

RESEARCH NOTE/NOTE DE RECHERCHE

Doctoral Mentorship Practices in Canadian Political Science

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Abstract

Supervisors shape the PhD student experience and play a critical role in students' development. To what extent and in what ways are faculty engaged in mentorship? Are faculty mentoring more or differently now than in the past? This study of political science faculty from political science departments offering PhD programs in the English language finds that graduate supervision is changing over time, with mentorship practices becoming both more common and more varied. Supervisors do not appear to be simply replicating their own limited experience of mentorship as a PhD student. Instead, supervisors are becoming more actively and directly involved in their students' research careers in ways that increase their students' career opportunities. There is opportunity for institutions, at both the university and department level, to further invest in building the capacity and ability of supervisors to be effective mentors.

Résumé

Les superviseurs façonnent l'expérience des doctorants et jouent un rôle essentiel dans leur cheminement. Dans quelle mesure et de quelle manière le corps professoral est-il engagé dans le mentorat ? Les professeurs sont-ils plus ou moins mentors aujourd'hui que par le passé ? Cette étude menée auprès des professeurs des départements de science politique offrant des programmes de doctorat en langue anglaise révèle que l'encadrement des étudiants au cycle supérieur évolue au fil du temps, les pratiques de mentorat devenant à la fois plus courantes et plus variées. Les superviseurs ne semblent pas simplement reproduire leur propre expérience limitée de mentorat en tant que doctorant. Au contraire, les directeurs de thèse s'impliquent plus activement et plus directement dans la carrière de recherche de leurs étudiants, de manière à accroître l'avancement professionnel de ces derniers. Les institutions, tant au niveau des universités que des départements, ont la possibilité d'investir davantage dans le renforcement des capacités des directeurs de thèse et de leur aptitude à être des mentors efficaces.

Keywords: doctoral training; PhD mentorship; PhD supervision; PhD programs; faculty

Mots-clés : formation doctorale; mentorat de doctorat; supervision de doctorat; programmes de doctorat; corps professoral

Introduction

Faculty are central to PhD student training. Supervisors shape the PhD student experience and play a critical role in students' development, both as scholars and as professionals in a broader sense. Yet despite the importance of graduate supervision and mentorship to the discipline and to the students themselves, we have limited understanding of graduate mentorship practices in political science. Insight into these practices can inform department-level practices and curricula, with a view to improving the doctoral student experience. It can also shape individual supervisors' approaches to graduate supervision, which is an important aspect of the faculty role in departments with doctoral programs.

This study seeks to address this knowledge gap. In this analysis, we distinguish between *graduate supervision*, which involves fulfilling the formal role of graduate supervisor, including providing feedback on a student's work and ensuring it meets the requirements for the degree being sought, and the role of *mentor*, which we frame as involving a broader conception of professional training relying heavily on involving the trainee in the supervisor's own research work as well as supporting the trainee in other aspects of career development.¹ We report on an original survey of Canadian political science faculty, in order to answer three sets of questions:

1. To what extent and in what ways are faculty engaged in mentorship? Are faculty mentoring more or differently now than in the past?
2. Who is engaging in mentorship activities? Does faculty subdiscipline or career stage relate to mentorship activities?
3. Do faculty mentor the way that they personally were mentored?

Our research finds that graduate supervision is changing over time, with mentorship practices becoming both more common and more varied. Simply put, political science mentorship practices in Canada are changing for the better.

Graduate Supervision Literature: Categorizations and Explanations

Doctoral supervision styles clearly matter. Supervisors play an important role in career socialization (Austin *et al.*, 2009) and the development of their students' professional self-confidence and judgment (Pearson and Brew, 2002: 140). Doctoral supervision also impacts attrition (Bégin and Gérard 2013); indeed, Heath (2002) found that students who met regularly with their supervisors were more likely to complete their programs than those who met infrequently.

Supervisory styles

Scholars have made various attempts to understand differences in graduate supervision styles. Some studies create typologies of supervisors (Acker *et al.*, 1994;

Deuchar, 2008); for example, Deuchar argues graduate supervision can be classified into four types:

Firstly the “laissez-faire” style makes the assumption that candidates are capable of managing both the research project and themselves; secondly, the “pastoral” style assumes that they are able to manage the project but may need personal support; thirdly the “directorial” style assumes that they need support in managing the project but not themselves; and fourthly the “contractual” style assumes that supervisors and students need to negotiate the extent of the support in both project and personal terms.” (Deuchar, 2008: 490)

Lee (2008), in contrast, sees supervisory orientations as lying on a five-point continuum, ranging from a narrow focus on specific research training and professional socialization into disciplinary norms to a broad focus on personal development and independence.

