

Faculty of Graduate Studies and Research

Recommendations on Improving Quality of Graduate Student Supervision at the University of Alberta

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1 Executive Summary

(The Executive Summary will be completed when the body of the report is finalized)

1.1 Introduction

Excellence in graduate supervision is a critical factor that distinguishes between good and excellent graduate student experiences. This is widely recognized in graduate schools around the world, and some institutions have developed specific programs to enhance quality in graduate programs. The University of Alberta is in a position to set the standard, nationally and internationally, for excellence in graduate education - the mentoring of graduate students; providing guidance for the professional development of graduate students; providing opportunities for the continued development of faculty members in mentorship; recognizing excellence in mentorship. Developing a reputation for outstanding mentorship would enhance our ability to attract outstanding graduate students.

1.2 Approach

Assess existing models and identify models that could be piloted at U of A

Develop criteria and methods for assessment of the models

Develop methods to identify groups interested in evaluating each of the models

Based on researchers, groups of researchers or graduate programs currently operating in a similar manner

Develop a strategy to ensure that researchers/programs will be eager to participate

1.3 Recommendations

(This report, with active links to research materials, be posted on the FGSR website)

2 Introduction

2.1 History of the committee

This project started in 2007, when FGSR Dean Mark Dale asked Associate Dean Locksley McGann to examine the potential impact of the elimination of mandatory retirement for faculty members on graduate student supervision. The original committee addressing this question (Heather Zwicker, Ron McElhaney, Mazi Shirvani and Locksley McGann) concluded that quality of supervision, not age of the supervisor, was the primary factor. So ideas were discussed on how the University could 1) encourage the development of supervisory abilities, 2) recognize outstanding supervision, and 3) recommend consequences for poor performance in supervision.

Elaine Parker (Graduate Awards Assistant, FGSR) and Locksley McGann conducted a literature research to explore those ideas, and a new committee was struck to expand details under the three primary points from the first committee, and to develop plans for implementation. Members of this committee were Chris Hackett, Lorraine Breault, Sharon Campbell and Locksley McGann (Chair), supported by Elaine Parker. One recommendation from this Committee was that quality of supervision should be recognized by Faculty Evaluation Committees, with consequences for both good and poor performance. Subsequent consultations with department chairs and faculty members were, at best, non-supportive. Department chairs felt that supervisory styles varied considerably even within one Department, and that there are no metrics for evaluating performance in supervision. Faculty members felt that supervisory style is individual, highly discipline-specific, and varies widely

across campus. There was also the sentiment that since supervisory style is a personal matter, and any questioning supervisory ability would be resisted. It was clear that this approach would not be productive.

2.2 The current committee

The project remained dormant until Katya Joshi (Graduate Scholarship Assistant, FGSR) and Locksley McGann performed a literature review of initiatives around the world designed to improve the quality of graduate programs. The objective of this exercise was to develop a positive approach for exploring different models of graduate supervision at the U of A that includes assessments of performance. They created a new committee and developed a strategy for Committee operation that would encourage participation for the duration of the project.

Committee members were invited primarily from recipients of Mentorship Awards, and efforts were made to balance the range of disciplines and supervisory 'cultures' across the campus. Five meetings were planned, each with defined objectives. At the first meeting, the Chair informed the Committee that their role was to contribute their wisdom, knowledge and experience. It was not our intention to assign additional responsibilities or work to Committee members. On the contrary, relevant research material would be provided to support the Committee's deliberations.

The Chair promised that the Committee members' time would be respected, and that they would receive, a week before each meeting, the agenda of the meeting with the questions to be resolved, research material relevant to the questions, and suggested directions. Meetings were scheduled when most Committee members were available.

The Terms of Reference for this Committee, and the agenda and minutes of all the Committee meetings are appended to this report, as well as well as links to and summaries of the research materials.

3 Background

3.1 Impact of Bologna Process on Approach to Supervision in Europe

Graduate education in Europe has been going through major changes. This transformation has occurred in response to several challenges: the changing nature of the labour market in the globalized economy; the European Union's common agenda in research and education; and the intergovernmental European initiative called the Bologna Process, the aim of which is to create the European Higher Education Area by implementing reforms that will improve cooperation among European universities, raise quality, foster mobility of students and academic staff, and increase the employability of graduates.

Implementation of the Bologna Process has major implications for transformation of supervision of graduate students. One practice, increasingly being introduced at universities, is the use of a *contract of shared rights and responsibilities*¹, which is signed by the doctoral candidate, the supervisor, and the institution, and includes a clearly defined research plan.

Instead of continuing to follow the traditional model of individual supervision, many universities are encouraging *multiple or team supervision*. Several models of this approach to supervision are presented below.

¹ See examples of Supervision Agreements templates used at the Humboldt Graduate School (Humboldt University, Germany) and the University of Saskatchewan in Appendices.

The continuous *professional development of supervisors* is another broadly discussed way to improve the quality of the graduate student experience. Countries like the United Kingdom, Sweden, Denmark and Finland have introduced the practice of training supervisors. In many universities, such training is a precondition for supervision by new, junior scholars.

As part of new approach to higher education in Europe, it is suggested that supervision should have a proper *recognition*:

- Some universities deduct teaching load depending on the number of candidates supervised;
- In some countries, supervisors are paid extra money (premium) for supervision;
- Supervision of graduate students is one of the conditions in academic promotion;
- Supervision of doctoral candidates means less undergraduate teaching;
- Working with doctoral candidates is stimulating (new ideas, enthusiasm, creativity, curiosity).

Some universities in the United Kingdom introduced the annual *Award for the Best Supervisor*. Students can nominate supervisors for this award (Bitusikova 2009).

3.2 Examples of Supervision Models

The examples of supervisory models reviewed by the committee are divided into two sections: models that can be implemented at the level of a single university, and models involving inter-institutional or international collaborations. Detailed outlines of these models were developed by the committee and are appended at the end of the report. Below is a brief overview of the models, each with its objectives and major features. In addition to the detailed description of each model found in the attachments, the committee suggests possible documentation for each model.

3.3 Supervision Models at the Level of a Single University

Three-pronged supervision (Norway)

This supervision model was developed at the University of Bergen in Norway and tested with students enrolled in the Master of Education program. The objective of this model was to create a richer learning environment, and better supervision and learning practices at the university. This approach consists of the combination of three supervision arenas: supervision groups, student colloquia, and individual supervision (Dysthe et al. 2006). (See Section 13.4 in Appendices for more detailed information on this model).

Supervisory Panel (Australia, Sweden)

Examples of supervisory panels can be found throughout Europe and Australia (University of Melbourne, KTH Royal Institute of Technology). Their major roles are to provide wider ranges of experiences and feedback available to the students. Supervisory panels are close in their function to the supervisory committees more common for Canadian Universities, but can differ in their composition. (See Section 13.4 in Appendices for more detailed information on this model).

