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DEVELOPING A SET OF PEDAGOGICAL PRINCIPLES FOR GRADUATE STUDENT SUPERVISION





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Abstract

There is a long history of scholarship about the nature of graduate student supervision, with little dispute about its importance. Notwithstanding this work, recommendations for excellent graduate supervision pedagogy have often taken the form of anecdotal information from individuals' experiences related to effective supervisory practices and/or from a limited set of empirical findings. Initiated by an interdisciplinary group of faculty members interested in graduate supervision pedagogy in a changing climate of doctoral education, our extended synthesis of the literature supports six interrelated research-based principles of excellent graduate supervision pedagogy. The principles focus on students, the teaching and learning process, academic progress, modeling and reflection, communication, and scholarly communities. As a "living document" these principles serve as a point of departure for discussions about pedagogies and practices that could potentially promote excellence in supervision across disciplines in a continually changing climate of higher education.

Keywords: Supervision, Role of Supervisor, Graduate Supervision, Teaching and Learning, Student Learning

Bios

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Introduction

In a relatively long history of reports and writing about the nature of expert graduate supervision, scholars have agreed that supervisors can make significant contributions to graduate students' learning processes and scholarly development (e.g. Arthaud 1953; Blumberg 1976; Chapman 1974; Chiappetta-Swanson and Watt 2011; Hartnett and Katz 1977; Lagowski 1980; Witton 1973). Supervisors not only have direct advising and mentoring relationships with the graduate students they are supervising, but also constitute the community of scholars that guide students' participation in various contexts and set agendas for academic disciplines (Walker et al. 2008). However, there is more variation than consensus in the scholarship about what comprises excellent graduate student supervision pedagogy.

We would argue that, ideally, supervisors support graduate students as they learn to create and transform knowledge through a process of ethical and intellectual dialogue in a community of scholars and share their knowledge across a range of audiences (e.g. Walker et al. 2008); and that mentoring students into a community of scholars includes fostering a commitment to lifelong learning and to contributing to the public good (Porter and Phelps 2014). Inevitably this process will vary within and across disciplinary boundaries that are constantly shifting and sometimes merging.

Questions about whether it is even possible or appropriate to further identify general principles of excellent supervisory pedagogy are worth consideration given differences in disciplines and contexts as well as in theoretical perspectives. For instance, scholars employing a critical lens question efforts to distil supervisory pedagogy for graduate students because of its complex connections to particular disciplines, the ongoing production of knowledge in various forms and contexts, and the power relationships inherent in supervisory contexts (Lee and Green 2009). One-size-fits-all approaches to supervision have been viewed as unlikely to be successful even in a single institution (National Academy for Integration of Research, Teaching, and Learning, NAITRL, 2012).

At the same time, perspectives on the role and nature of university-level support for high-quality supervision vary (Carton 2015); for example, questions arise about internal university dynamics and attention to equity, diversity, and inclusion across and within disciplines, departments, or units. It has also been noted that supervision requires a collective effort that includes all members of faculty, students, administrative units that serve graduate students, research groups, and universities' institutional cultures (Vehviläinen and Löfström 2016). Some professional organizations have specifically recommended



additional university level supports for faculty development in graduate research supervision, including a formal framework as well as workshops, online modules, and assigned readings (e.g. NAITRL 2012; Greene, Kloet and Kasprzak, 2018; Reeves, J., Denicolo, Metcalfe and Roberts, 2012).

While ongoing efforts aim to advance graduate supervisory excellence, universities are undergoing major cultural and structural shifts in an attempt to manage the multiple demands of globalization, the diversification of funding sources, burgeoning digital technologies, and a variety of social and environmental issues (McCallin and Nayar 2012. Zhao 2003). Universities are competing in global markets with increasing numbers of international students, responding to growing calls for e-learning, and coping with a decrease in public funding levels (Zhao, 2001; 2003). Supervisors working in these changing university environments are managing diverse populations of students, demands for more flexible and interdisciplinary research education and opportunities, pressure to improve completion rates and times, heavier workloads, more accountability requirements, and an emphasis on graduate student employability (Cumming, 2010; Halse and Malfroy 2010; Zhao 2003).

We argue that such increasingly complex conditions in higher education call for flexible, context-sensitive, interrelated, and research-informed principles that have the potential to support high-quality teaching and learning in graduate student supervision. We frame this discussion around our aim to identify principles of high-quality supervision pedagogy and practices supported by recent research and scholarship. This synthesis is based on a selection of higher education journal articles and related scholarship and policies concerning graduate supervision, and organizational guidelines published over the last 15 years. Our intent is to share the principles we developed to contribute to local and international debates and dialogue about excellent pedagogy in the graduate supervision context.