Other studies have focused on the frequency of specific mentoring activities. A 1993 survey of Canadian faculty found “‘Some’ to ‘Substantial’ support for assistance in preparation of journal manuscripts (mean = 3.83), preparation of conference paper proposals (3.69), development of teaching skills (3.58), and development of skills in preparing research grant applications (3.48)” (Holdaway et al., 1995: 13).

Explaining differences in supervisory styles

A key factor affecting supervisory practices is disciplinary norms. Research typically finds *some* correlation between supervisor practices and disciplinary affiliations. For example, Lunsford (2012) finds specific mentoring and development of academic career skills (such as co-authoring and inclusion in grant applications) more common in the sciences and engineering and finds psychosocial mentoring (general advising and personal attention) more common in the humanities and social sciences. Such patterns are not unexpected. Co-authorship is the norm in lab-based STEM disciplines generally, and it is unsurprisingly more common for supervisors in those disciplines to co-author with their PhD students than it is in disciplines where most publications are sole-authored. Supervisor-student interactions are also typically closer and more regularized in lab disciplines, sometimes to the point of students feeling excessively controlled and monitored, while in other disciplines interaction is much looser and the major risk may be neglect. These will likely influence the prevalence of different types of mentoring activities.

These patterns suggest that doctoral mentoring practices are best studied at the disciplinary level, where we can assume a generally similar baseline of norms regarding research and knowledge production. However, it is important to note that disciplinary norms themselves do not tell the whole story. Indeed, supervision styles vary considerably and can be uneven between different supervisors even in the same program (Austin, 2002). In particular, the degree to which supervisors engage in specific mentoring practices with their students, such as co-authoring, varies considerably.

Looking beyond disciplinary norms, a second factor affecting PhD supervisor behaviour is individual supervisors’ attitudes about their roles and responsibilities

as supervisors (Lee, 2008) and their views of the purpose of the doctorate (Acker *et al.*, 1994: 484). Bogelund (2015) finds these attitudes interrelate, with supervisor orientations toward their roles varying based on their perceptions of the overall purpose of the university and the doctorate.

Supervisor confidence and experience is a third factor. Supervisors may also feel better equipped for some types of mentoring activity than others. Berdahl *et al.* (2020) find that while many political science faculty are supportive in principle of non-academic careers for PhDs, most do not feel personally equipped to offer preparation for non-academic careers or know how and where to direct students.

Faculty career stage may also be also relevant. On the one hand, senior faculty may have more experience in successfully guiding and mentoring their students, and further they are also likely to have greater access to resources and networks that can be made available to their supervisees. Conversely, it is possible that senior faculty may be less open to non-academic career paths. In a cross-disciplinary survey of Australian doctoral supervisors, Halse (2011: 561) notes that senior faculty tended to resist pressures to oversee students more closely, as

the new regime did not fit comfortably with their established views of the doctorate or academic work. They regarded it as an irritating, burdensome interference in their workplace practices. Some senior academics from the arts, humanities and social sciences also alleged that stronger institutional oversight of doctoral students and supervisors undermined quality research, eroded academic freedom and was inappropriate for their particular disciplines.

In contrast, newer academics were more active supervisors who promoted timely doctoral completions (Halse, 2011: 561).

A fifth and final factor is the “powerful impact” (Lee, 2008: 268) of the supervisor’s own previous experience as a PhD student. Historically, “supervisors learnt about supervision through their experiences of being supervised” (Manathunga, 2005: 19). This may involve replicating their own experience; it may also spur them to *not* replicate the patterns: “Some graduate supervisors approach graduate supervision in the ways that they themselves were supervised, while others actively take steps to supervise students in different or better ways” (Alharbi and Jacobsen, 2018: 14).