Joint Supervision (Australia, UK)

The committee reviewed various forms of joint supervision practiced in New Zealand and the United Kingdom. It also discussed differences between disciplines; joint supervision in social sciences and humanities appears to be less frequent than in natural sciences and engineering (Pole 1998). The models of joint supervision that the committee discussed

included: mixed expert-support teams, serial mixed teams, serial experts, supervisor support teams (Peelo 2008). (See Section 13.4 in Appendices for more detailed information on this model). As a result of discussion, the committee chose to focus on the Mixed Expert Support Teams model which is usually made up of subject expert and guidance supervisors.

Collaborative Cohort (Australia)

This model was piloted for dissertation supervision at a large metropolitan University in Australia. It was developed as an alternative arena for discussion of dissertations in the final stages of PhD program. All doctoral students who achieved ABD (All But Dissertation) status during a particular academic year composed a collaborative learning cohort. A faculty member served as coordinator and mentor to the cohort which met twice per semester (Burnett 1999). (See Section 13.4 in Appendices for more detailed information on this model).

Framework for Individual Supervision (UK)

This model is the most commonly used and is preferred in many disciplines. The major goals of this model are: to help students with all aspects of their graduate program and to encourage development of professional skills. It is argued that the supervisor's approach to their student will have an impact on how that student will approach their research, and that the academic's approach to teaching graduate students will have an impact on how those students develop. A framework was developed to define different approaches to the individual supervision. This framework enables examination of different values, beliefs and concepts. Its underlying premise is that an experienced academic will be able to adopt an appropriate approach at a certain point of a student's career. The five approaches to individual supervision that were identified are: functional, enculturation, critical thinking, emancipation, and relationship. These different approaches encompass the different aspects of supervision and are complementary, with permeable boundaries between them (Lee 2009). (See Section 13.4 in Appendices for more detailed information on this model).

3.4 Supervision Models Involving Inter-Institutional and/or International Collaborations

Cotutelle (originally France)

Cotutelle students have their doctoral studies not only supervised jointly by academics from French and a foreign University, but, if successful, the students are awarded a joint or double doctoral degree by the two institutions. Cotutelles are possible in all French Universities with any foreign country. Students are enrolled in both institutions involved and undertake their studies under the control and the responsibility of a supervisor in either country. Each cotutelle project takes place under a reciprocal agreement called "Cotutelle Convention" binding the two institutions involved. This is the recognition of the validity of the studies undertaken within the framework. PhD students are exempted from paying registration fees at one institution and usually pay fees in their home university. The PhD study is submitted and defended only once. Funding for cotutelle students is available through universities, the French Ministry of Research, the French Embassy, or a regional French Government (Embassy of France in Australia). (See Section 13.4 in Appendices for more detailed information on this model).

Collaborative Research Program (Southeast Asia)

This program was developed as part of Southeast Asia Engineering Education Development Network (SEED-Net) Project which is an autonomous sub-network of the ASEAN University Network (AUN) aimed at promoting human resources development in engineering in ASEAN. The Network consists of 19 leading institutions from 10 ASEAN countries with the support of

11 leading Japanese Supporting Universities. The major objectives of the Collaborative Research Program are developing high quality of joint research and publications and establishing inter-institutional professional networks. Students participating in this program are jointly supervised by a supervisor at a Japanese University and a supervisor at a host university. Supervisors help student conduct joint research and get funding, while students are expected to conduct collaborative research with a different intuition. Funding is available through the Collaborative Research network for the Short-term Visit Program, Japanese Professors Dispatch Program, and Short-term Study Program in Japan (AUN/SEED-Net). (See Section 13.4 in Appendices for more detailed information on this model).

Research Training Groups (Germany)

International Research Training Groups provide opportunities for joint doctoral training programs between German universities and universities outside of Germany. The research and study programs are jointly developed and supervised. Doctoral students in the program complete a six-month research stay at the respective partner institution.

The major objective of these groups is to enable speedy research-related qualification of doctoral researchers. Research areas of Research Training Groups comprise humanities and social sciences, life sciences, natural sciences, and engineering. Participants of the Research Training Groups come from all over the world (German Research Foundation). (See Section 13.4 in Appendices for more detailed information on this model).

Erasmus Mundus (EU)

Erasmus Mundus is a cooperation and mobility program in the field of higher education that aims to enhance the quality of European higher education and to promote dialogue and understanding through cooperation with non-European countries. The Erasmus Mundus program provides support to: higher education institutions that wish to implement joint program at a graduate level or to set-up inter-institutional cooperation partnerships between universities from Europe and targeted non-European countries; individual students, researchers and university staff who wish to spend a study / research / teaching period in the context of one of the above mentioned joint programs or cooperation partnerships; any organisation active in the field of higher education that wishes to develop projects aimed at enhancing the attractiveness, profile, visibility and image of European higher education worldwide. The European Commission is responsible for the operation of the Erasmus Mundus Program (European Commission). Since 2004, 122 students, 65 academics and 12 institutions from Canada have taken part in Erasmus Mundus (AUCC Symposium 2009). (See Section 13.4 in Appendices for more detailed information on this model).

4 Selected Supervision Models

4.1 Scope of the Models to Select

The committee reviewed the supervision models presented in the previous section, both at the level of a single university and models involving inter-institutional and/or international partnerships, and decided to focus on the following models that can be implemented at the level of a single university: three-pronged supervision model; supervisory panel; individual supervision; and one of the variants of the joint supervision – ‘mixed expert support teams’ model. Brief description of each of this model is presented in the previous section and detailed descriptions are provided in Section 13.4 in Appendices.

4.2 Why these models were selected

The committee selected models from those that can be tested within a single university for the following reasons:

1. Variants of these models are already practiced at the University, but not formally structured.
2. A group already exists within a university that focuses on the internationalization of the education at the University and introduction of joint and dual degree. It is in the scope of that group to concentrate on the models that require international partnerships.
3. The committee felt that it should focus on more tangible goals as they saw the goal of the work to improve the quality of supervision at the University of Alberta.

The Collaborative Cohort Model was discarded during the discussion from models selected to be tested as the committee found it to be a professional development model rather the supervision model. Finally, it was decided to work with all four supervision models that can be implemented at the level of a single university to provide room for diversity as various disciplines will have different approaches to supervision and availability of a number of various models to test can help attract research groups and faculty members to the work of this committee.

5 Important Attributes of a Successful Graduate Student

The committee considered attributes that characterizes a successful graduate student. These were deemed to be important for the development of evaluation strategies and helpful for research groups who would be piloting the supervision models. The committee came up with the following list of attributes:

A successful graduate student (is):

➤ Independent

The student has to be able to work independently. The level of independence varies across disciplines, but is required for any graduate student in any program.

➤ Self-motivated

Student should know what they want to get out of their graduate education, should know the research area that they are interested in and should be passionate about their research. Self-motivation is essential for graduate student to be able to meet challenges of a graduate program.

➤ Articulate

The student should be able to communicate their work effectively as to the colleagues in their own field but also to members of the general public.

➤ Strong critical thinking skills

A successful student is expected to approach ideas in a critical manner to be able to effectively participate in a scientific discourse.

➤ Good writing abilities

The student should know how to express himself/herself in writing and be familiar with the writing in their discipline. They should be aware of thesis and publications requirements in regards to style and structure.

