

## Initiatives to Empower Women Faculty Members at University of Ottawa

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### Mothers See the Value in Participation

*Despite the increasing number of female students in undergraduate and graduate programs, female faculty members are still a minority at most Canadian universities. Although participation by women has increased significantly at the pre-tenure assistant rank, substantial gaps between the number of men and women at the associate and full professor levels remain as well as for research chairs and leadership roles. This article describes the multiple initiatives put in place at the University of Ottawa to support women faculty members in their careers, a great majority of whom are mothers, trying to balance professional and family responsibilities. The policies include long-standing Policy 94 named for its year of inception, a number of career and leadership development activities through the Centre for Academic Leadership established in 2005, and tailored activities through the NSERC / Pratt & Whitney Canada Chair for Women in Science and Engineering program (2011-2016). Although not all of these activities were geared towards women and mothers, the participants, overwhelmingly, have turned out to be mothers or have expressed the desire to become mothers. Among these current and aspiring women professors, many are unsure of how to combine an academic career with motherhood. A short portrait of the activity participants and their reflections are included in the paper. In particular, responses from mothers who, as professors, attended the Centre for Academic Leadership writing retreats indicate that their participation was influenced by their family responsibilities; these mothers cited the particular usefulness of the activity for writing productivity.*

Canada enjoys a reasonable participation of women in academe, with 30 percent of academic researchers being women, lagging behind several European countries like the oft-touted Sweden at 44 percent (“Strengthening Canada”). Although

the participation rate has grown considerably since the 1970s, percentages in the higher ranks and roles (associate professor, full professor, department chair, dean and vice-president, Tier 1 Canadian Research Chair (CRC) and Canada Excellence Research Chair (CERC)) remain low to extremely low. Canada's lack of candidates for the 2010 round of CERCs prompted outrage and a commission of the *Strengthening Canada's Research Capacity: The Gender Dimension* report, which was published in 2012 (Canadian Council of Academies). In the recent second round, one woman has been selected. In the social sciences and humanities as well as the life sciences, women participate in university study programs in larger numbers than men, only to have that trend reversed at the professorial level. In the physical sciences, engineering, computer science, and mathematics, women struggle to reach 30 percent university study program participation, and the male to female ratio at the professoriate level increases. Clearly there is an underutilization of these pools (Nelson).

Mason and Goulden have spent several years monitoring the effect of having children on academic careers in the U.S. Over a decade of research into the "relationship between family formation and the academic careers of men and women" went into their recent book, *Do Babies Matter?* (Mason, Wolfinger and Goulden). Using the Survey of Doctorate Recipients, which has tracked, since 1973 and every two years since, more than 160,000 PhD recipients until age seventy-six across all disciplines with surveys, and their own survey of close to 8,700 faculty members in the entire University of California system, Mason and Goulden show that successful male faculty members generally are married with small children while the majority of women who achieve tenure are not married with children. The majority of women who achieve tenure indicate that they had fewer children than they would have liked or stayed single for their career. Given that the average age for receiving a PhD is thirty-three, and over forty for achieving tenure, it is no wonder that fewer women than men have children or that women have fewer children than they would have liked. Indeed many of the women who have "early babies," defined as within five years of the PhD, slip into the second tier academic workforce of part-time teaching, adjunct, or lecturer—the "gypsy scholars" as Mason and Goulden call them.

In Canada, the trend is similar. Statistics Canada data from 2006, as reported by the Canadian Council of Academies, show that more women professors in the thirty- to forty-year-old bracket are single with or without children than men, and fewer are married with children. Although Canadian maternity leave policies are much more generous and proactive than those in the U.S., many women fear using the full leave and find that the leave itself is seen as a deterrent for hiring women even in a CRC holder's laboratory because of a potential loss of productivity. Childcare and mobility issues were also reported as having a negative effect on women's research careers.

## Background

Within this context, the University of Ottawa, recognizing that women were underrepresented in the professoriate and being committed to promoting a better balance between the number of men and women professors, adopted a new policy in 1994 by setting a global recruitment objective of at least 40 percent for the tenure track hiring of women professors for the following three years, with a particular interest in attracting women who had not yet entered an academic career or who might have considered returning to an interrupted academic career. Over twenty years later, this policy still exists, and a discretionary fund is available every year to support women professors developing their careers. Eleven professors, for example, out of seventeen applications received up to \$7,500 each in April 2015 for course relief or research assistance for the next academic year.