One area that surprisingly appears largely unexplored in this literature is the effect of gender. There is little work on whether and how gender affects supervisor styles and mentoring relationships with students, and what does exist is relatively dated (for example, Seagram *et al.*, 1998; Smeby, 2000). A 2011 study of gender and supervisory relationships in counselling psychology graduate programs concluded that “there is a paucity of current research related generally to the influence of gender on the supervisory relationship” (Hindes and Andrews, 2011: 254), and there is little evidence that this has changed. In particular, there is limited understanding of how gender acts as a variable in relation to the other factors above, especially differences in disciplinary norms. Research on the effect of race and other identity-based factors is also largely absent from the literature, although it is notable that an experimental study by Milkman *et al.* (2012) found that white male students received “more and faster responses” to meeting requests than did female and

minority students, suggesting that a student's personal attributes may influence faculty supervisory practices.

In summary, the existing literature finds that supervisory practices vary considerably both by discipline and within disciplines, with supervisory attitudes, career stages and personal experiences as a PhD student being key determinants of practice. The literature also identifies that supervisory practices matter greatly to student outcomes.

Methodology

Our research is based on an online survey of tenure-stream faculty working in Canada's 17 political science departments offering PhD programs in the English language. The University of Saskatchewan and Carleton University research ethics boards approved the study. Our sampling frame included 566 faculty identified from departmental webpages in the months immediately prior to the survey administration. We sent our survey invitation on September 19, 2018, and closed the survey October 26, 2018. The survey took respondents approximately 10–15 minutes to complete. Our response rate was 30 per cent ($N = 167$), and the sample is generally representative, with each institution being within ± 4 percentage points of its share of the population and each rank within ± 5 percentage points (see appendix). Like all surveys, our study has a potential interest-based self-selection bias, as respondents interested in graduate education may have been more likely to respond.

As our analysis here considers mentorship of PhD students, we limit our analysis to the respondents ($N = 131$) who reported supervising at least one PhD student.

Our variables of interest are mentorship activities. Respondents were asked about six activities. For each activity, respondents were asked about their own practices as a supervisor (*practices*) and their personal experiences as a PhD student (*experiences*). Although respondents were given frequency options for the questions regarding practices, for the purposes of this analysis these questions are coded as a simple binary: "have engaged" or "have not engaged." This coding allows for direct comparison with the experience measures, reduces the impact of inaccuracies due to poor recall and may reduce the impact of engagement variations due to greater or lesser opportunity (length of time in career, opportunity to mentor PhD students, funds to hire students or to pay for conference travel, and so on). Our six activities focus on research (assistant work, conferences, grants, publishing) and non-academic events; they do not include mentorship with respect to other aspects of academic careers (teaching and service) or with respect to career advising and guidance on work-life balance.

To examine the activities in aggregate, we created a count measure ranging from zero (respondent reports engaging in none of the specified activities) to six (respondent reports engaging in all of the activities). As some activities are more involved than others—for example, co-authorship with a student requires considerable engagement, while encouraging a student to attend non-academic events requires a simple email or conversation—we consider activities both individually and in aggregate.

Findings

What mentorship activities are occurring?

Our survey suggests that mentorship levels are robust. The mean number of self-reported practices is 4.4 activities. The most frequent mentorship activity is employing PhD students as research assistants (95.4 per cent), followed by providing PhD students with funding to attend conferences (84.7 per cent). The least frequent activities centre on grant applications, with 57.3 per cent reporting consulting PhD students on grant applications and only 38.9 per cent reporting formally including PhD students on grant applications.

The data suggest that mentorship activities are becoming more common over time, as supervisors report providing more activities to their students than they experienced in their own doctoral studies. The mean number of self-reported experiences as a PhD student is 2.0, less than half of the self-reported practices. We recognize a limitation here in that by using a simple binary of “have engaged” or “have not engaged” in a mentoring activity, we are not capturing the *frequency* of mentoring—that is, a supervisor may only co-author with some students and not others. However, the binary allows us to concentrate on our primary focus of whether supervisors merely replicate their own experiences or have gone beyond them (and, as noted above, also avoids problems of imprecise recall or relative opportunity, such as career stage).

We found striking gains in all six mentorship activities (see [Table 1](#)). The largest increases are seen in encouragement to attend non-academic events (rising from 29.0 per cent experienced as a PhD student to 81.7 per cent practised as a faculty member) and in co-authorship (rising from 29.8 per cent to 80.9 per cent). These changes may reflect trends in the discipline overall, including increased availability of non-academic events and increased emphasis on student training in Canada’s Social Sciences and Humanities Research Council (SSHRC) and other research grant funding. Direct involvement of students in grant applications—either consulting students on applications or formally including students as co-investigators or collaborators—is lower than other activities but has still increased substantially from very low levels of supervisors’ own experiences, especially formal inclusion on grants.