➤ Capable of expressing needs and tailoring programs of study to fit those needs

Students should know that they want to get out of the graduate program and should be able to plan their program to fit those requirements.

➤ Focused

It is essential for student to stay focused as graduate programs are demanding and time consuming. They have to be able to follow their plan of work throughout the program.

➤ Develop and utilize time management skills

Time management skills are very important for graduate students as they are involved in numerous activities during their program. In addition to working on their dissertation, many graduate students teach classes or work with faculty members as research assistant, attend conferences and participate in various research activities.

➤ Has innate sense and ability to get things done

Students should be aware of what they are able to achieve and the amount of work they can take on.

6 Important Attributes of a Successful Supervisor/Mentor

In this section attributes of good supervisors are addressed, and can be used as cornerstones for evaluation of successful supervision. The journal, *Nature*, published “*Nature’s guide for mentors*” (Lee et al. 2007) outlining what constitutes good mentorship based on evidence from the competition for *Nature’s* awards. According to that article, good mentorship includes the following characteristics and engages in the following activities:

➤ Enthusiasm

This is applicable to research in general, supervisor’s own research as well as student’s research project.

➤ Sensitivity

This is not overwhelmingly connected with student’s progress, but can go further, e.g. ‘coping with cultural transitions’, ‘finding the right balance between work and family responsibilities’, etc.

➤ Appreciating individual differences

Different people have different approaches to work. Good mentors make an effort to understand these differences in their students.

➤ Respect

It is important for students to be treated as junior colleagues by their supervisors.

➤ Unselfishness

According to *Nature’s* research, many students valued this trait in their supervisors.

➤ Support for other than one’s own career

A good mentor was viewed by students as one helping them foster their developing careers.

➤ Encouraging students to teach as soon as they started PhD to develop important skills

➤ Being a good communicator

➤ Availability: the open door

- Balancing direction and self-direction
Good mentors give students the freedom to expand on their ideas but also carefully help them when they get off track.
- Art of questioning and listening
Practice of answering questions with questions is used to lead students towards answers to their questions and better understanding of the material.
- Celebration
Importance of reward and recognition is emphasized.
- Building scientific community
Engaging students in joint research activities.
- Building a social community
Engaging students in mutual activities outside of their research
- Skill development
- Networking

7 Important Attributes of a Successful Graduate Program

The graduate program is also an important factor in evaluation of the quality. The following have been identified by the committee as attributes of a successful graduate program:

- Opportunities for development of specific skills (research, oral and written scientific discourse)
- Available funding and other resources
- Opportunities for establishing professional networks
- Opportunities and guidance for research contributions
- Opportunities for professional development
- Relationships with peers
- Established and followed plan of work
- Satisfaction with the program and supervision
- Completion on time
- Simple, but somewhat structured program
- Engaged graduate coordinator and/or graduate committee
- Exposure to other areas
- Context for peer mentoring; establishing relationship with other graduate students
- Clear statement of expectations
- Available guidance about key phases of the program
- Engaged faculty
- Collegial atmosphere
- Having good students (good program attracts good students)
- Having faculty members who work together as a group

- Interest and enthusiasm
- Knowledge transfer between supervisors

McGill University has developed *Guidelines and Regulations for Academic Units on Graduate Student Advising and Supervision* (McGill 1998). Below are a few examples of these guidelines:

- Policies in place regarding supervision of graduate students and means for informing students about procedures, guidelines and phases of their program
- Every effort should be taken to ensure that students that students choose, as soon as possible, realistic and appropriate areas of research commensurate with degree requirements.
- Clear procedures by which student receive guidance and constructive criticism on their progress through the program
- Students should receive guidance and encouragement in areas relating to their growth in scholarship, professional development and career planning
- Each unit should clearly identify the student's supervisor needs at each phase and the means by which these needs will be met
- Academic units and the Graduate and Postdoctoral Studies office should consider ways to assess and improve the quality of supervision and to help new supervisors
- Graduate supervision should be recognized as an integral part of the academic responsibility of an academic unit and should be considered in the allocation of workload as should the teaching of graduate courses.
- Academic units should establish criteria of excellence in supervision
- The maximum number of students under the direction of a single supervisor should be consistent with the ability of the supervisor to provide quality supervision
- Procedures to ensure continuity in supervision

8 Evaluation

An essential part of piloting of proposed supervision models is finding ways to measure how well these models are working. Attributes discussed in the previous sections (attributes of a successful graduate student, attributes of a successful supervisor, and characteristics of a successful graduate program) can be treated as indicators of well functioning supervision models and should be taken into account when designing evaluation strategies for the tested models.

8.1 Approach to developing evaluation methods

The committee suggests that evaluation methods should be developed by research groups and/ or individual faculty members participating in the project. Input can be provided from departments and/ or faculties. The Faculty of Graduate Studies and Research will work with research groups and/ or individual faculty members involved into implementation stage of the project to help develop evaluation strategies for tested models and to provide guidance for launching the testing of these models.

8.2 General evaluation methods

Most common methods involved into evaluating quality of graduate student supervision involve questionnaires and surveys of various kinds (paper or online) administered by departments or faculties to gather information about general perceptions and practices of graduate student supervision. Results are often quantitative and are used to get a general picture of the graduate student supervision at a certain academic unit. Qualitative approach to collective data about graduate supervision can involve interviews with students and/ or supervisors. Exit questionnaires and interviews are also often used to get insight into students' perception of supervision that they received at a certain institution. Although exit questionnaires and interviews are more often seen as providing a more reliable data as students are less likely to be worried about providing sensitive information about their supervision, this is debatable as many graduating students still depend on their supervisors for reference letters and other career opportunities. A suggestion has been made by the committee about the possibility of conducting questionnaires after a few years from graduation. This will provide a comparative perspective and students will feel more confident about providing feedback about their supervision a few years after graduation.

At Simon Fraser University, Dean of Graduate Studies organized a task force in 2005 to review quality of supervision at the SFU. The task force came up with the final report in 2007 a section of which was devoted to recommendations in the area of evaluation of graduate student supervision. These recommendations were based on suggestions given during surveys that the task force conducted with various members of the university community. Below are a few recommendations mentioned in that report:

- Performance in graduate student supervision should be measured over the long term. The first evaluation should occur at the time of tenure consideration, with a second evaluation at the time of promotion to full professor.
- A "360" review would include comments from current and former students, other faculty members who serve on the same supervisory committees, and the department chair and graduate program chair (or equivalent).
- Programs should be encouraged to track objective performance measures that are relevant to the discipline, such as time to completion, number of successful defences, co-authored publications etc.
- The University and individual departments should develop methods for evaluating long-term effectiveness of an individual's graduate student supervision. There should be rewards for heavy supervisory loads and for high quality supervision (SFU Task Force Report 2007).

8.3 Examples of Methods of Evaluating Graduate Supervision (Reference to existing information)

The Committee reviewed different approaches to evaluating graduate supervision which can be helpful for research groups and/or individual faculty members participating in the project. Short overviews of the discussed examples are presented below. More detailed information about each evaluation model can be found in Section 13.4 in Appendices.

