

Evidence-based pedagogies for supervisors¹

Introduction

Much has changed on the Canadian doctoral landscape since Elgar (2003) wrote about the serious problems in doctoral programs. As in other national jurisdictions, greater attention is now directed at ensuring doctoral students successfully complete their degrees in a timely fashion. Still, we know that problems remain: from student financial difficulties, to plagiarism, lack of progress to supervision conflicts. While such problems will continue to emerge, we hope with less frequency, here we focus not on problems but on things that you as a supervisor can do to advance student progress and enjoyment. This report is structured as follows:

- A brief introduction to our research to highlight the evidence base for our recommendations
- Pedagogical principles emerging from the evidence followed by questions to guide action

Our research²: The basis for our recommendations

Our longitudinal qualitative research program funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) began in 2006. In 2007, a companion project in the UK began, funded by alternate sources. Our initial motivation was pragmatic: to address the substantial problem of PhD non-completion (Yeates 2003). We realized about a year into the research that our focus on non-completion was changing to a broader one, which highlighted learning to do academic work. (See Appendix 1 for more detail.) Initially data were collected from doctoral students in the social sciences. We followed over 50 individuals for at least one year and have followed twenty-two individuals for over five years as they have moved into both academic and non-academic careers. In 2010-11, we began collecting data in the sciences using the same longitudinal research design. Twenty are in their third year of participation and 13 in their second. As with those in the social sciences, individuals have moved from one role to another and from one institution to another.

Guiding principles (drawing on our research and the literature)

There is sufficient evidence in the literature to show that doctoral student progress is influenced by the total learning and research environment not just the relationship with the supervisor and committee. At the same time, our research findings provide clear evidence of students' efforts to be agentive, to set goals and to plan strategies to achieve them. Based on our research, several principles are apparent for which there is corroboration in the literature. (See Appendix 2 for rationales for each.) These are likely not completely 'new' to you but we think provide a broad and more conceptual understanding of the potential of your role as supervisor to support student progress.

1. Learning required at the doctoral level is substantially different from previous levels of education (e.g., greater autonomy, greater analytical skills, more substantive independent work, less structured course work).
 - Are the admissions processes structured so that applicant knowledge and ability match what will be actually required of applicants to be successful at the doctoral level? Does your program's application process provide evidence of:
 - Why the individual is doing the degree?
 - Understanding of how the demands of the PhD are distinct from previous education?

¹ This is one of four reports prepared for the CAGS website; the others address Deans of Graduate Studies, Graduate Program Directors, and students.

² The research is represented in a substantial body of work referenced at <http://doc-work.mcgill.ca>.

- Ability to do doctoral level work (i.e., not GPA or research interest but autonomy, in-depth analytic thinking, dealing with uncertainty)?
 - In considering whether to supervise a student, have you found out the following in deciding if you can or want to supervise the student:
 - Are the student's interests closely enough related to your area of expertise?
 - Do you have sufficient ability to accommodate the needs and expectations of this student?
 - Have you discussed with the student his/her expectations and yours of how the relationship should function?
 - Are you able to support this person in their stated career intention?
2. Supervision should **not** be viewed as an individual responsibility (i.e., the supervisor's), but as a collective distributed responsibility. Doctoral student progress is influenced by the total learning/research climate/environment not just the relationship with the supervisor and committee.
- Have you worked out roles and responsibilities of committee members and co-supervisors (if any) and their expectations of the student to avoid misunderstandings and conflicts?
 - Have you ensured that the student understands and agrees with the distribution of responsibilities? If not, renegotiate the differences.
 - If you have any practices that deviate from the norms in the department, have you explained these to the student and other committee members?
 - Have you identified colleagues to whom you can bring supervision questions/ problems/ challenges?
 - What methods do you use to help you, the student, and the department track student progress?
 - Do you make clear to the student (and committee members) your availability? Absence and unavailability can be a source of concern, and disruption for students.
 - Inform students about deadlines, absences and response times so they can plan.
 - Foreshadow future change, e.g., research leave, parental leave, move.
3. Think about supervision as teaching with a focus on knowledge development.
- Do you from the very beginning set regular reading and writing tasks while acknowledging the difficulties of both?
 - Do you provide strategies and structures for reading and writing, and ensure experience with a broad range of genres?
 - Do you discuss issues around day-to-day ethical practices?
 - Do you provide concrete, constructive and timely feedback? Be attentive to kinds, frequency, as well as quality?
 - Kinds: Students seek feedback on reading, writing, progressing their doctoral research, and their overall progress,
 - Frequency: Students progress better when they have regular structured meetings with their supervisors at least once a month.
 - Quality: Ensure you give the student undivided, uninterrupted attention. Ask the student to bring an agenda, naming issues of present concern and then provide feedback on the agenda.

