficient funding for graduate students
- ii. Lack of constructive supervision of students, including transparency of expectations and regular progress tracking
- iii. Inappropriate program design
- iv. Academic isolation
- v. Too extensive a scope for the thesis
- vi. Poor quality of admissions, i.e., lack of readiness for graduate studies

In the interest of providing Canada with an optimal number of persons with graduate degrees who graduate in a timely manner, the Canadian Association for Graduate Studies is providing the following recommendations to all Canadian universities with graduate programs. These recommendations are based on recent research as well as on discussions with over one hundred Deans of Graduate Studies both nationally and internationally.

It is our hope that universities will use them for discussion, procedural modifications and planning purposes at all levels of the university that are involved in graduate education.



RECOMMENDATIONS

Transparent and Adequate Data

Recommendation 1: Retention data

Obtain data on your university's graduation rates, times to completion, and times to leaving. These data for your university should be collected in accordance with the definitions established for the 1992 cohort study and can be compared to that study's data (see www.cags.ca for information). Transparently disseminate these data to professors, students and administrators for discussion. Include these data as a performance indicator in program reviews and as a basis for resource allocation. Provide it to potential graduate students for their decision-making purposes.

Recommendation 2: Funding data

Obtain data on the funding of graduate students in all of your university's programs. Transparently disseminate these data to professors, students and administrators for discussion. Include these data as a performance indicator in program reviews and as a basis for resource allocation. Provide it to potential graduate students for their decision-making purposes.

Educational Approaches

Recommendation 3: Funding

Maximize funding available to students enrolled in graduate programs. Put offers of funding in writing at the time of admissions. (Offers should include information on the amount and duration of the funding.) Guarantees of funding are preferable. Enrollment levels need to be established in consequence of available funding. Provide students with written information on how to obtain maximal funding for their graduate studies.

Recommendation 4: Progress Tracking

Institute a procedure by which, at least annually, expectations and requirements for graduate students are outlined, and progress toward those objectives is evaluated. It is preferable that these be established by the student, the supervisor and at least one other departmental member. These should be recorded in a written document. It is recommended that universities provide their academic units with a model document for recording objectives and progress.

Recommendation 5: Academic Participation

Foster academic and social integration into research teams, scholarship discussion groups, teaching and other departmental affairs. This is especially important in areas of scholarship where graduate students have typically worked in relative academic isolation, engaged in solo scholarship.





Recommendation 6: Program Content and Review

Review the objectives and format of graduate programs regularly with the aim of insuring quality while achieving the goals of higher graduation rates and timely completion. The extensiveness of the coursework, thesis and publications need to be critically examined. Consideration should be given to a format for theses and comprehensives that encourages publications as a part of their process. Mechanisms for fast tracking master's students to the PhD should be available. Direct admission into the PhD from the bachelor's degree should also be considered.

Recommendation 7: Supervisor Selection

Promote procedures for students to make an informed decision about their supervisor. This could include rotations through various research groups before making a final decision. Institute guidelines on how students can change their supervisor.

Recommendation 8: Supervision Information and Rewards

Provide professors and graduate students with educational opportunities for learning about graduate supervision practices as well as norms for degree expectations and factors affecting retention. Produce written guidelines of useful information for progressing through the degree, i.e., survival guides. Reward successful mentorship.

Recommendation 9: Information and Rewards for Graduate Program Directors and Secretaries

Hold orientation sessions for new graduate program directors with information about the rates and factors associated with retention. At least annually hold information sessions for graduate program directors with information about the rates and factors associated with retention. Reward graduate program directors and secretaries.

Recommendation 10: Evaluate Educational Support to Graduate Support

Institute a system whereby graduate students evaluate their department's performance in terms of material and academic support. Identify successful practices in units that make noteworthy progress with regard to retention. Share these practices across the university in information sessions for graduate program directors and in educational workshops for students and supervisors.

Recommendation 11: Exit Information

Obtain feedback from exiting students, both those who graduate and those who leave before graduation. Use this feedback to adjust graduate programs and practices.

Recommendation 12: Potential Student Information

Provide information to potential graduate students on what to expect in a graduate education and what to inquire about when deciding where to apply and which university to attend. (See www.cags.ca for *Deciding Your Future: A Guidebook for Potential Graduate Students* and *A Practical Guide to Graduate Studies*)

References

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