Annual Report Data

This model was developed in Australia and is used to collect data about students' and supervisors' satisfaction with progress and supervision. The data used for evaluation on this model is collected from the detailed annual reports of progress by graduate students. The

structure of the progress report is designed to monitor progress, interaction and planning with the help of various factors. Authors of this measure warn that the data should be considered in the context of previous years (Holbrook 2006). For more information on this model of evaluating supervision please refer to Section 13.4 in Appendices.

Online Research Students' Feedback Survey

This evaluation tool is being developed at the University of Technology in Sydney (Australia). Its main goals are: 1) to elicit sustained reflective commentary from doctoral students in an anonymous format; 2) to provide individual supervisors with useful information for personal feedback and improvement, and also provide evidence of the quality of supervision for institutional performance and recognition processes such as promotion and awards. University's quality unit sets up individual surveys and sends each trial participant the URL; URL is sent to current research students with more than one year's experience with the supervisors and recently graduated students. Results are automatically compiled by the survey tool and are not accessible to the supervisors until staff from the planning unit has closed off the survey; compiled results are sent to supervisors as PDF files (Lee and McKenzie 2008). For more information on this model of evaluating supervision please refer to Section 13.4 in Appendices.

Peer Review

Peer review is a wide range of evaluative practices characterised by being undertaken with colleagues. Peer review involves collaborative partners working together to learn about and improve their teaching practice, not to make summative judgements about one another. Objectives of this model are: 1) to guarantee higher level of anonymity and privacy to the students which is hard with questionnaires as numbers of students of a particular supervisor are usually small; and 2) to provide supervisors with new critical insights in the teaching which can't be obtained through other sources (Otago University). For more information about this model please refer to Section 13.4 in Appendices.

Combination of three evaluation tools

The goal of this evaluation model is to facilitate regular and ongoing feedback between students and supervisors. It is argued that use of a single feedback procedure is inadequate, and a suite of strategies promoting flexibility is required. This model was developed on the premise that the giving and receiving of regular and ongoing feedback between students and supervisors plays a crucial role in addressing previously identified student and supervisor concerns. Three evaluations tools have been developed for the postgraduate supervision process: "Role Perceptions Rating Scale"; "Student Evaluation of Postgraduate Supervision"; and "Student Profile Proforma." All these tools are compiled into a booklet titled "Tracking postgraduate supervision" (Aspland et al, 1999) For more information about this model please refer to Section 13.4 in Appendices.

Student Perception of Research Supervision (SPORS)

The goals of this evaluation model are 1) to improve communication and bring about a better match between the students' needs and the supervisors' style at each stage of the supervision process; and 2) to address the lack of a formal, structured approach to supervision feedback and to provide a mechanism for facilitating a dialogue between students and their supervisors. This evaluation model consists of students and supervisors independently filling in parallel questionnaires in which they indicate how they rate 25 items in terms of priority. Copies of the completed questionnaires are exchanged between supervisors

and their students with a time set aside for discussion of the responses (FIRST 2001). For more information about this model please refer to Section 13.4 in Appendices.

9 Recruiting Project Participants

The committee agreed that the most effective way of recruiting research groups and/or individual faculty members for participating in this project would be to create a competition for the best proposal which would include the use of one of the supervision models discussed by the committee or its variation. Some of the committee members volunteered to be part of the implementation stage of this project.

Committee's proposal includes the following:

- Send a '*Request for Proposal (RFP)*' to all graduate programs with the description of
 - an opportunity to participate in an innovative project on graduate student supervision at the University
- The RFP should be motivating and offer an exciting opportunity
- Suggested structure of proposals should be included in the RFP. Proposal should address the following points:
 - Model to be tested (or its modification)
 - Target group (master's or doctoral students, etc)
 - Timeline
 - Appropriate assessment instruments and evaluation periods
 - Faculty members involved
 - Desired outcomes
- RFP should include references to documentation developed by the committee
- Timelines for selecting winning proposals by the committee and requirements for their launching by participants should be included in the RFP
- RFP should address recognition of successful research groups and/or individual faculty members. Some of the suggestions made by the committee included organizing symposium for successful groups to share their proposals; reception from University senior administrators; awards for good mentors.
- Resources and assistance that will be provided to research groups and/or individual faculty members participating in the project from the FGSR should be clearly outlined in the RFP.

After successful proposals are chosen by the committee, the groups will start working on developing all required mechanisms for launching their projects. The FGSR will provide assistance outlined in the following section.

10 Implementation: Launching of the Project

This final section of the report is devoted to implementation of the piloting of supervision models by research groups and/ or individual faculty members who volunteer to participate. After all proposals are reviewed by the committee and the FGSR and successful proposals are selected, it is expected that groups will start to develop a more detailed plan of work. This plan will include a more detailed plan of operation of groups, such as: procedures, roles and

responsibilities of group members. At this stage supervision agreements and evaluation methods will be refined for a specific supervision model that will be tested. The FGSR will work with groups to refine and document roles and responsibilities within a supervision model and to fine-tune evaluation strategy.

After selected groups develop all required documentation, it will be submitted to the FGSR to final approval and feedback. The FGSR and the committee will review all submitted documentation and will meet with groups to provide feedback. The FGSR will be available throughout the piloting period to provide guidance for the research groups and/ or individual faculty members participating in the project.

Several meetings can be planned during the implementation stage to discuss how well the supervision models are working and get feedback and insights from other groups. After research groups conduct evaluation of tested supervision models, as planned by groups at an earlier stage, documentation will be submitted to the FGSR and the committee will review the information. It is the intention of the committee to incorporate developed evaluation practice into regular procedure of the wider university community. After the piloting stage is over, the committee should meet with research groups who participated in the project to discuss further direction that can be taken in the area of improving quality of graduate student supervision at the University of Alberta. For implementation of this project it would be important to have a continuing contact at the FGSR at the Associate Dean level to provide guidance to research groups throughout the implementation stage of the project.

11 Acknowledgements

The Committee would like recognize the outstanding support provided by Katya Joshi, who conducted exhaustive literature searches and became very knowledgeable in the area of graduate student supervision. Her summaries of various models of supervision and assessing the performance of graduate programs were crucial for the Committee in making their conclusions and recommendations.

The Committee Chair would like to express the view that this was the most enthusiastic and productive University committee that he has served on.

12 References

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13 Appendices

13.1 Committee Terms of Reference

FGSR Committee on Quality of Supervision: Terms of Reference

Preamble

Graduate supervision has a major impact on graduate education, and the student-supervisor relationship is one of the most important relationships in the career of all graduate students. Given the value of this relationship, it is essential to ensure that students get maximum benefit from this relationship and that it will have a positive impact on their academic career. Formalization of these relationships, providing supervisors with opportunities for continuous professional development, and developing supervision evaluation strategies will have major impact in ensuring that these relationships prosper. Expanding the range of supervisory experience could provide valuable alternative for existing models of supervision and contribute to supervision excellence at the University of Alberta which will in turn help attract best students by enhancing graduate student experiences.