Table 1. Self-Reported Mentorship Experiences and Practices

	Experiences Experienced this support/ mentoring as a PhD student (%)	Practices Have supported/mentored PhD students in this way during academic career (%)	Change
Employed as a research assistant	71.0	95.4	+24.4
Provided conference funding	46.6	84.7	+38.1
Encouraged to attend non-academic events	29.0	81.7	+52.7
Co-authoring	29.8	80.9	+51.1
Consulted on grant application	19.8	57.3	+37.5
Formally included on grant application	5.3	38.9	+33.6

Note: *N* = 131

Who is engaging in mentorship activities?

The survey results found only minor differences in what kind of faculty are more or less likely to engage in mentorship activities. Gender differences were not seen on any of the measures, nor were there differences based on the country from which the faculty member received their own doctorate. Respondents with higher academic rank and respondents from older graduation cohorts are more likely to report providing conference funding, consulting students on grant applications and formally including students on grant applications. This may reflect increased opportunity due to length of time in the profession.

Specific to the measure of employing PhD students as research assistants, there were some small differences based on university, which may speak to institutional structures in place to fund student research assistants. The most important and interesting difference is seen with respect to subfield and co-publishing with students. Respondents working in theory (32 per cent) report considerably lower co-publishing with students than those working in Canadian (83 per cent), international relations (83 per cent), public policy/administration (79 per cent) and comparative politics (73 per cent). This almost certainly speaks to independent versus collaborative publishing norms in the subdisciplines.

To better understand whether there are systematic differences in mentorship intensity, we use our count index, which gives one point for each of the six mentorship activities identified in Table 1. Comparing mean scores on this measure, we found no statistically significant difference between women (3.97) and men (4.11). Differences across subfields were not statistically significant, but political theory stood out as being substantially lower (3.22) than the overall mean (4.04). We did find a statistically significant ($p = .000$) difference between more junior and more senior colleagues, as demonstrated in Figure 1. As faculty members spend longer in their position, they accumulate more opportunities to engage in mentorship activities.

We also find a difference (albeit not statistically significant) based on the size of the PhD program. Faculty in smaller programs (with less than 10 PhD students)

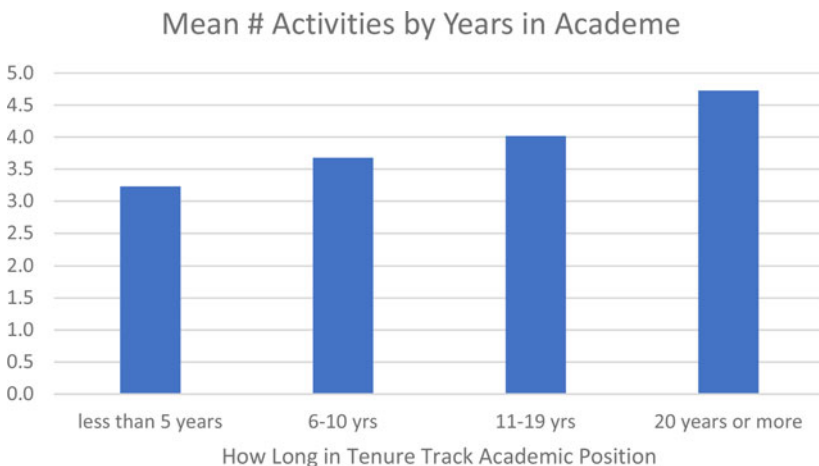


Figure 1. Mean Mentorship Activities by Years in Academe

report 3.44 mentorship activities, on average, as compared to 3.98 in medium-sized programs (11–30 students) and 4.31 in large programs (more than 30 PhD students). Greater emphasis may be placed on the professionalization of mentorship in those larger PhD programs.