Besides this equity policy, the University of Ottawa also invested in the creation of the Centre for Academic Leadership (hereafter referred to as the “Centre”) in 2005, currently managed by Françoise Moreau-Johnson. Although its central mission is to support current and potential academic leaders so that they can fulfil their administrative responsibilities competently, the Centre’s four objectives around leadership and mentoring target all tenured and tenure-track (regular) faculty development. Interestingly, although the activities are designed and available to both genders, it is mostly women who make use of these resources. Since 2005, 272 workshops have been offered with a total of 2,585 participants where 67.1 percent were women (these numbers do not include the mentoring initiative); women only represent 39 percent of regular faculty. The gender difference is even more evident in two key initiatives: the mentoring program (73.6 percent of participants are women) and the writing events (87.4 percent are women). A number of initiatives target women specifically: a mentoring program and a leadership program for women have been developed that help women achieve and aspire to key roles at all levels of the organization.

With extensive programing for women in the U.S., Catherine Mavriplis, an associate professor of mechanical engineering, has developed a number of activities for advancing and empowering women at the university since her arrival in 2008. These led to the award to the University of Ottawa of a Natural Sciences and Engineering Research Council of Canada (NSERC) Chair for Women in Science and Engineering (hereafter referred to as the “Chair”) for the period 2011-2016, funded by NSERC, an industrial partner, Pratt & Whitney Canada, and the University of Ottawa. Under the Chair program, which covers all of Ontario, all fields of science and engineering have been covered in a number of workshops for women of all ages—young girls through

to women leaders—and other career development activities have been held at the university and at other locations.

## Activities Offered

### *Mentoring Program*

The mentoring program establishes a link between regular faculty members (the mentees) and more experienced colleagues (the mentors). Mentors provide support, information, and advice as well as share experiences that can help faculty better negotiate the demands of a complex and constantly changing academic world. The mentoring comes in two formats: individual and group mentoring. In the individual program, the mentee meets monthly with an appointed mentor for a period of up to twelve months. In the group program, the Centre organizes monthly meetings during the academic calendar (September to April) for up to ten mentee professors of the same rank from various faculties and two mentors at a superior rank. During an initial brainstorm session, the group agrees on a list of topics for discussion through the year. For the most part, professors self-identify for the mentoring program; however, a direct email to recruit mentees is sent to professors in the relevant category for the different groups (e.g., assistant professors, associate professors) and it generates a flurry of interest, mostly from women faculty members (Bujaki et al.).

Numerous studies (Taylor) have shown that, generally, women seek more social support to deal with stress, provide more social support to others, and engage more actively in their social networks; this could explain why the mentoring program is more popular among women faculty members. Although we cannot speak to the individual relationships (as these are confidential), the topic of being a parent has been brought up in every group when discussing tenure and/or promotion dossiers (e.g., how best to address gaps) and work-life balance.

### *Writing in the Company of Others*

Social support encourages female participation not only in the mentoring program but also in the writing initiatives organised by the Centre where more than 85 percent of participants are female. The opportunity for faculty members to write in the company of colleagues promotes social support that is often lacking in the academic environment and allows leadership development through interactions among professors, centred on the writing practice and process.

The Centre started focusing on faculty writing in 2010 upon request from a faculty member mother. Recognising herself as one of the women described by Grant as needing space and time away from home and office routines, Professor Rhonda Pyper, from the Telfer School of Management, approached the Centre to publicise the five-day residential writing retreat she was organizing

during the October 2010 reading week. The Centre promoted the Women Who Write retreat, took over the logistics (hotel communication, dietary restrictions, carpooling, etc.), and provided financial support for half the cost of the retreat (four hundred dollars per participant) for twelve professors from six different faculties.

Following the retreat's success, and based on ongoing feedback from participants, the Centre has since broadened its focus on writing by adding three-day mini-retreats on campus during reading weeks (October and February) as well as one-day writing events on a monthly basis during the academic year. The writing events on campus allow those who find it difficult to be away from home (especially those with young children) to reserve some time towards their research. These successful undertakings have led us to set up a permanent meeting room for the Centre where we can now hold regular writing days at a low cost, including summer writing days.