Objectives

Value for students

- Expanded range of supervisory experiences for graduate students
- Broaden the scope of supervision by providing students with access to multiple faculty members
- Clear and formalized expectations at the beginning of their program

Value for supervisors and faculty

- Benefit of enriching supervisory practices within a department for attracting best supervisors and students
- Opportunity for continuous professional development for supervisors
- Developed evaluation strategies of graduate supervision
- Clear and formalized roles and responsibilities of students and supervisors

Value for the University

- Developing excellence in graduate student supervision
- Developing culture of continuous improvement in supervision among faculty
- Increased competitiveness of the University in recruitment of new graduate students and faculty members

Proposal

The committee will focus its work on the following tasks:

- Assessing different models of supervision (supervision practices) and selecting models for piloting at the University of Alberta
- Selecting departments/ research groups for piloting selected models
- Defining details of selected models
- Developing evaluation strategies of the selected models and establishing piloting period, evaluation periods and reporting
- Formally defining roles and responsibilities of students and supervisors (supervisory contracts/ agreements)
- Investigating opportunities for continuous professional development for supervisors

Committee Composition

- Chair – Locksley McGann, Associate Dean, FGSR
- Faculty members from across campus
- Chris Hackett, Discipline Officer, Office of Student Judicial Affairs
- GSA representative

Meeting Schedule: dates to be determined; 5 meetings are planned until the end of June.

13.2 Meeting Agendas

MEETING 1

FGSR Committee on Graduate Supervision

March 8, 2009

3:00-4:30 PM

1-16 Triffo Hall

Objectives: *to identify supervision models to be tested at the University of Alberta and finalize action plan*

Agenda Items	Time
1. Welcome, introductions and overview	3:00-3:15
2. Presentation of supervision models. (Chair)	3:15-3:45
Selection of models to be tested. (Everybody)	
3. Committee action plan (Chair, everybody)	3:45-4:15
4. Meeting wrap-up (Chair)	4:15-4:30

Distribution

Members: Locksley McGann, Chair; Catherine Field; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Priscilla Koop; Chris Hackett; Helen Madill; Russ Greiner; Heather Zwicker; Teresa Krukoff; George Pemberton; John Seubert; Geoffrey Rockwell

Support: Heather Hogg; Katya Joshi

Regrets: Heather Zwicker; Heather Hogg; Chris Hackett; Teresa Krukoff; John Seubert

MEETING 2

FGSR Committee on Graduate Supervision

April 12, 2010

2:30-4:00 PM

1-16 Triffo Hall

Objectives: *to identify supervision models to be tested at the University of Alberta and finalize action plan*

Agenda Items	Time
5. Call to order and introduction of new members	2:30-2:35
6. Minutes from the last meeting (March 8, 2010) (Chair, everybody)	2:35-2:40
7. Presentation of supervision models (Continuation from the previous meeting). (Chair)	2:40-3:20
Selection of models to be tested. (Everybody)	
8. Committee action plan (Chair, everybody)	3:20-3:50
9. Meeting wrap-up (Chair)	3:50-4:00

Distribution

Members: Locksley McGann, Chair; Catherine Field; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Chris Hackett; Helen Madill; Russ Greiner; Heather Zwicker; Teresa Krukoff; John Seubert; Geoffrey Rockwell; John Pemberton; Priscilla Koop; GSA representative

Support: Heather Hogg; Katya Joshi

Regrets: George Pemberton, Priscilla Koop, Heather Zwicker

MEETING 3

FGSR Committee on Graduate Supervision

May 7, 2010

9:00-10:30 AM

1-16 Triffo Hall

Objectives: *to identify supervision models to be tested at the University of Alberta and discuss approaches to identifying participants*

Agenda Items	Time
10. Call to order and introduction	9:00
11. Minutes from the last meeting (April 12, 2010) (Chair, everybody)	9:00-9:05
12. Discussion of supervision models to be piloted (Individual Supervision, Joint Supervision, Supervision Panel, Three-Pronged Supervision) (Chair, everybody)	9:05-10:00
13. Discussion of approaches to identifying research groups for piloting supervision models (Chair, everybody)	10:00-10:20
14. Meeting wrap-up (Chair)	10:20-10:30

Distribution

Members: Locksley McGann, Chair; Catherine Field; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Chris Hackett; Helen Madill; Russ Greiner; Heather Zwicker; Teresa Krukoff; John Seubert; Geoffrey Rockwell; John Pemberton; Priscilla Koop; Chris Dyck

Support: Heather Hogg; Katya Joshi

Regrets: Murray Gray, André McDonald, George Pemberton, Catherine Field, Marty Luckert

Next Meeting: Wednesday, May 26, 1:30 – 3:00 PM (Triffo Hall 1-16)

MEETING 4

FGSR Committee on Graduate Supervision

May 26, 2010

1:30-3:00 AM

1-16 Triffo Hall

Objectives: *to identify supervision evaluation strategies applicable to supervision models to be tested*

Agenda Items	Time
15. Call to order	1:30
16. Minutes from the last meeting (April 12, 2010) (Chair, everybody)	1:30-1:35
17. Discussion of factors contributing to successful supervision and attributes of a successful graduate program (Chair, everybody)	1:35-2:20
18. Discussion of evaluation strategies (Chair, everybody)	2:20-2:50
19. Meeting wrap-up (Chair)	2:50-3:00

13.2.1.1.1 Distribution

Members: Locksley McGann, Chair; Catherine Field; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Chris Hackett; Helen Madill; Russ Greiner; Heather Zwicker; Teresa Krukoff; John Seubert; Geoffrey Rockwell; John Pemberton; Priscilla Koop; Chris Dyck

Support: Heather Hogg; Katya Joshi

Regrets: Marty Luckert; Murray Gray; André McDonald; Chris Dyck

13.3 Meeting Minutes

MEETING 1

FGSR Committee on Graduate Supervision

March 8, 2010

3:00-4:30 PM

1-16 Triffo Hall

Attendees: Locksley McGann, Chair; Catherine Field; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Priscilla Koop; Helen Madill; Russ Greiner; Geoffrey Rockwell; Katya Joshi

Regrets: Heather Hogg; Heather Zwicker; Chris Hackett; Teresa Krukoff; John Seubert; George Pemberton

Call to Order

Meeting called to order at 3:00 PM.

Welcome, Introductions and Overview.

Committee members introduce themselves.

The Chair give background on how the committee was set up:

- broad range of expertise is essential;
- a meeting long ago about consequence of the elimination of mandatory retirement on supervision;
- many universities have done work to improve the quality of supervision;
- finding a way to improve quality of supervision at the UofA to set the University apart from other schools;
- different models can be applied across the University;
- will be looking at different models and selecting ones to test; identifying research groups interesting in testing these models;
- will be developing assessment tools for tested models and for further introduction of these tools to the current system;
- the work of the committee will be presented at FGSR Council and the communication plan will be developed by the end of June, after which implementation of suggestions will follow.

Parking Lot Items (items for consideration, not necessarily at this meeting)

- Graduate student representatives on this committee?
- Need to also look at:
 - o Completion rates
 - o Time to completion
- There should be an easy fix to arising problems
- Want to be able to attract more students
- Explore international collaboration
- Why is change required? What are the problems? Differences between disciplines
- Exit interviews, exit questionnaires; exit interview for drop-outs
- Where does Master's degree fit in?

