

Best Practices in Graduate Supervision

The quality of the supervision that a graduate student receives directly impacts not just their experience as a student but also the outcomes of their studies (McCulloch et al., 2016). In fact, a “key factor of the success of a research project is the relationship between the supervisor and researcher during the training stage” (Orellana et al., 2016). This relationship is so important that it is one of the four most significant problems that have been shown to impact the postgraduate experience, namely “(1) *clashes between the purposes of supervisors and students*, (2) lack of support structures for students, (3) student isolation, and (4) student confusion regarding the function of resources” (Edwards, 2002, as cited in Orellana et al., 2016).

Characteristics of Effective Graduate Supervision

When thinking about what constitute effective graduate supervision, it is important to keep in mind that there is “no gold standard model of graduate supervision which can be applied in all situations, across all disciplines. For supervision to be effective, it must be an evolving process that concentrates on meeting the needs of different students, programmes and administrative structures” (Benaquisto, 2000, as cited in Egan et al., 2009). Factors that influence the success of the student/supervisor relationship include the personalities of the student and their supervisor, their interests, experiences, and prior knowledge, and their conception of supervisory roles and styles (Orellana et al., 2016). It is crucially important for supervisors to understand what has motivated their students to pursue graduate work, and what their expectations are for the process (Guerin et al., 2015).

James and Baldwin believe that underlying all aspects of effective graduate supervision are the following principles:

- **Good teaching:** showing “concern for students, interest in their progress,” and providing “timely and thoughtful feedback.”
- **Professional commitment:** understanding that supervision is an intense and sustained effort that involves large investments of time and energy.
- **Personal involvement:** accepting that supervisory relationships with students have a personal as well as academic dimension, “especially when students face crises of confidence or personal problems.”
- **Recognizing and valuing diversity:** seeing students as individuals with different preferences, expectations, and approaches to their studies, and adjusting practices accordingly.
- **Setting high standards:** encouraging students to go beyond what they thought possible “by setting high but realistic standards” and encouraging independence by “building students’ confidence in their personal research capabilities.”
- **Serving as a model:** keeping in mind the role of supervisor as mentor and always striving “to be a model of first-rate scholarship” (James & Baldwin, 1999).

Brown and Atkins state that “effective supervisors must be competent researchers, must be able to reflect this competence in research practices, and must be able to analyze the knowledge, techniques, and methods that make their supervision effective” (1988, as cited in Orellana et al., 2016). They created a list of potential supervisor roles and associated attitudes:

- Director (determining topic and method, providing ideas)
- Facilitator (providing access to resources or expertise, arranging field-work)
- Adviser (helping to resolve technical problems, suggesting alternatives)
- Teacher (of research techniques)

- Guide (suggesting timetable for writing up, giving feedback on progress, identifying critical path for data collection)
- Critic (of design of enquiry, of draft chapters, of interpretations of data)
- Freedom giver (authorizes student to make decisions, supports student's decisions)
- Supporter (gives encouragement, shows interest, discusses student's ideas)
- Friend (extends interest and concern to non-academic aspects of student's life)
- Manager (checks progress regularly, monitors study, gives systematic feedback, plans work)
- Examiner (e.g., internal examiner, mock vivas, interim progress reports, supervisory board member) (Brown & Atkins, 1988, as cited in Orellana et al., 2016).

Orellana et al. examined Cullen et al.'s "indicators of effective management of research projects" and summarized them as follows:

1. **Direction and leadership** – organizing regular meetings, enabling students to develop new ideas, being flexible in project choice, encouraging ideas, and connecting students with a scholarly community
2. **Competence with respect to the student's project** – familiarity with relevant literature, expertise in the area of the project, and with a global perspective on the research area.
3. **Approachability and friendliness** – being supportive, positive, open-minded, stimulating, enthusiastic, and willing to recognize errors.
4. **Academic and intellectual standing** – being a creative, flexible thinker and a good researcher, with a consistent publication record, familiarity with funding bodies, and professional standing in the field (Cullen et al., 1994, as cited in Orellana et al., 2016).