NB Useful resources for supervisors and students that draw on our research can be found at <http://www.learning.ox.ac.uk/supervision> and also <http://www.mcgill.ca/gradsupervision>.

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Appendix 1. The scope of the research

Our longitudinal qualitative research program began in 2006. Volunteer participants were recruited (email, snowballing) from universities in large cities, two universities in Canada and two in the UK. In all universities, tenure-track and tenured faculty have responsibilities for research, teaching and service.

Initially data were collected in the social sciences (2006-2007) from approximately 50 doctoral students. They were in sociology and social policy, teacher education, environmental studies, management studies, human geography, kinesiology, information sciences, and counseling psychology. A subset agreed to continue and 22 have remained into the sixth annual cycle of data collection; they have now taken up a range of careers in different locations.

In 2010-11, we recruited in the same manner over 40 doctoral students, post-PhD researchers and new lecturers, again in two UK and two Canadian universities in math, zoology, engineering, computing science, chemistry, and the biosciences. They have engaged in the same cycle of data collection. At this point, 20 are in their third year of participation and 13 in their second. Like the social scientists, over time, individuals in the roles of doctoral student, postdoc and pre-tenure faculty have moved from one role to another and from one institution to another or to non-academic contexts.

Demographically, the range is diverse. In terms of doctoral students, both in the social sciences and sciences, participants ranged in age from mid-20s to late 40s. A good number are international with English-as-another-language; similarly many had partners and children.

References to our work

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Appendix 2. Rationale for principles

1. Learning required at the doctoral level is substantially different from previous levels of education (e.g., greater autonomy, greater analytical skills, more substantive independent work, less structured course work). Admission processes that match applicant knowledge and ability with what will be actually required of applicants to be successful at the doctoral level are necessary as are methods for tracking of progress. *Rationale:*
 - a. Reasons for lack of progress and attrition vary but often can be linked to insufficient selection and admissions processes leading to, for instance, lack of student understandings of the scope of doctoral work, or 'poor fit' between the student and the program.
 - b. Without regular tracking of progress, problems often only emerge when they are serious whereas 'nipped in the bud' they may be dealt with more straightforwardly.

2. Supervision should not be viewed as an individual responsibility (i.e., the supervisor's), but as a collective distributed responsibility. *Rationale:*
 - a. New supervisors care deeply about doing a good job of supervision, but may i) feel underprepared, and ii) experience a departmental climate that is not supportive.
 - b. Students often will not reveal difficulties to supervisors because they wish to be agentive and also because they fear not living up to expectations.
 - c. Supervisors cannot provide all the support that is necessary, but there are multiple units in the university that can support supervisors and students.

3. Supervision should be viewed as teaching with a focus on developing researcher knowledge. *Rationale:*
 - a. There are increasing pressures for doctoral education to be more comprehensive in scope (e.g., ensuring student develop the knowledge and capabilities necessary for non-academic as well as academic careers) and shorter in duration. In this context, a more structured program is called for that intentionally develops a range of knowledge and abilities beyond the specifics of completing a thesis.
 - b. Further, over the past 10 years' of research, students have consistently noted the following program gaps: i) career development, ii) day-to-day ethical practice, iii) academic communication beyond the doctoral genres, iv) management skills, v) teaching skills.