ACTION – Katya Joshi to e-mail PowerPoint presentation to Committee members

Presentation of Supervision Models

See Power Point Presentation.

Chair explains objectives of the work on this committee (to start the process for the UofA to distinguish itself) and suggested outcome (models or aspects of models that are interesting to test).

Chair goes over the following supervision models: current UofA model, three-pronged supervision, supervisory panel, joint supervision, collaborative cohort model, cotutelle, collaborative research program (*For detailed description of each of the models, see Power Point Presentation*)

Questions and Comments

Questions: How are the supervisor and board in some of the models different from the supervisory committee?

Answer: Supervisory committees at the UofA are comprised of subject experts; the boards are more professional and represent institutional interests.

Question: When are the contracts signed? Are they changed if committee members change?

Answer: There are differences between programs; provisions must be made for change.

Comments:

- Objectives if the current model are not clearly stated; they should be stated on the website and the committee will need to decide on this;
- We need to encourage students to interact more with supervisors – currently there is only one mandatory meeting per year;
- Funding across campus is variable– number of students is limited by funding;
- Serial mixed teams (joint supervision)– students need to take more control of their program;
- Supervisors play different roles, a different supervisor can be assigned for each of these roles: for course work, candidacy, thesis writing;
- A student commented that constructive feedback is not taught at the UofA; FGSR has workshops on constructive feedback (FGSR)

ACTION – Katya Joshi to schedule the next meeting

ACTION – Katya Joshi to send presentation references and outlines of supervision models via e-mail to the committee members

Chair reports that at the next meeting the committee will finish reviewing the models and identify 2-3 to test. Chair suggests that committee members think about the models that were reviewed and about possible research groups or supervisors on campus that might be interested in trying out some of the models.

Meting Adjournment

Meeting adjourned at 4:45 PM.

MEETING 2

FGSR Committee on Graduate Supervision

April 12, 2010

2:30-4:00 PM

1-16 Triffo Hall

Attendees: Locksley McGann, Chair; Marty Luckert; André McDonald; Bob Koch; Murray Gray; Chris Hackett; Helen Madill; Russ Greiner; Teresa Krukoff; John Seubert; Chris Dyck; Heather Hogg; Katya Joshi

Regrets: Catherine Field; Heather Zwicker; John Pemberton; Priscilla Koop

Absent: Geoffrey Rockwell

Call to order

Meeting called to order at 2:35 PM.

The Chair recaps the previous meeting and introduces new committee members.

Presentation of Supervision Models (Continued)

See Power Point Presentation.

The Chair continues presentation of the supervision models and the following models are discussed: Research Training Groups; Erasmus Mundus Program.

Professional Development of Supervisors

All discussed models include elements of supervisor training. University of Alberta conducts workshops for new supervisors, but these are not always very well attended. We need to shift the culture over to value quality of supervision in addition to quality of research.

Committee's Next Steps

- Identify models for piloting
- Develop evaluation methods
- Investigate opportunities for continuous professional developments of supervisors
- Formalize and defines roles and structures of supervision (supervision contracts/ agreements)

We also need to have a better defined individual supervision model that we have now.

Discussion

Some of the committee members think it would be better to first identify key elements in students' programs instead of selecting models and then come up with ways to address these elements; there are common stages in all programs and we can identify suitable models for each step. Every department works differently; we need to look at functions and mechanisms rather than models. We also need to look at why some students are leaving their programs. We require formal definition of responsibilities for supervisors and students and formalized rules; otherwise problems may arise.

The Chair comments that we are not trying to change the current practice, but rather define it and develop tools for measuring performance.

The student member of the committee notes that it would be helpful for students if mechanisms existed to provide feedback on supervision during their program; this will also help incoming students.

To understand why the supervision is the way it is, it would be helpful to look at the questions that are asked in annual reports; we need more quality rather than numbers. Department chairs need supervision evaluation tool; it will help in annual review process; there is no way of measuring supervision now. We need clear assessment tools; clear rules and clear expectations.

Question: We are focusing on PhD student supervision; what about master's students? A new supervisor would usually first take a master's student to supervise to develop themselves as supervisors.

Answer: Models are not restricted to PhD students; the goal is to provide broader range of experience. One of the avenues of encouraging good supervision is recognition.

Suggestions from Committee members:

- Students can be asked about key elements in their programs
- Best practices can be shared between departments.
- We need requirements for regular meetings.
- Regular feedback on chapters in certain time frame.
- The systems should not be dependable on a single relationship between a student and a supervisor.
- When developing models descriptions, we need to clearly state motivation for supervisors to use these new models.
- Measurement of supervision is very difficult; it is also important to look at ways to solve common problems.

Objective – expand the range of experiences on campus and develop culture of continuous improvement of supervision among faculty.

Our principles should be:

- Attract best students
- Give them best experience
- Develop opportunities for best supervision

Action – FGSR to define 4 supervision models (individual supervision, supervision panel, joint supervision, three-pronged supervision).

Action - Committee members to think about groups on campus who practice similar supervision and who might be interested in testing them.

Adjournment

Meeting adjourned at 4:00 PM.

MEETING 3

FGSR Committee on Graduate Supervision

May 7, 2010

9:00 – 10:30 AM

1-16 Triffo Hall

Attendees: Locksley McGann, Chair; Bob Koch; Chris Hackett; Helen Madill; Russ Greiner; Teresa Krukoff; John Seubert; Chris Dyck; Heather Zwicker; Priscilla Koop; Geoffrey Rockwell; Katya Joshi

Regrets: Catherine Field; John Pemberton Marty Luckert; André McDonald; Murray Gray

Call to order

Meeting called to order at 9:05 AM.

The Chair recaps the previous meeting and introducing the agenda for the meeting (discussion of four supervision models and ways of approaching research groups). The next meeting will be devoted to the evaluation strategies of performance of these models.

The Chair suggests that specific supporting documents should be developed for each of the models and that FGSR work with research groups to develop these documents.

Supervision Model 1 (Three –Pronged Supervision)

General template is provided. It can be noted that group learning is becoming more common in many supervision models. There might be variations of this model between its applications to master's and doctoral students; doctoral students should have more checkpoints and longer span of three supervision arenas (supervision groups, student colloquia and individual supervision). There has to be a better understanding of roles of supervisors and students. This model illustrates evolution of supervisory practices which are slowly moving away from 1-1 relationship.

Comments from Committee members

Supervision contracts should outline consequences of noncompliance with program requirements and measures of progress.

Useful outcome of the work of this committee would be to make documents public, share examples of existing supervision charters.

A student member of the committee reinforces the point that sometimes supervisors are not prepared for meetings; it is important to shift the balance of power is supervisory relationship.

This model is helpful in developing students' skills in scientific discourse.

Written criteria for colloquia will be helpful.

ACTION – Katya Joshi to e-mail drafts of outlines of supervision models to all committee members

Supervisions Model 2 (Supervision Panel)

This model has provisions for alternative supervision if main supervisor is away. It could be treated as an expanded version of commonly practiced supervisory committees. It would be logical to have graduate coordinator be chair of many panels.