Finally, James and Baldwin have outlined the following practices of effective graduate supervision:

1. **Get to know students and carefully assess their needs:** Find out what knowledge and skills students bring to the partnership, as well as where their weaknesses lie, and how you will help address those shortcomings. Work together to set reasonable expectations for your partnership.
2. **Work with students to establish a strong conceptual structure and research plan:** In this area, the experience of the supervisor is crucial to the success of a student's project. Help students construct the best possible research proposal – review their objectives, their methodology, and their timelines. Work with them to determine what research is most valuable to the field and to their career, help them find the right scale for their project, and help them locate resources that will help them complete their project.
3. **Encourage students to write early and often:** Provide students with focused writing tasks from a very early stage in their project. These literature reviews, conceptual frameworks, reports, or critical summaries will not only serve as the potential basis for thesis chapters, conference papers, or articles, but also prevent the task of writing from becoming daunting later in the process. This can also help students find their voice and work on their style, so that they can iron out any major difficulties they are having before having to tackle overwhelming revisions to their thesis.
4. **Initiate regular contact and provide high quality feedback:** Providing students with regular and constructive feedback helps them stay on track with their work. The form this feedback takes is crucial. "What students value in feedback is confirmation of their success (it's easy to overlook the things that are going well), unambiguous identification of problem areas, and suggestions for how to tackle them."

5. **Get students involved in the life of the department:** Graduate students often feel isolated by their work. Being made to feel like they are part of an academic and collegial community goes a long way to bolster their morale.
6. **Inspire and motivate:** “From the beginning of a project, a supervisor can help a student to understand the significance of what she or he is doing – and frequently reaffirm that significance as the work progresses... It may be only a tiny gap in the great map of knowledge that will be filled by this piece of research. Nonetheless, the student contributes to the enterprise in which all researchers are engaged – the advancement of human understanding. To give students a sense of the nobility and excitement of this role is to bestow a gift of considerable value and utility.” Treat students as your colleagues in intellectual adventure – keep them excited about their work by engaging them in debates, sympathizing with their difficulties, and helping them find opportunities to share their enthusiasm for their work.
7. **Help if academic and personal crises crop up:** Get to know your students as individuals and how their personal lives interact with their academics. Present yourself as a sympathetic ear and be flexible in your requirements in times of personal stress. Be aware of services available at the university that can help students through a crisis, from counselling to financial assistance.
8. **Take an active interest in students’ future careers:** Discuss your students’ career aspirations and goals. Help them understand the labour market and how to prepare to enter it, and share your professional connections in the field. Assist students in preparing papers, recommend appropriate conferences, and locate suitable journals for their work.
9. **Carefully monitor the final presentation of the research.** Remember that “for most people, completing a research degree is one of their biggest accomplishments in life, and their emotional investment causes stresses and strains. Moments of doubt can start to appear in the final stages. Even though the vast bulk of the work has been done and (in the supervisor’s opinion) little additional work may be necessary, some students nevertheless stall. The supervisor must be a calming and reassuring influence, while at the same time playing the devil’s advocate and putting the work through a comprehensive quality-assurance audit” (James & Baldwin, 1999).

Student Perception of Effective Graduate Supervision

Egan et al. examined exit surveys from over 1,000 graduate students from mid-sized Canadian universities between 1996 and 2005 to determine what students perceived to be effective supervision. They divided supervisory attributes into two groups – holistic and concrete. Holistic variables included “supervisor attributes not directly related to academia, such as willingness to spend necessary time and knowledge of school regulations.” Concrete variables were those directly connected to academic, such as “providing constructive criticism and returning work in a timely manner” (2009).

Egan et al. found that though students appreciated well-rounded supervision that took both concrete and holistic needs into account, for both domestic and international students, and for students in the hard and soft disciplines, “holistic variables were more important determinants of overall supervisor satisfaction than concrete variables.” They found that international students were adaptable, but required more holistic supervision, especially early on. Students in the soft disciplines also valued holistic over concrete variables, especially with regard to the amount of time spent on their supervision. Students in these disciplines might report a greater need for supervisor time “due to the student–supervisor model primarily used in the ‘soft’ disciplines, in which students may not have alternative sources for support if the supervisor’s time is inadequate” (2009).