### *Career Development Workshops for Women Professors*

Among the many activities for women organised by the NSERC Chair for Women in Science and Engineering, the FORWARD to Professorship workshop for aspiring and tenure-track professors in science and engineering, and the Take the Final Step workshop for associate professors in science and engineering aspiring to promotion to the rank of full professor are significant initiatives benefiting mothers or aspiring mothers. Based on their success and track record, the national network of NSERC Chairs for Women has adopted the two workshops to be delivered across Canada. Other in-person Chair activities include free yoga and Zumba classes on campus, networking events, alumnae mentoring breakfasts, a distinguished lecture series, graduate research competitions, and outreach to girls. Online features of successful professional women in these fields, interdisciplinary research on women's career development in science and engineering (in sociology, education, women's studies and history), and policy work (including rights while on maternity leave for graduate students and postdoctoral scholars) also contribute to a positive environment for academic women and mothers. In particular, a study of mothers' influences on daughters' choices for science and engineering has recently been completed and publications are forthcoming (NSERC/Pratt & Whitney "Chair for Women").

The two faculty development workshops at the University of Ottawa were based on a long history and experience with the FORWARD to Professorship workshop developed in the U.S. under funding from the U.S. National Science Foundation ADVANCE program (Heller et al). Some of the results mentioned here are gathered from the seventeen-year experience with the FORWARD program. Overall, the program has supported over thirteen hundred doctoral women scientists, many of whom are mothers. In fact, the fifty-five offerings

of the FORWARD to Professorship workshop often hosted very visibly pregnant participants, and sometimes the organizers and speakers were pregnant as well. As mothers organizing these events, the workshop developers were keenly aware of the challenges of motherhood in academe and designed special sessions to discuss work-life balance and how to handle pregnancy and early motherhood in the job search or the pre-tenure phase. In the U.S., the maternity leave provisions are nowhere near as generous or as clear as in Canada: there are no national provisions other than the 1993 Family Medical Leave Act, which allows eligible employees of a covered employer to take job-protected, unpaid leave for up to twelve weeks (“*The Family Medical Leave Act*”). Furthermore, this act was fairly underused or unfamiliar to faculty members and universities until several years later. Even universities that were proactive enough to develop family-friendly policies, as the University of California at Berkeley did in 1998, found that the policies were not in use or familiar to the faculty members (Mason and Goulden).

The FORWARD to Professorship workshop addresses the “nuts and bolts” of obtaining and thriving in a tenure-track assistant professorship in science and/or engineering. Although most sessions focus on skills development in the three areas of tenure evaluation—i.e., research, teaching and service—the overall ambiance of the workshop is one of support, networking, and mentoring for women professors, current or aspiring. Motherhood is discussed extensively in the work-life balance sessions as well as in the negotiation and administrative sessions. Whether it be about how to deal with teaching loads and the planning of research and funding around pregnancy and maternity leave, or simply scheduling of faculty meetings in the late afternoon when many mothers need to collect their children from day care, balancing pregnancy and childcare in an ultra-competitive and male-dominated academic arena is challenging and ends up being an issue in many of the sessions (NSERC/Pratt & Whitney “FORWARD to Professorship”).

Similarly, the Take the Final Step workshop addresses the mechanics and encouragement for applying for promotion to the rank of full professor. With several maternity leaves or setbacks due to motherhood in their academic path, women associate professors often lag behind their male colleagues by a number of years for promotion to full professor (Ornstein et al.). In fact, many women professors never reach the top rank. Several of these women report being discouraged by their department chairs and deans to put their promotion dossiers forward, while observing their younger, less accomplished male colleagues apply early in some cases and succeed. This midcareer workshop features a special session on politics and the inevitable forces at play in promotion and career development and how to deal with them. A work-life balance session is also a must and heavily focuses on handling childcare, eldercare and adolescents

as well as marital issues in a much different light than at the pre-tenure stage. (NSERC/Pratt & Whitney Canada Chair “Take the Final Step”; WISE Atlantic “Step Up”; WWEST “Promotion to Professorship”).