Context for the Research Synthesis and Development of the Principles of Excellent Graduate Student Supervision Pedagogy

As part of a strategy to continuously improve graduate supervision at the University of British Columbia in Vancouver (UBCV), in 2014, the Faculty of Graduate and Postdoctoral Studies presented a proposal “to cultivate a community of practice in graduate supervision” (Porter 2014). The proposal indicated that,



unlike the case of teaching in the classroom setting, there had not been a concerted effort at the university to inculcate a scholarly approach to graduate supervision. In response, an International Faculty Scholarship of Teaching and Learning (ISoTL) Leadership Program (Hubball, Clark, and Poole 2010) was initiated that included a cohort of faculty members from across the UBCV campus. To create a community of practice focused on graduate supervision, deans from a number of Faculties across our campus, as well as the Faculty of Graduate and Postdoctoral Studies, supported the cohort.

The Graduate Supervision Leadership Cohort (herein referred to as the Cohort) decided to undertake a synthesis of the empirical evidence regarding the development of 21st century scholars (Walker et al. 2008), recognizing that graduate supervision is integral to universities' aspirations to nurture the world's future leaders and researchers (Porter 2014). The Cohort more generally aspired to establish a networked community to champion research-based supervision pedagogy and practices across disciplines that would: enhance expertise in effective, research-informed graduate supervision practices; create resources and professional development opportunities grounded in scholarly literature and disciplinary contexts; contribute to policies and processes for evaluation of graduate supervision grounded in scholarly literature and disciplinary contexts; and conduct and disseminate local research on graduate supervision.

The Cohort members consisted of individuals nominated by Faculty Deans as leaders in research-based supervisory pedagogy, or individuals connected with the Faculty of Graduate and Postdoctoral Studies in roles, such as Graduate Advisor in their units. The authors, together with program leaders for the ISoTL Program, developed materials to support this network of scholars and change agents. As we began focusing on a range of resources related to graduate supervision (guides, research, policies, etc.), Cohort members noted that many current University documents and resources are based on received practices and policies rather than on empirical findings. Thus, over the course of the six monthly meetings in early 2015, members of the Cohort began to articulate a set of shared principles of graduate supervision based on their critical analyses of the literature in relation to what they, as a group, viewed as important for their own supervisory practice.

A smaller group of the Cohort—including professors of Education, Nursing, Engineering, European Studies, and Medicine—continued to meet, review research and consult on the principles over two more years. The excerpt below provides one example of the dialogue during those additional meetings (recorded



2.12.2016). During this particular conversation, we were revisiting our set of assumptions that were guiding the development and refinement of the principles:

SH: *If you look at this line, “to enhance consistency and efficacy across the university...”*

TR: *...Hmm “consistency” is not what we are after at all...*

MS: *...The PhD is about new knowledge and innovation, not consistency.... That’s the problem with the language of ‘best practice.’ We want to talk about the diverse ways of knowing and supervising and how we can inform each other about the different practices.*

NE: *So the outcome of this is to frame a dialogue.*

SH: *But we do want quality to be consistent? High quality and new knowledge?*

WH: *We can talk about high quality and innovation.*

MS: *There is literature on diversity of approaches – versus a singular language of best practices...*

SH: *We have to recognize that it is not a one-way learning experience, so calling it an apprenticeship is problematic. Also, we are not necessarily replacing the professoriate any more. There may be other kinds of [student]outcomes....*

WH: *We also need to talk about interactive and reciprocal processes.*

MS: *...and that it will be different in different contexts....*

WH: *And what about the public impact of our work? More and more we have to justify our work and discuss public engagement.*

VD: *...And dialogue needs to be in there...*

NE: *...and something about continual or lifelong learning is important.*

MS: *In Education, we talk about developing professional judgment—helping students to think ethically and with judgment in different situations....*

TR: [after having recorded and integrated key points projected on overhead screen and further clarifying key points with the group] *Okay, so this is what we have so far:*



Learning to be a scholar at the graduate level is a process of interactive, reciprocal, intellectual, and ethical dialogue. It is a process that involves engagement with a community or communities of scholars to support the development of professional judgment and learning to create, transform, and share knowledge.

There will necessarily be learning variations within and across units and disciplines, which are constantly evolving and shifting.

Ideally, the process of development as a scholar should engender lifelong learning and include various forms of commitment to the public good.

After agreeing on these general assumptions, we continued to discuss how the principles might represent a starting point for identifying critical elements of graduate supervision and building committed scholarly networks around shared principles and practices (Bryk, Gomez, and Grunow 2010).