Panel reports could be considered for promotions; supervisors need to be let know if any problems arise and are reported by students; mechanisms for providing this information should be built in the process. Power imbalance is built in the system; it has to exist, but shouldn't be abused.

It is important to allow students more freedom to express themselves; most problems arise from misunderstandings.

Supervision Models 3 (Individual Supervision)

It is Important to teach time management and project management to students.

ACTION – KatyaJoshi to find a source that states that individual supervision is a preferred type and works well and e-mail it to Geoffrey Rockwell

Question: Are all these models internal to the university? There is a movement to make PhD programs more open to open non-academic career perspectives for students. Collaborative supervision models can include representatives from outside of university.

Answer: There are no provisions not to include representatives from outside of university in any of these models. An advisor or a supervisor can be from outside of academia.

Professional development and individual supervision should be incorporated in all models.

Supervision Model 4 (Joint Supervision)

This supervision model is sometimes practiced in training junior colleagues.

Comments from Committee members

Provisions should be built in for students when model is not working.

Graduate coordinators should ensure that the model is working well.

University needs to acknowledge groups that agree to test these models.

It has to be determined which of the supervisors takes ownership for each of the models.

Suggestions for Recruiting Study Participants

To send "Request for Proposal (RFP)" with a request for departments who would be willing to test new supervision models; we need to inform them that we will be running formative assessments and that we will provide resources.

Faculty of Medicine and Dentistry should be approached by schools.

It is no necessary that the whole department commits to this experiment, but we will need departmental involvement as graduate chair will play important role to ensure that models are working.

RFP should request departments to identify groups within their unit; we need right size of departments

Background needs to be done; groups will need good motivation; we should present this as a new, exciting opportunity.

There is a group in Computing Science that could participate is approached correctly.

Graduate students can be asked to identify potential groups.

ACTION – Katya Joshi to e-mail dates of next meetings to Committee members

ACTION – Katya Joshi to meet with Chris Dyck on benchmarks of students’ academic career

ACTION – FGSR to work on the draft of background document

Adjournment

Meeting adjourned at 10:37 AM.

MEETING 4

FGSR Committee on Graduate Supervision

May 26, 2010

1:30-3:00 PM

1-16 Triffo Hall

Attendees: Locksley McGann, Chair; Bob Koch; Helen Madill; Russ Greiner; Teresa Krukoff; John Seubert; Heather Zwicker; Geoffrey Rockwell; Catherine Field; Katya Joshi

Regrets: John Pemberton; Marty Luckert; André McDonald; Murray Gray; Chris Hackett Chris Dyck; Priscilla Koop

Call to order

Meeting called to order at 2:37 PM.

Committee members have no additions to the minutes from the previous meeting.

Chair informs the committee members of the goal of the meeting. The goal is to discuss factors of successful supervision, successful graduate student and graduate program and briefly look over a few evaluation strategies.

Factors that contribute to the successful supervision

Chair refers the committee to the handout with factors that contribute to the successful supervision of doctoral students identified by the German Research Foundation to evaluate supervision in their research training groups and asks whether the committee members think that some factors are missing or are not applicable.

Suggestions from the committee

- Add program design as an outcome measure; well integrated program will show how well the system is performing
- Supervisor should help student understand broad discipline requirements
- Experience in research work in discipline
- Experience teaching
- Preparation for the first job (regardless of whether it is academic or not)
- Add conferences to point 3

Attributes of a successful graduate student (ideas from the committee members)

- Independent
- Self-motivated
- Being Articulate
- Critical thinking
- Writing abilities
- Can express needs and tailor program of studies to fit those needs
- Focused
- Possessing time management skills

- Having innate sense of ability to get things done

Comments from the Committee

Thesis writing for master's students is not as important as for PhD students; focus needs to be shifted to the development of other relevant skills.

Department of Computing Science offered a graduate course on how to go through a graduate program.

Attributes of successful graduate program

A committee member gives an example of the Department of Computing Science as a successful program, because they keep the program rules simple and not numerous; this allows students and supervisors to adapt. There are too many rules in the Faculty of Arts. At the Faculty of Pharmacy and Pharmaceutical Sciences, on the contrary, there is a need for more rules; the program is very unstructured.

Ideas from the Committee members

- simple, but somewhat structured program
- engaged graduate coordinator and/or graduate committee
- exposure to other areas
- context for peer mentoring; establishing relationship with other graduate students
- clear statement of expectations
- engaged faculty (e.g. seminar series)
- collegial atmosphere
- having good students (good program attracts good students)
- having a unit in a department that knows regulations and can assist students throughout their program
- having faculty members who work together as a group
- interest and enthusiasm
- knowledge transfer between supervisors

Future Actions of the Committee

Chair reports that the committee should have the final report ready by the end of June. This report should include recommendations, information about selected supervision models, attributes of a successful program, measures which will be refined by testing groups; we need help identify groups.

Chair suggests that the meeting on June 9 be cancelled; draft of the report will be circulated one week prior to the final meeting at the end of June.

Overview of Evaluation Models

As per handouts. It needs to be decided which components of each supervision model need/can be measured.

Suggestions from the Committee

- exit interview
- questionnaires 5 years after program completion (better perspective)
- make documents developed by this committee available on website and/or available to graduate coordinators
- investigate membership in FIRST (for improving research student supervision consortium)
- groups testing supervision models should be charged with the task to develop evaluate methods

- Goal of the project: to get people to experiment; cultural shift towards valuing supervision as much as research
- General information about how well program performs can be used for assessment of how well the model is working
- Need to have mechanism to identify which student would like which model
- Identify how to screen students to see who would work well in which model
- Departments should select models and students will select departments on the bases of models (groups or individual faculty members can practice a certain model)

Incentives for groups

RFP – competition

- requesting proposals from groups
- part of proposal – appropriate assessment instruments
- symposium of approved proposals.
- pick 1 of 4 models – overlap is ok
- Recognition (GSA gives out awards for good mentors; reception from Provost/Dean (senior administrators))

ACTION – FGSR to send draft of the report before the next meeting for feedback

ACTION – Katya Joshi to reschedule the final meeting on June 28

Adjournment

Meeting adjourned at 2:54 PM.

13.4 Research Links and Summaries

(Please see appended documents).

Collaborative Cohort Model

Description and Rationale

This model was piloted for dissertation supervision at a large metropolitan University in Australia. It was developed in response to concerns about completion rates and the quality of research supervision. All doctoral students who achieved ABD status during a particular academic year composed a collaborative learning cohort. A faculty member served as coordinator and mentor to the cohort which met twice per semester.

Role of Students

Students were required to attend cohort meetings. During the meetings, the students had the opportunity to discuss their dissertations and related issues (development of research ideas, the pragmatics of doctoral research including access to subjects/ participants, ethical considerations, and resources for data entry and analysis.) Having a rolling cohort provided more advanced students with the opportunity to share their insights about the dissertation process with new ABD status students in a collaborative environment. Students coming into the cohort around the same time were paired and encouraged to support each other via a “buddy” system. After receiving training from the faculty member in editing and providing critical feedback on academic documents cohort members reviewed and provided feedback on the proposal documents for two other students in the cohort and on the draft dissertation documents for two other students.