Zhao et al. looked at data gathered from over 4,000 graduate students in the United States and Canada in the Survey on Doctoral Education and Career Preparation, published in 2001. They found that a reputation as a good advisor, matching intellectual interests, and the ability to provide funding came out as the most

important characteristics for students when choosing an advisor. The most important characteristics of a satisfactory advising experience were receiving regular and constructive feedback and timely assistance, getting help putting together funding and grant applications, and believing that the advisor was interested in and cared about their supervisee as a person. Students, on a whole, reported not enjoying being overworked to the detriment of their personal lives, or being used by their supervisors as a source of cheap labour for their supervisor's research (2007).

Models of Graduate Supervision

The two most common forms of graduate student supervision are the one-on-one individual student/supervisor model, traditionally seen in the “soft” disciplines, like the arts and humanities, and research group or laboratory-based supervision seen in the “hard” disciplines, like the sciences. Each of these models has their benefits and drawbacks that should be kept in mind when planning graduate supervision.

Individual Student/Supervisor Approach

In the traditional “dyadic” approach to graduate supervision, one supervisor works with one graduate student. This model gives students the opportunity to “work collaboratively with an expert in a specific topic of interest, which may lead to a very productive interpersonal relationship” (Egan et al., 2009). This model is well suited to “intelligent, self-directed students who are capable of becoming independent researchers with minimal input from their supervisors” (McCallin & Nayar, 2012).

However, the one-on-one model also has the potential to be “formal, hierarchical, and not very inclusive,” and often does not sufficiently support students’ “emotional, encouragement, validation, feedback, and topic clarification needs” (Egan et al., 2009). It is prone to conflicts caused by “differing conceptual understandings or differing expectations,” isolation, and asymmetric power dynamics. It can lend itself to a transmissive, instructor-centred model of education, with the faculty member serving as “guru” (Bitzer & Albertyn, 2011).

Effective supervision in the traditional model involves “appropriate amounts of encouragement, advice, support, constructive and critical appraisal, pastoral care and encouraging and developing independent thinking and ways of working” (Gill & Bernard, 2008). Effective supervision in the traditional model also requires a facilitative approach that is flexible, “supervisee-centred and reflective,” and in which the “supervisor and supervisee share mutual control off the learning process.” A facilitative approach has also been shown to reduce student confusion and anxiety, and positively influence student views of supervisor capability and effectiveness (Lizzio, Stokes & Wilson, 2005).

For the traditional model of supervision to be effective:

1. Students and supervisors must discuss and agree as to “their needs, expectations, responsibilities and ways of working, early in the relationship”
2. Meetings should be set at regular intervals by the supervisor, with set agendas, agreed upon plans of action, and detailed written records of everything that was accomplished and agreed upon.
3. The supervisor should be open to new “new approaches to the subject and new views of methods” (Gill & Bernard, 2008).

Group Approaches

In the research group or laboratory-based model traditionally seen in the “hard” disciplines, “research fellows and graduate students work together toward a common goal and support each other in the process,” with the supervisor serving as the group's leader. This approach creates more of a community of practice, and has the

potential to create a lively, casual, and collegial atmosphere where students report “seeing their supervisor daily due to close proximity and shared research goals” (Egan et al., 2009).

In group approaches to supervision, students also have the opportunity to work with their peers. Group approaches to supervision can reduce the isolation caused by the traditional approach as well as “diffusing power and increasing social learning in collaborative and collective environments” (Bitzer & Albertyn, 2011). When used effectively:

1. Group approaches that involve interaction with peers reduces dependence on supervisors and increase the students’ sense of self;
2. Working with peers creates a sense of a community of researchers, and helps “emerging researchers to establish their researcher identity while simultaneously focusing on skill development;”
3. Interacting with peers has been shown to help students “produce higher quality dissertations;”
4. “Students gain insights in contributing and interacting; they move away from doing, to reflecting on the thinking behind actions” (Bitzer & Albertyn, 2011).

Group approaches require structure, guidance, and the modelling of constructive behaviour so as to reduce the fear of participation from shy students, or students with English as an additional language, as well as to quell the dominating personalities of more forceful students (Bitzer & Albertyn, 2011; McCallin & Nayar, 2012). Effective leadership is also important so as to prevent an inexperienced group from “pooling ignorance.”