Ultimately, the Cohort developed six interrelated pedagogical principles of excellent supervision supported by international conceptual and empirical research and policy reports (e.g., Carton 2015). Many of the principles focus on one-to-one teaching in the supervisory context; however, we recognize that, in the contemporary context of graduate education, it is unlikely that one or even two supervisors can provide a multifaceted, integrative learning experience for every student (Walker et al. 2008). While there is variation in terms of supervisors/committee members internationally (e.g. one supervisor in Australia, two supervisors in the UK, one or two supervisors and a committee in the U.S. and Canada), we argue that graduate students benefit from a range of interactions with scholars not only from their own departments and others from across the university, but with scholars from external settings, and with their peers (Webb et al. 2009). Thus, we include in our principles the importance of strong scholarly communities to support the graduate-level teaching and learning process (Bryk, Gomez, and Grunow 2010). An adapted version of these principles been posted on UBC's [Faculty of Graduate and Postdoctoral Studies website](#), along with a range of related resources for each one.

Principles of Graduate Supervision Pedagogy: Teaching and Learning in the Graduate Supervisory Context

Our goal was not to create principles that represent precise measurable targets or strategies, but to compose principles that serve as a starting point for enhancing graduate supervision pedagogy. Simply put, these principles focus on: the student; teaching and learning processes; student academic progress;



supervisor modeling and reflection; communication; and the scholarly community. Our intention is to conceptualize excellent graduate supervision pedagogy in a form that can generate discussions across a range of contexts about a renewed commitment to supporting graduate supervision pedagogy and practices. We present a statement on each principle, followed by supporting scholarship. The synthesis of scholarship is then summarized into a bulleted list of key points.

Principle One: A focus on the student.

Students learn more effectively when supervisors acknowledge students' passions and questions, unique skills and abilities, experiences, and development—and when their interactions reflect an awareness of any personal, cultural, and structural challenges students may face.

Perhaps the most important pedagogical principle for graduate supervisory contexts is putting students at the center of the teaching and learning process. Graduate students have unique identities, passions, questions, perspectives, and goals. Acquiring a graduate degree, particularly at the doctoral level, should be about the formation of a scholars' identity in all its dimensions (Walker et al. 2008, 8); therefore, it is important to acknowledge each student's knowledge base and set of strengths and weaknesses—all of which influence their development as graduate students.

Contemporary learning theories also emphasize learners' active roles (Cherry 2012). Learners become active, engaged participants when their unique skills, abilities, and challenges are acknowledged, rather than when they are expected to simply accept received wisdom. Effective supervisors recognize that graduate students often arrive with research questions that grow out of academic, professional, and personal experiences occurring prior to their application to graduate school (Goelman, personal communication, 2015). Supervisors can build on those questions and experiences to support students' intellectual development (Wright-Harp and Cole 2008)—making adjustments according to students' learning needs, and balancing students' risk-taking, reflection, and problem-solving skills with professional guidelines and organizational and contextual requirements (Hodza 2007). Knowing when to guide, redirect, or step back is critical to supporting students as they assume more responsibility during their entry into the world of scholarship (Cherry 2012).

Supervisors similarly benefit from acknowledging students as active participants because they learn new perspectives and approaches from their students. Supervisors are, however, also expected to be knowledgeable and open about their fields—sharing analyses of their intellectual history and debates and



presenting circumstances to help students enter complicated conversations and address key issues and real-world problems (Pinar 2015).

The supervisory process can be described as an interactive, reciprocal, intellectual, and ethical dialogue that underpins the creation of new knowledge. A crucial aspect of a successful supervisory experience is attention to mutual respect and students' needs (Graham and Gadbois 2013). In addition to learning to be a scholar, students experience the affective, social, and political elements of the supervisory relationship (Doloriert, Sambrook, and Stewart 2012). Given power imbalances and related stylistic differences are inherent in student-supervisor relationships, awareness of these differences and potential imbalances, and addressing them as needed, is part of the ethical commitment of supervision, and is critical to a successful outcome.

Relatedly, attention to diversity is intrinsic to excellence in the context of research universities. When particular groups of students who are diverse or are 'minoritized' in terms of, for example, gender/sexuality, culture/ethnicity, or ability, are treated inequitably, they are put at risk. While personal, cultural, and structural challenges have the potential to inspire and motivate students, they are more often dispiriting (Walker et al. 2008, 103). A crucial quality of supervision pedagogy is faculty members' ability to support students to work through potential structural barriers, inequities, and challenges in order to foster individual students' maximal development (Hodza 2007; Walker et al. 2008).

In summary:

- In high-quality supervisory relationships, supervisors put students at the center of the teaching and learning process.
- Effective supervisors build on students' interests, questions, strengths, and experiences to support students' independence and intellectual development.
- By sharing the intellectual history, debates, and present state of their fields, supervisors help students enter complicated conversations so that they can engage with key issues and real-world problems.
- High-quality supervision emphasizes mutual respect and attention to students' needs.
- In a successful supervisory relationship, supervisors assist students to work through power imbalances and any personal and structural challenges to students' academic progress.



Principle Two: A focus on the teaching and learning process.