### Reactions from Faculty Members

The Centre and the Chair offer a large number of activities to support faculty. As mentioned before, the activities are open to all faculty (men and women), but it seems that they are more appealing to women. We report here on the writing initiative as an example. The Centre offers single day and three-day mini-retreats on campus and five-day residential retreats. The statistics speak for themselves: from a total of 156 different participants since 2010, only thirty-eight have been men. The Centre was able to organise one all-male retreat in 2011 but has never again since. Looking at participant days (e.g., if a faculty member took part in a five-day residential retreat and a three-day on campus mini-retreat, that counts for eight participant days), out of a total of 1,536 participant-days, 1,396 are women (90.8 percent).

The writing initiative at the University of Ottawa was not designed with theories of social support (Barrera) and organisational support (Eisenberger et al.) in mind, but such theories may explain the fact that being part of a group increases enthusiasm towards the task of writing and produces greater writing productivity. Social support is defined as enhancing the perception of personal control in one’s life experience (Albrecht and Adelman) and includes the concept of social network, the feeling of belonging to a group (Gottlieb). Comments from participants suggest that, during the writing days, they feel that they become part of a social network that brings them psychological support; they have access to a group that they can rely on to get professional and personal support when needed:

- *“I’m feeling less isolated.”*
- *“I met many new colleagues and exchanged experiences and strategies with them.”*

Studies reviewed by Hogan and Najarian have shown that having social support reduces stress, increases the feeling of being competent, improves collaboration and the sharing of resources, and provides a feeling of being more in control. Again, this is reflected in the participants’ comments:

- *“Reduced my anxiety and gave me the confidence that I can complete this revision by the due date.”*
- *“Confirmed that I was not the only one who finds writing challenging.”*

According to the theory of perceived organizational support, employees who perceive that their well-being is looked after and that their contribution is valued exhibit an increase in motivation, satisfaction, emotional commitment, work performance, and a sense of belonging (Eisenberger). By providing a pleasant room dedicated to writing, setting up facilities to facilitate the task, and favouring interaction between participants, the University of Ottawa is showing that the faculty's well-being is important. Such care is noted by participants:

- *"I have felt supported in my work and felt I was part of a team."*
- *"I'm impressed by the quality of the service and the attention that is given to our work."*
- *"I feel extremely fortunate to be working at an institution which supports innovative initiatives."*

Writing in a group may also produce competition. Being surrounded by colleagues whose publication projects are advancing could create a feeling of emulation and encourage some professors to perform as well as, or even better than, their colleagues.

- *"There is a subtle peer pressure to keep active."*
- *"It was motivating to know everyone around me was working hard."*

At every writing event, participants are asked to fill in a short evaluation form, a mix of open and Likert scale questions. The open questions include whether they have accomplished the objectives they had set for themselves and whether the writing event has contributed to their writing productivity.

Participants' comments from over two hundred evaluations (n=170 for on-campus events, n=45 for residential retreats) reveal three main benefits of writing events: increased productivity helped by being away from their normal environment; increased social support and validation that writing is a difficult, yet an important task; and increased motivation for making research and writing commitments a priority again.

However, not all women faculty decide to attend: Some women feel they would not benefit from the writing events (e.g., writing days or retreats are not for them as they work better in their office or at home). Some women do not want people to believe that their success is only due to some special favour that they received through a program targeting women. Some women, who simply get the job done, feel that they do not need any support to succeed.

In April 2015, we surveyed mothers (with children under their care) who participated in the residential writing retreats and the on-campus mini-retreats to find out what influenced their choice (to attend residential vs. on-campus

retreats) and whether there was any barrier related to motherhood that affected that choice. Of the forty-three responses we obtained from sixty-eight women queried who attended the retreats, thirty-three (77 percent) said they had children at home. Only five (15 percent) of those thirty-three said that being a mother was not a factor influencing their choice of retreat. Two of these five said their husbands helped with childcare so they could manage the retreat. Twenty-eight of the thirty-three mothers (85 percent), however, answered that being a mother did influence their choice of retreat. Two spoke of their partners working and living in another city. One was a single parent of children with disabilities. Two felt they could only afford time away for one or two conferences a year and could therefore not spend the time on a writing retreat. Two mentioned teaching responsibilities that made their participation in the retreats difficult (the Faculty of Education conducts classes during the reading weeks due to teaching practicum schedules). Thirteen of the thirty-three (39 percent) said childcare responsibilities did not allow them to attend the residential retreat. Some women did attend but spoke of the need for extensive planning and organization in order for them to attend; others who were able to attend spoke of the need to concentrate on their writing without the constant interruptions of childcare responsibilities. For example, one mother wrote:

*•“I chose the residential retreat even though I have small kids because I need to get fully engrossed in my writing, and not to be distracted by the daily routines and chores of parenting that fill my head, even when at work on campus.”*

Overall, the mothers expressed their appreciation for the writing retreats, finding them particularly useful for writing productivity. As one mother said:

*•“It happened that I chose to attend the residential retreat instead of a conference because I knew that by going to the retreat I could finish an article. That’s what I did last year and I had the nice surprise of winning a prize for the article I wrote during the retreat.”*

## Discussion

The menu of activities offered by the two programs described was intended to support and empower faculty members, women and mothers in particular, in tenure-track and tenured academic positions. In effect, these activities serve to help navigate the academic environment of professors, one which increasingly demands a wide variety of skills and an ever-stretching timetable to answer not only to the requirements of research, teaching and service, but also to a myriad

of new demands such as outreach, new procedures (e.g., providing access for students with disabilities, accreditation, and quality control), and community engagement. The activities serve as faculty development and offer traditional as well as peer and near-peer mentoring opportunities, either as a formal mentoring session or an informal one through discussions and conversation. These are important vehicles for women and mothers in particular, who, research has shown, are often excluded from networking and mentoring circles and find little time, because of family responsibilities, to network and to learn, as men do, how to navigate the historically male-dominated academic environment.

Although we expect that these activities help women progress and persist in the academy, it is difficult to measure a direct link between the two. Clearly, the writing retreats, for example, are aimed at increasing the quantity and quality of professors' academic publications. These increases would no doubt contribute to increased promotion and tenure success. However, it is difficult to single out these outcomes as single indicators of success. Indeed, promotion and tenure decisions are as complex as the roles of faculty members and depend on so many aspects of the job. Success is difficult to measure in academe and often appears subjective to those who are being evaluated.

Furthermore, there is no real control group against which to measure the impact of the activities. Professors find their own ways of being productive: some work at home alone, some are involved in intense, fruitful collaborations; some minimize their teaching efforts in favour of research while others devote themselves to teaching wholeheartedly at the expense of their scholarship. The balance is indeed a fine line to walk, one which translates into promotion and tenure decisions that at times seem unfair. How is success defined in academe? And is the definition changing? For example, in the sciences and engineering, a greater involvement with industry is being promoted by the funding agencies.

Although a faculty member may choose to define her own notions of success, promotion and tenure requirements govern chances of employment. The writing retreats were strategically designed to attend to a measurable indicator of success based on the more tangible promotion and tenure requirements. Similarly, in the faculty development workshops—FORWARD and Take the Final Step—a focus on writing research and grant proposals and on graduate student time management aims to increase research productivity along an established indicator of success. A more focused study to measure the outcomes of our activities—via such definable indicators of success such as a control group of faculty members who do not participate in our activities—would be able to draw more definite conclusions.

What we can say is that the activities are deemed very useful by those who partake in them. The respondents clearly indicate that the opportunities offered helped them focus on aspects of their contributions in a more strategic way and

that they helped them with productivity, work-life balance, and job satisfaction. They enjoyed social support that is often lacking in disciplinary departments, especially for isolated women in underrepresented fields such as the physical sciences, computer science, and engineering. They exhibited more empowerment and motivation. In essence, the activities helped them boost their self-efficacy. Will this translate into persistence and progression of women and mothers in academe? We think so. The more mothers find ways to balance their home life with their work realities, and the more they communicate their success and satisfaction in that balance to incoming candidates (students and aspiring professors), the more women will consider academe as a viable option for themselves. Increasing the critical mass of women and mothers in male-dominated arenas will be most important to significantly influencing gender equity and to significantly influencing the academic environment to change.

## Conclusions

In order to facilitate the participation and success of women and mothers in particular in academic tenure-track and tenured positions, inexpensive and easy to organize events are simple approaches to supporting mothers in the tenure track who perceive the activities as beneficial to their productivity. Mothers find value in participating in these events and enjoy social support as well as self-imposed peer pressure to motivate them to perform. Not all women are comfortable with these initiatives and several choose not to participate; however, as events organized for men and women alike, the response has been overwhelmingly from women, and mothers in particular.

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