Planning Graduate Supervision

For a supervisory experience to be successful, the processes of supervision and their desired outcomes must be made explicit, rather than being left unarticulated and vague. These outcomes should be negotiated between the student and supervisor, and can take many different forms, depending on the institutional, disciplinary, and professional contexts in which the supervision is taking place (Pearson & Brew, 2002). To build an effective working relationship, supervisors and graduate students must have an initial discussion, or even set up a contract, to “determine the goals and direction of the graduate programme... Initial miscommunication can create frustration and alienation, and eventually, if unresolved, attrition from the discipline and/or university” (Egan et al., 2009).

In the *Western Guide to Graduate Supervision*, Skarakis-Doyle and McIntyre provide a “Role Perception Rating Scale” that they suggest students and supervisors take turns filling out. It asks the respondent to mark on a scale their conception of who is more responsible for different tasks within three categories: topic/course of study, contact/involvement, and the thesis. The statements included in the scale are reproduced below:

Topic/Course of Study

- It is the supervisor’s responsibility to select a research topic / The student is responsible for selecting their own research topic
- It is up to the supervisor to decide which theoretical framework or methodology is most appropriate / Students should decide which theoretical framework or methodology to use
- The supervisor should direct the student in the development of an appropriate program of research and study / The student should be mainly responsible for developing their program of research and study

Contact/Involvement

- Faculty-student relationships are purely professional and personal matters should not intrude / Close personal relationships are essential for successful supervision
- The supervisor should insist on regular meetings with the student / It is up to the student to decide when they want meetings with the supervisor
- The supervisor should know what the student is working on at all times / The student should work independently without having to account for how they spend their time
- The supervisor should terminate supervision if they think the project is beyond the student / The supervisor should support the student right through until the thesis has been submitted, regardless of their opinion of the work

The Thesis

- The supervisor should insist on seeing drafts of every section of the thesis in order to review them / Students should submit drafts of work only when they want constructive criticism from the supervisor
- The supervisor should assist in the writing of the thesis if the student has difficulties / The writing of the thesis should only ever be the student's own work and the supervisor should be very wary of contributing too much to the thesis
- The supervisor should ensure that the thesis is finished not much later than the minimum period / As long as the student works steadily they can take as long as necessary to finish the work
- The supervisor has direct responsibility for the standard of the thesis / The supervisor advises only and leaves all decisions concerning content, format and standards to the student (Skarakis-Doyle & McIntyre, 2007).

Getting Feedback on Supervision

To facilitate supervisors in reflecting on their own supervisory process, and to help them gather structured feedback from their students and/or peers on their supervisory skills, Pearson and Kayrooz have developed the "Reflective Supervisor Questionnaire" (2002).

The RSQ is divided into five constructs of "facilitative supervisory practice": expert coaching, facilitating, mentoring, reflective practice and sponsoring. The items in Pearson and Kayrooz's RSQ are reproduced below, and can be used as the basis for a questionnaire or evaluation sheet for a supervisory experience:

Expert Coaching

- challenges me intellectually
- assists me to formulate research topic
- helps me plan and refine the project
- encourages me to develop/evaluate own ideas
- provides me with specialist/technical expertise
- introduces me to relevant current literature
- encourages me to write early
- advises me on problem framing + solving
- advises me on critical aspects of research
- provides me with advice on the logistics for producing a thesis document

Facilitating

- negotiates programme of study and research
- directive when needed
- negotiates explicit ground rules for supervision
- ensures official requirements are met, e.g. ethics clearance, annual reports
- devotes sufficient time
- promotes good interaction and learning among students and staff
- listens with attention
- respects knowledge and expertise
- approaches supervision flexibly
- puts effort into a good start
- provides information on availability
- initiates contact
- negotiates availability

Mentoring

- demonstrates genuine interest in my well-being
- approachable, responsive, and affirming
- encourages publishing
- directs me to leading researchers
- encourages networking within the university
- introduces me to professional networks
- helps arrange for presentations at seminars and conferences
- assists progress in career goals
- advises me on opportunities for relevant experience

Reflective Practice

- models effective research practice
- open to different research approaches
- open to critical discussion on research practice
- periodically reviews our supervision
- carries out supervisory duties professionally
- encourages open/critical discussion on research practices

Sponsoring

- assists me to obtain resources for seminars and conferences
- assists me to meet administrative requirements in an efficient and timely manner
- keeps me informed about procedures and issues re: intellectual property rights
- assists me to access essential technical support
- advises me about resources and other funding sources

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