Supervisors' capacity to listen, question, and guide students throughout their programs engenders students' reflections on and critical examinations of their decision-making processes, which support their development as creative, flexible, and confident emerging scholars.

Supervisors' productive engagement with students rests largely on their ability to listen, question, and provide guidance. Relationships between graduate students and academic supervisors are more successful and satisfying when supervisors support, extend, monitor, and evaluate students' learning experiences (Chiappetta-Swanson and Watt 2011). At the same time, graduate students' independence is enhanced by supervisors' efforts to challenge them, which encourages learning and reflection (Lee 2007).

Scholars argue that graduate education is about 'coming to be' in particular ways, which include creating an academic identity as well as earning an advanced degree (Petersen 2007). This identity work often includes the negotiation of boundaries and the evolution of ethical, emotional, and practical compasses related to challenges and negotiations within the supervisory context—such as how students will work with difference and disputation in their field (Petersen 2007).

Continual discussions between supervisors and students about refining research approaches and goals help students engage with their fields and develop critical perspectives, agency, and independence (Hibbert et al. 2014; Petersen 2007). Supervisors and students alike can benefit from exposure to each other's strengths and recognition of each other's weaknesses. Effective guidance also requires some restraint from supervisors in an effort to promote increased student productivity and independence (Petersen 2007); that is, some restraint can prompt students to engage, formally and informally, with other scholars and peers who can contribute to their development and build scholarly networks. This dialogue with others beyond the supervisor can provide broader knowledge of the field and its limits, in addition to increasing the scholarly relevance and contributions of students' work (Hibbert et al. 2014; McCallin and Nayar 2012; Petersen 2007).

Graduate students' flexibility and creativity are regarded as fundamental not only for meeting originality requirements in graduate-level papers and theses but also for the full realization of students' scholarly potential (Baptista et al. 2015). This creativity involves supervisors' original, relevant, and applicable work with students—and realizing their potential to be responsible and independent scholars (Baptista et al. 2015). Supervisors act as guides, both by providing opportunities for students to take risks and make



mistakes, and by mitigating and managing risk. Whitelock, Faulkner, and Miell (2008) noted that supervisors they observed provided guidance while promoting student autonomy; they built students' confidence through positive feedback; encouraging risk taking; filtering knowledge and identifying problems; and modeling practice. Additionally, supervisors guide students to develop analytical, problem-solving, and integrative thinking skills as they challenge students' thinking and decision-making processes (Baptista et al. 2015).

Supervisors can also promote students' independent development through storytelling and critical self-reflection (Blass, Jasmane, and Levy 2012). Sharing supervisory stories about creating productive learning spaces for graduate students and about the personal process of supervision may be a more effective approach for professors to support students' independent development than providing workshops that emphasize policy and administrative procedures (Blass, Jasmane, and Levy 2012). These opportunities to share stories can be extended through contact with communities of scholars and peer learning experiences. For instance, supervisors with experience are more likely to recognize danger signals from students and know how to step in and provide appropriate support (McCallin and Nayar 2012). Opportunities for supervisors to reflect on their interpersonal processes and relationships with students in the context of a larger scholarly community can also ameliorate their feelings of isolation, and increase feelings of competence or confidence (Emilsson and Johnsson 2007).

In summary:

- Supervisors who listen, question, and provide guidance encourage their students' learning and reflection.
- When supervisors monitor, evaluate, and otherwise enhance students' learning experiences, they facilitate students' critical thinking.
- Effective supervisors help students achieve an independent academic identity.
- High quality supervisory relationships provide opportunities for students to negotiate and challenge boundaries, and to engage in intellectual debate.
- Communication with communities of scholars enhances the relevance and reach of students' academic work.



- Supervisors' practice of critical self-reflection and abilities to guide and support graduate students are enhanced by interactions with communities of scholars and peers.

Principle Three: Focus on academic progress.

Supervisors work with students to articulate self-directed goals, develop innovative conceptual plans, support the design and management of projects, and provide general support during the process of completing their programs.

Engaging with students to support self-directed goals and therefore increase independence not only involves a focus on the research process but also requires attention to students' learning and the learning process. Some supervisors view themselves as primarily responsible for creating the necessary conditions for doctoral students to participate in the work of research practice, while others emphasize the learning process and supervisory relationship (Franke and Arvidsson 2011).

A number of models of supervision move beyond tips and strategies gleaned from supervisors' personal experiences toward a broadened understanding of the pedagogical processes of supervision. Examples of supervisory models in the scholarly literature on graduate supervision include traditional apprenticeship models, vocational training models, knowledge conversion and management models, critical models, and mixed models (Zhao 2003; Cumming, 2010). These models represent different supervisory approaches to engaging with students and supporting the design and management of their projects.