Faculty members' attitudes toward the purpose of PhD training do not have a substantial impact on their specific mentorship activities. Respondents were asked "Which of the following statements best describes your thoughts of the purpose of a political science PhD?" and offered two possible responses: that the primary purpose of the political science PhD is to train researchers, some of whom will go on to academic careers *or* that the primary purpose is to train the next cohort of tenure-stream university/college professors. Three-quarters of respondents opted for the "research training" response. Attitudes toward the purpose of the PhD predicted attitudes toward alternatives for addressing the oversupply of PhD students but have no consistent effect on mentorship activities. Table 2 shows that none of the differences in practices are statistically significant, although faculty who see the purpose of the PhD as training academics were less likely to engage in most of the mentorship activities. Their mean scores on the activity index were not statistically significant, with those who selected "train researchers" having a mean score of 4.11 and those who selected "train next academic cohort" with a mean score of 3.86.

Do mentorship patterns repeat?

Do faculty mentor the way that they personally were mentored? Our survey data suggest this is somewhat the case: the majority of those who experienced a particular form of mentoring as a PhD student went on to provide this same form of mentoring to their own students and are more likely to engage in a particular activity than are those who did not have this experience as a PhD student (Table 3). At the same time, however, in five of the six items the majority of faculty who did *not* experience a particular mentorship practice as a student still went on to engage in the practice themselves. Furthermore, the correlation between the number of activities experienced as a student and the number of practices undertaken as a faculty member is weak and not statistically significant; in other words, supervisors do not appear to be simply replicating their own limited experience of mentorship. This suggests an important and, in our opinion, exciting cultural shift in doctoral student mentorship.

Table 2. Self-Reported Mentorship Practices and Attitudes toward PhD

Practices	Train researchers	Train next academic cohort
Have supported/mentored PhD students in this way during academic career		
Employed as a research assistant	92.3	97.2
Provided conference funding	76.0	69.4
Encouraged to attend non-academic events	80.8	72.2
Co-authoring	74.6	72.2
Consulted on grant application	55.4	38.9
Formally included on grant application	32.3	36.1

Note: *N* = 131; none of the differences are statistically significant.

Table 3. Relationship between Past Mentorship Experiences and Current Practices

Self-reported mentorship practices as a supervisor/faculty member	Self-reported mentorship experiences as a PhD student	
	Did <i>not</i> experience this support/mentoring as a PhD student	Experienced this support/mentoring as a PhD student
Employed as a research assistant	91.7%	96.8%
Provided conference funding ^a	79.1%	91.8%
Co-authoring	78.9%	87.2%
Encouraged to attend non-academic events ^b	74.7%	97.4%
Consulted on grant application	56.3%	61.5%
Formally included on grant application	38.5%	57.1%

Note: $N = 131$

^aStatistically significant at $p = .05$

^bStatistically significant at $p = .01$

Discussion and Conclusion

These data suggest that mentoring in English-Canadian political science doctoral programs has increased over time. Supervisors engage in more mentoring practices than they report experiencing themselves as PhD students. They are extremely likely to employ PhDs as research assistants, commonly co-author with students and provide students with conference funding, and often consult students on grant applications and sometimes include them formally in grant applications. While these are all significant increases from their own experience, the biggest increase is in encouraging students to attend non-academic events, from 29 per cent to 81.7 per cent.

These increases in collaborative activity may partly reflect changing disciplinary norms or other contextual factors, such as changing expectations for SSHRC funding (Nossal, 2006). But they also suggest that supervisors are becoming more actively and directly involved in their students' research careers in ways that increase their students' career opportunities. As noted above, our measures focus on research activities and non-academic events. Future research might consider how mentorship across other aspects of academic careers and professional training has changed over time. It is possible that supervisors are increasing involvement in their students' careers beyond research.

Moving forward, we see opportunities to further support supervisors as engaged and constructive mentors. One key area is training supervisors themselves. Typically, supervisors receive no specific training for their role, including how to appropriately mentor students. In recent years, some Canadian universities have created programs to train and support supervisors better. These programs typically remain supplementary and optional, while Manathunga (2005) observed as early as 2005 that they were more widespread and mandatory in the United Kingdom and Australia than in North America. This is unfortunate as research finds that graduate supervision training increases supervisor confidence (Alharbi and Jacobsen, 2018: 23).

Although the findings we report here indicate a positive trend in the frequency of mentorship practices, mentorship for supervisors has the potential to normalize and reinforce these practices, thereby widening students' exposure to them. Our data do

not tell us whether these mentorship activities were well received or effective; we anticipate there is potential for faculty members to acquire an improved understanding of best practices for co-authorship with students and other mentorship practices. Given the challenge of preparing students in political science graduate programs to pursue careers in a variety of venues, there is scope for the development of best practices that would ensure research assistantships cultivate transferable skills, in addition to meeting faculty members' research needs.