The traditional apprenticeship model relies on singular supervisor-student relationships, wherein the supervisor transfers a research tradition with an emphasis on modeling a systematic way of approaching intellectual activities, participating in research work to build knowledge in a given field, and acquiring a researcher identity (Franke and Arvidsson 2011). The apprenticeship model can be very effective, or it can serve as a reproductive model of scholarship that does not provide opportunities for students to develop self-directed goals, innovative conceptual plans, or independence (Walker et al. 2008).

The vocational training model emphasizes teaching research skills—such as writing a grant proposal, preparing ethics applications, reviewing the scholarly literature, and analyzing data—as well as managing and writing up a research project (McCallin and Nayar 2012). This model focuses more on the accomplishment of particular curricular or program goals than on developing original and innovative dissertation work (Franke and Arvidsson 2011).



The model emphasizing a knowledge management and conversion process is similar to the vocational model. This model focuses on students' acquisition of knowledge, from sourcing raw materials, resources, and data, to producing intellectual capital, enhancing knowledge transfer and sharing, and improving knowledge access (Zhao 2003).

Critical models of supervision emphasize the complex nature of the supervisory context, including power differentials, and resist notions of effectiveness and completion (Petersen 2007); they view supervision as a site of ongoing negotiation and knowledge production that culminates in a student academic progress and success.

Mixed approaches to supervision emphasize holistic student development and incorporate other aspects of supervision outlined above. Supervision activities include directing progress through project management; engaging with students' difficulties and coaching them to succeed; evaluating and challenging ideas through argumentation and analysis; and mentoring students through ongoing negotiation and reflection (Lee 2008). Mixed models also focus on supporting students as they develop self-directed goals and innovative conceptual projects and facilitating the design and management of products and processes (Franke and Arvidsson 2011). Of the models outlined above, the holistic approach may be an effective way to support students' self-directed goals, innovation, and independence.

Supervisors with expert subject knowledge, research expertise, and supervisory experience, and who maintain close contact with students and their academic progress and work, contribute to a well-functioning supervisory relationship (Franke and Arvidsson 2011; Halse and Malfoy, 2010). Some disciplinary traditions, such as the social sciences, may place relatively more emphasis on independence in writing and conceptualization; others, such as in the bench sciences, may emphasize collective projects and activities. Contact also varies according to the stage of a student's program. These differences can affect the position of the supervisor and the application of a supervisory approach—as can supervisors' perspectives on the level of support necessary for successful project design and management.

The institutional or disciplinary culture can also influence a supervisor's approach; for instance, a culture focused on efficiency (e.g., completion times and rates), on student funding, and that offers only standardized supervisory courses to faculty members, may constrain a supervisor's efforts to support more unique and innovative projects (Franke and Arvidsson 2011).



The supervisory teaching and learning process involves a dialogue between students and their supervisors so that, as students form ideas about their work, supervisors can provide guidance about what constitutes academic quality, monitor progress, and move into a mentorship role by providing resources and social and emotional support (Franke and Arvidsson 2011). Integrating a focus on the research process with an emphasis on learning and supportive relationships promotes clarity and consistency in monitoring and facilitating progress. It also helps students to become aware of disciplinary traditions and standards, identify with a community of scholars, engage in rational approaches to inquiry, and enhance personal growth (Lee 2008).

Lastly, supervisors who are part of communities that promote high-quality scholarship are able to leverage the dynamic interplay between cooperation and competition among generations of researchers to more effectively guide students' projects and manage the tension between tradition and renewal (Franke and Arvidsson 2011). When supervisors engage with students to develop self-directed goals and innovative conceptual plans within communities of scholars, potential for the consideration of social dimensions of research supervision and acculturation into institutions and the disciplinary community are enhanced (Lee 2008). Moreover, guiding students within a larger community of students and faculty extends their research capacity and mitigates feelings of isolation (Johnson 2014).

In summary:

- Although supervisors may operate in cultures that emphasize student completion rates and employability, they can engage in mixed approaches to supervision that emphasize holistic student development and progress and acknowledge the importance of negotiation and development of students' scholarly identities.
- Focusing on the research process, as well as on students' learning and engagement with self-directed goals and innovation, supports successful project completion and students' academic growth and identification with community standards.
- Subject knowledge and supervisory experience enhance supervisors' attention to leadership and organization in project management, while simultaneously supporting students' independence and critical thinking.



- Supervisors who guide students within communities of scholars help students develop research capacity and renew their disciplines.

Principle Four: A focus on modeling and reflection.

Reflecting on and articulating one's supervisory beliefs and practices, individually and as a member of a scholarly community, makes one a better supervisor; in turn, the supervisor's contributions and transparency as a role model help students gain intellectual, ethical, and practical knowledge of their field and of the scholarly profession.

Central to excellent supervision pedagogy is supervisors' articulation of and reflection on their beliefs and practices related to supervision pedagogy (Pearson and Kayrooz 2004). Articulating supervision pedagogy involves being aware of the models and conceptions of supervision one holds, and developing them over time (Lee 2007). These beliefs and practices will necessarily vary within and across disciplines and contexts, requiring adaptation over time and with different students (Graybill and Shandas 2010). Key to this principle is not only individual but also collective responsibility for excellent supervision pedagogy, based on a documented and shared understanding of supervisory beliefs and practices held by members of a scholarly community as well as on an acknowledgement of the supervisory process as a unique and complex form of pedagogy (Lee and Green 2009).

Supervisors who engage in a process of reflecting on and articulating collective and individual pedagogical practices engender respect, trust, responsibility, relevance, and reciprocity among students and colleagues (CIHR 2017). This process includes clearly articulating one's teaching and learning styles, approaches to supervision, and expectations within the supervisory context—as well as sharing and documenting practices with colleagues. Students provided with explicit information about supervisory expectations early in their programs develop better working relationships, are more committed to their programs, and are more likely to complete their degrees (Barnes 2010).

Being a reflective supervisor includes thoughtfully selecting new graduate students based on an awareness of one's own strengths and weaknesses, areas of expertise, and available resources. When working with students, they acknowledge and address power differentials between students and faculty, as well as between postdoctoral fellows and graduate students as needed. A reflective supervisor can better accommodate occasional miscommunication and conflicts with their students, and, in rare cases,



support students' transitions to new supervisory arrangements upon discontinuing a supervisory relationship (Ives and Rowley 2005).

Another key assumption related to reflecting on and articulating one's beliefs and practices is that supervisors within a discipline share signature pedagogies (Shulman 2005) that prepare students to think and learn within that disciplinary culture. For instance, while Law schools often use a case dialogue approach, English departments tend to focus on critical skills involved in literary analysis and argumentation. At the same time, much contemporary scholarship moves across traditional disciplinary boundaries to reach audiences in a variety of fields and contexts, discover new knowledge (Hibbert et al. 2014), and integrate skills and insights from discrete disciplines (Goelman personal communication 2015). Supervisors who are aware of these variations can encourage students to communicate with scholars from different disciplines within and outside of the academy. Working across disciplinary boundaries often creates and advances knowledge and contributes to the discovery, dissemination, and application of research that informs the public good (Hibbert et al. 2014).

Finally, supervisors are key role models in the process of mentoring new students; they not only model various form of competence but also model fairness and scholarly integrity in relation to funding; research standards; data collection, analysis, and interpretation; authorship and writing; and ethical decision-making (Alfredo and Hart 2011). Effective supervisors intentionally and explicitly model ethical research practices (Halse and Malfroy 2010) that are consistent with standards espoused by universities and professional organizations, and that support the highest standards of scholarly conduct (Bell 2015; Wright, Titus, and Cornelison 2008).

In summary:

- High-quality supervisory practice includes articulating and sharing pedagogies, practices, and expectations with students and colleagues.
- Successful supervisors thoughtfully select new students.
- High-quality supervision includes an awareness of power differences and miscommunication, and an ability to manage conflict.
- Effective supervisors acknowledge disciplinary pedagogies and encourage students to work across disciplinary boundaries to create and advance knowledge and research.



- Supervisors act as models of fairness and scholarly integrity.

Principle Five: A focus on communication.

The supervisory process and student learning are enhanced when supervisors' and students' expectations about the process are communicated clearly and regularly, with sensitivity, empathy, and recognition of boundaries.

Critical elements of effective supervisory pedagogy are clear and regular communication, and recognition and negotiation of supervisor-supervisee expectations and boundaries (Pyhältö, Vekkaila, and Keskinen 2015). Graduate students who experience a mismatch between themselves and their environments may lack of a sense of wellbeing, particularly when they perceive social conflict or organizational injustice (Stubb, Pyhältö, and Lonka 2011). Students who experience insecurity about what to expect may also experience feelings of exclusion and exhaustion (Stubb, Pyhältö, and Lonka 2011)—such as when tensions exist between students' expectations for research education and institutional emphases on preparing for employment (McCallin and Nayar 2012). In fact, lack of communication and mismatched expectations are the most common causes of the breakdown of supervisory relationships (Adrian-Taylor, Noels, and Tischler 2007; Deuchar 2008).

On the other hand, when students view supervision and scholarly communities as sources of support, students and supervisors experience trust and clarity about students' rights to ask questions and share expectations regarding high quality supervision. Clearly articulated expectations, from students and supervisors, enhance shared understandings about graduate supervision and steps toward academic progress (Chiappetta-Swanson and Watt 2011).