Along with pursuing university-level initiatives, political science departments should consider how they can best train and support supervisors in ways appropriate to the discipline, such as through workshops and informal sharing of knowledge and best practices. Mentoring activities should also be incentivized—for example, formally incorporating co-authoring with students into merit pay calculations. Universities and departments should also be proactive in setting clear guidelines and appropriate expectations for mentorship activities to avoid abuse or misunderstanding. This might include setting standards for co-authorship and promoting transparency about research assistant roles, expectations and compensation.

A final area to consider is formally expanding the mentorship circle around students entirely. This is especially important for promoting non-academic career paths. Berdahl *et al.* (2020) report that many faculty are broadly supportive of PhDs pursuing careers outside academia but also do not feel personally equipped with the requisite capacity and contacts. Thus, there are growing calls to expand mentorship beyond academic supervisors (see, for example, Clifford *et al.*, 2014), and some universities are experimenting with expanded mentorship models that allow students to draw upon community expertise (Gunaratne *et al.*, 2019). Porter and Phelps write that this “reduce[s] the need for all faculty members to be experts in the non-academic work” (2014: 62–63). Supervisors are doing a lot more mentoring, but we should not expect them to do it all.

In conclusion, mentoring is on the rise in English-Canadian political science. We believe this is good not only for students but also for supervisors and the discipline, particularly given that Canadian universities are training an increasing proportion of Canadian political science faculty (Albaugh, 2017). A strong mentoring relationship benefits the mentor as well as the mentee, often bringing new perspectives and filling gaps in the mentor's own knowledge and skills. There is an opportunity for institutions, at both the university and department level, to further invest in building the capacity and ability of supervisors to be effective mentors.

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Author contributions. Authors are listed in alphabetical order by surname.

Note

1 Our conceptualization of mentorship excludes the idea of “sponsorship.” As Rockquemore (2015) writes, “Mentors are important because they provide you with information, resources, connections and the wisdom of their experiences. But sponsors are people who have power and influence and use it on your behalf to shape the story about who you are (and the importance of your work) behind closed doors when people are talking about you and you're not there.”

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Appendix: Survey Methodology

The full survey questionnaire can be obtained at: <https://www.cambridge.org/core/journals/ps-political-science-and-politics/article/faculty-perceptions-of-political-science-phd-career-training/23ECD4D2D489D3213F897C38BA99D23E#supplementary-materials>.

Survey sample demographics relevant to this research note are presented in Tables 4 and 5.

Table 4. Respondent Demographics by Institution

University (Province)	Invited	Responded	Response rate	% of study population	% of sample
Victoria (BC)	22	8	36%	3.9	4.8
British Columbia (BC)	35	16	45%	6.2	9.6
Simon Fraser (BC)	20	5	25%	3.5	3.0
Calgary (AB)	23	7	30%	4.1	4.2
Alberta (AB)	27	7	26%	4.8	4.2
Western (ON)	26	10	38%	4.6	6.0
McMaster (ON)	21	5	24%	3.7	3.0
Guelph (ON)	24	11	46%	4.2	6.6
York (ON)	52	12	23%	9.1	7.2
Toronto (ON)	109	26	24%	19.2	15.6
Ryerson (ON)	30	5	17%	5.3	3.0
Queen's (ON)	20	8	40%	3.5	4.8
Carleton (ON)	33	11	33%	5.8	6.6
Ottawa (ON)	46	17	37%	8.1	10.2
McGill (QU)	36	7	19%	6.3	4.2
Concordia (QU)	29	6	20%	5.1	3.6
Dalhousie (NS)	14	6	43%	2.5	3.6

Table 5. Respondent Demographics by Academic Rank

Rank	Invited	Responded	Response Rate	% of study population	% of sample
Assistant	106	39	37%	18.7	23.4
Associate	232	72	31%	40.9	43.1
Full	207	53	26%	36.5	31.7
Other	22	3	14%	3.9	1.8

Note: "Other" includes tenure-stream teaching faculty with titles separate from assistant, associate, full; department chairs/heads without a clearly specified rank available on the departmental website; and research chair faculty without a clearly specified rank available on the departmental website.

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