Role ambiguity and conflict can present ethical challenges in supervisory relationships (Löfström and Pyhältö 2012); thus, it is important to articulate reasonable and legitimate expectations within the parameters of personal and professional boundaries. Problems can be avoided when supervisors clearly identify interpersonal boundaries (Strandler et al. 2014) and mutual expectations are clearly articulated. For instance, it is inappropriate and inequitable for a supervisor to use their supervisory privileges to ask for unpaid, non-academic-related support (e.g., for family, home, etc.). To avoid exploiting student labour, supervisors should communicate clearly about tasks or work that advance students' studies and avoid asking students to work in unrelated areas (Löfström and Pyhältö 2012). Similarly, supervisors can feel they are being exploited when students make claims on their time beyond what supervisors consider the



legitimate sphere of the supervisory relationship (e.g., the expectations of a therapeutic relationship) (Strandler et al. 2014).

Supervisors, who experienced ‘poor’ supervision or have observed poor supervisory practices of others, can reflect on such experiences to inform their understanding of empathetic and respectful attitudes toward students (Löfström and Pyhältö 2012). Supervisors operating with sensitivity, empathy, and clear boundaries embrace equitable and fair treatment of supervisees. Articulation of expectations supports a just supervisory relationship, in which supervisors and students adhere to expectations of supervision in the research process—including appropriate emotional support, constructive feedback, guidance, and collaborative thinking (Pyhältö, Vekkaila, and Keskinen 2015).

Clearly articulated expectations in the form of shared documents can assist communities of scholars in identifying exploitative or abusive supervisory relationships. Identification of inappropriate relationships increases the likelihood that the community will accept responsibility for intervening to stop such cases and assist community members in identifying their vision of good supervisory practices—supporting students’ commitment to their careers in the process (Löfström and Pyhältö 2012). This can occur while acknowledging the relational and emotional boundary work inherent in supervision (Strandler et al. 2014). Respectful and generous communities of scholars are more likely to support the clear articulation of expectations and sensitivity to a respectful environment (Walker et al. 2008).

In summary:

- High-quality supervision involves clear communication about and negotiation of mutual expectations.
- Strong supervisory relationships incorporate ethical conduct with clear interpersonal boundaries; that is, they provide support while maintaining appropriate boundaries.
- Empathetic and sensitive supervisors practice equitable treatment of students.
- Strong and collaborative communities of scholars encourage and promote appropriate supervisory relationships.

Principle Six: A focus on community.



Outstanding supervision integrates, and is embedded in, strong scholarly communities that assist in shaping students' scholarly identities, modeling scholarly integrity, and sharing the norms and scope of fields—while promoting diversity, inclusivity, intercultural understanding, and equity. Scholarly communities also support supervisors by addressing complex issues openly and fairly.

Strong intellectual communities with a shared purpose and commitment to develop the best possible scholars and contribute to new knowledge support and enhance the graduate supervision experience (Walker et al. 2008). Strong scholarly communities reduce the likelihood that supervisors will feel isolated in their work (Wisker, Robinson, and Shacham 2007) and provide opportunities for effective graduate student engagement through interactions with other disciplines, units, research groups, and universities (Vekkaila, Pyhältö, and Lonka 2014). Students may be best served by several intellectual mentors, particularly as their interests evolve. Also, having multiple mentors allows students to see the norms and practices of a field or fields through a variety of theoretical and methodological perspectives while increasing students' potential networks of collaborators and connections (Golde 2010, 94).

The scholarly community extends beyond one or even several mentors to include the graduate program, the institution, and larger disciplinary fields, including community resources (Fedynich and Bain 2011). Contemporary graduate education is multifaceted, and developing a scholarly identity depends on a large network of support—including peers and mentors within and beyond a department or unit, and from different scholarly and professional settings (Walker et al. 2008); Cummings (2010) defines this as the “doctoral interface” (p. 26). Many graduate students assume various positions of leadership and responsibility in a range of arenas that contribute to the shape of society (Walker et al. 2008, 1), which may involve tackling current complex global challenges. Educating these students takes more than one-to-one teaching; it requires shared pedagogical responsibility within scholarly communities (Vehviläinen and Löfström 2016). Vibrant intellectual communities show generosity in providing time, ideas, and feedback, as well as flexibility and forgiveness in relation to risk-taking and experimentation (Walker et al. 2008).

Beyond supporting intellectual interests and engagement, strong scholarly communities help shape students' identities by promoting scholarly integrity and transmitting the norms of the field and the scope of the discipline, including disciplinary debates. In addition to the primary supervisor (see Principle 3), modeling is enhanced by exposure to a network of like-minded mentors and through access to guidelines and practices in the larger scholarly community and related professional fields. High-quality research can



thrive within a community of scholars that shares an obligation to maintain and promote scholarly integrity (Koocher and Keith-Spiegel 2010).

The key role of peer support in the graduate education context is often undervalued. Peer interaction prepares graduate students for collaborative work (Walker et al. 2008) and contributes to meaningful peer support (Devenish et al. 2009). Graduate students often learn both with and from their peers, including how to be a research colleague to others (Boud and Lee 2005). This goal of collaborative learning and peer support is too important to leave to chance. Multiple approaches in a given scholarly community facilitate peer support, including writing groups, journal clubs, collaborative research, and other forms of peer engagement (Walker et al. 2008).

A vibrant scholarly community acknowledges structural inequity and works to cultivate more equitable communities. These communities realize that equity is connected to excellence in research and teaching and is an ongoing process. When students view themselves as being a part of a scholarly community, the learning environment can enhance the quality of doctoral training and student wellbeing (Pyhältö, Stubb, and Lonka 2009). Providing opportunities for students to engage with the professional norms and practices of a field, by joining a community of practice (Wenger, 1998) and/or an intellectual/scholarly community (Golde 2010), enriches graduate experiences (Lahenius 2012). In addition, a vibrant intellectual community stimulates and supports new ideas, and values and appreciates the generative potential of cultural diversity and multiple perspectives—thereby adding to creativity and innovation. Far from mandating universal consensus, true intellectual exchange includes a wide range of opinions that can challenge and inform thinking (Walker et al. 2008).

The importance of intellectual exchange and intercultural understanding extends to international graduate students. Exploring the productive potential of differences involves inviting international students to bring new perspectives and methods; working within and across cultures and languages; and providing opportunities to re-examine supervisory and teaching practices. Nevertheless, intercultural understanding at universities has been elusive. International students' challenges related to cultural misunderstandings, immigration status, funding, and work demands are common (Phelps 2013) but often go unacknowledged. Strong communities of scholars that value difference broaden and enhance supervisory and scholarly community experiences for all students.



Scholarly communities pay attention to equity and power dynamics in supervisory relationships and are less tolerant of exploitative practices. Equity promotes excellence (Wisker, Robinson, and Shacham 2007). Students from equity-seeking groups, such as those named in the Canadian Employment Equity Act, (see <http://laws-lois.justice.gc.ca/eng/acts/e-5.401/>), which includes Indigenous people, members of visible minorities, women, and people with disabilities), are more likely to succeed when welcomed by scholarly communities that value equity and work to eliminate discriminatory barriers. Scholarly communities that focus on what all students need to succeed are more likely to develop institutional structures for providing various forms of support and accommodation for the students who require them.

Finally, scholarly communities committed to high-quality supervision and graduate education have processes in place that reduce conflict, and address conflicts that do arise openly, fairly, and at their source while promoting shared student-supervisor positive outcomes (Pyhältö, Stubb, and Lonka 2009).

In summary:

- A strong intellectual community that includes shared purpose and commitment supports and enhances graduate students' supervisory experiences.
- Students benefit from engaging with multiple mentors and a strong, vibrant intellectual community.
- Strong, collaborative scholarly communities help shape students' identities by promoting and maintaining scholarly integrity and by sharing the norms and scope of the discipline.
- Scholarly communities that support exemplary practices in graduate student mentoring, supervision, and conflict resolution—and that acknowledge structural inequity—work toward transparent, consistent, and equitable administration of policies and practices.

Conclusion

As previously discussed, this paper emanated out of a project in which a group of faculty members from across our campus came together to develop a set of principles that might contribute to the goal of achieving excellence in graduate supervision. While this Cohort began a number of years ago several members continued to meet over the course of two years to further discuss and debate the principles. The pedagogical principles of excellent graduate supervision —that draw on both empirical and



conceptual scholarship, as well as on policy documents—were distilled and refined over that series of meetings. Recently a member of the cohort presented these principles to the University Senate; senators discussed and unanimously endorsed the principles.

Most discussions or documents purporting to identify excellence in graduate supervision are actually limited to identifying a limited set of the various aspects of competence (McCulloch et al., 2016). Instead, we offer the principles articulated in this synthesis as a living document -- starting point for ongoing dialogue about improving the teaching and learning process in graduate supervision. Such ongoing dialogue is particularly important given the continually changing context of higher education. For instance, these principles are flexible in terms of their applicability for supporting students from diverse backgrounds, for providing opportunities to do innovative, interdisciplinary and intersectoral research, and for preparing students for a range of professional outcomes. While we hope that these principles contribute to a form of graduate supervision pedagogy of the highest quality across disciplines and contexts, there is no assumption that one size fits all. Each discipline or context will have its own unique characteristics, strengths, and set of challenges that will guide scholarly communities in their conception of excellent graduate supervision pedagogy and practices. It is important to frame any pedagogical principles in the context of a community of scholars who have the capacity to contribute their own goals, aspirations, and disciplinary belief systems to any rich understanding of graduate supervisory excellence.



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