Role of Faculty

- to organize and structure meetings;
- to facilitate the meeting using a previously circulated agenda;
- to produce 2-3 cohort newsletters per academic year;
- to establish communication mechanisms for cohort members;
- to teach editing and constructive feedback skills; and
- to structure links between students, buddies, and reviewers.

The university acknowledged the role of the faculty member as being the equivalent of that of a teacher of a regular class. This model did not replace individual supervision. Each ABD status student had an individual supervisor who was responsible for guiding the student through the production of their dissertation. It was each student’s responsibility to inform their supervisor about the cohort; individual supervisors were forwarded copies of the newsletters.

Advantages of the Model

- some students felt less isolated;
- students were more likely to complete their dissertations;
- students gained a greater breadth of knowledge about the profession from reading four other students’ research studies;

- students acquired knowledge and understanding of research design and methods;
- students acquired writing, editing, and critical feedback skills;
- workloads decreased for some individual staff members who were supervising dissertations; and
- the quality of the proposal and dissertation documents produced by the students was enhanced.

Disadvantages of the Model

- the allocation of a faculty member to coordinate the model increased the workload of other faculty members;
- potential for conflict between the coordinating faculty member and individual supervisors.

References

Burnett, Paul C . "The supervision of doctoral dissertations using a collaborative cohort model." *Counselor Education and Supervision* 39.1 (1999).

Collaborative Research Program

AUN-SEED-Net

Southeast Asia Engineering Education Development Network (SEED-Net) Project is an autonomous sub-network of the ASEAN University Network (AUN) aimed at promoting human resources development in engineering in ASEAN. The Network consists of 19 leading institutions from 10 ASEAN countries with the support of 11 leading Japanese Supporting Universities.

Objectives

- To create joint research activities between Host Institutions and Japanese Supporting Universities.
- To implement joint research by assigning thesis research topics to AUN/SEED-Net students and conducting “joint thesis research supervision” by Host Institution and Japanese Supporting Universities.
- To ensure high quality thesis research of master’s and doctoral students (which would lead to reputable international refereed journal publication) and to ensure the completion of the graduate degree within reasonable duration (two years for master’s degree and three years for doctoral degree) through the involvement of Japanese professors.
- To enhance the research collaboration between Host Institution and Japanese Supporting Universities.
- To closely link scholars as well as graduate students among the Member Institutions.

Features of the Program

- The principle investigator and co-investigator at Host Institution must be an advisor of an AUN/SEED-Net student, and a Japanese co-investigator must be a co-advisor or a committee member of an AUN/SEED-Net student. A faculty member of other Member Institutions may be invited as a co-investigator.
- It is expected that thesis research of each AUN/SEED-Net student will be conducted under the support of Collaborative Research.
- It is expected that each Collaborative Research theme comprising of several key words leading to a collection of interrelated thesis research topics will be continuously and progressively carried out for several years to come by AUN/SEED-Net students and their partner students of Host Institution, and it is planned that the collection of those research results could be published by AUN/SEED-Net Project as a comprehensive book of each identified research theme.
- It is encouraged that collaborative research might challenge regional comparative study of certain subjects, or might challenge innovative solutions for the common problems of the region or for the problems across several

countries in the region, so that teaching staff in other Member Institutions (particularly Sending Institutions of students) might be also involved in joint thesis research supervision.

- It is anticipated that all necessary equipment be available at Host Institution.

Financial Support

In order to further promote such research activities among Member Institutions under defined collaborative research themes, *Short-term Visit Program* within Member Institutions provides limited support for a faculty staff of Non-hosting Member Institutions to visit Host Institutions for research consultation and implementation. The Collaborative Research Program covers only research expenses (such as small equipment and spare parts, consumable items and materials for research, travelling cost by students to research fields etc.) and the Honorarium to the thesis advisor (including all other minor personnel costs). To accomplish its objective of joint research and joint thesis research supervision by Host Institution and Japanese Supporting Universities, Collaborative Research Program is supplemented by other support programs such as *Japanese Professors Dispatch Program* (which supports Japanese co-investigator's (or co-advisor's or committee member's) visit to Host Institution for joint research and joint supervision of student), *Short-term Study Program in Japan* (which supports students' visit to Japan for research consultation) and *Short-term Visit Program to Japan* (which supports principle investigator' and co-investigator's (or advisor's) visits to Japan for research consultation).

References

Collaborative Research Program. AUN/SEED-Net. Web. http://www.seed-net.org/support_rs_collab.php. 15 June, 2010.

Cotutelle

Background

Cotutelle students have their doctoral studies not only supervised jointly by academics from French and a foreign University, but, if successful, the student will be awarded a joint or double doctoral degree by the two institutions. Cotutelles are possible in all French Universities with any foreign countries.

Details

Supervision: Cotutelle students are enrolled in both institutions involved and undertake their studies under the control and the responsibility of a supervisor in either country.

Agreement: Each cotutelle project takes place under a reciprocal agreement “Cotutelle Convention” binding the two institutions involved. This is the recognition of the validity of the studies undertaken within the framework.

Tuition fees: PhD students are exempted from paying registration fees at one institution and usually pay fees in their home university

Duration: PhD in Cotutelle is normally 3 years with time shared between the 2 countries – at least one year is spent in each country.

Examination: PhD study is defended or submitted only once on accordance with the “Cotutelle Convention”.

Award: a joint or double-degree to the student, if successful.

Benefits:

For the research teams and universities involved:

- ▶ To increase, structure and highlight international scientific cooperation between France (Europe) and foreign country;
- ▶ To better train and benefit from highly skilled students;
- ▶ To access new funding sources specific to cotutelle;
- ▶ To expand international relationships in Higher Education.

For the Cotutelle student:

- ▶ To get an early experience of international research;
- ▶ To be exposed to different cultural and scientific environment;
- ▶ To create personal links, at early stage of their career, to pursue scientific research opportunities between two countries;
- ▶ To obtain, if successful, a double doctoral degree

Cotutelles in Canada

The Université de Montréal has had 12 years of experience with PhD co-tutelles with French institutions, and other Québec francophone universities have similar experience.

Québec Universities with Cotutelle Programs:

- ▶ Université du Québec à Montréal
- ▶ Université Laval

- ▣ Université de Montréal
- ▣ Université de Sherbrooke

References

France in Australia. Embassy and Consulate General. *What is a Cotutelle? La France en Australie*. Sydney: France in Australia, 2007. Web. http://www.ambafrance-au.org/france_australie/spip.php?article809. 14 June, 2010.

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Erasmus Mundus

Background

Erasmus Mundus is a cooperation and mobility programme in the field of higher education that aims to enhance the quality of European higher education and to promote dialogue and understanding between people and cultures through cooperation with Third-Countries.

The Erasmus Mundus programme provides support to:

- **higher education institutions** that wish to implement joint programmes at postgraduate level or to set-up inter-institutional cooperation partnerships between universities from Europe and targeted Third-Countries;
- **individual students, researchers and university staff** who wish to spend a study / research / teaching period in the context of one of the above mentioned joint programmes or cooperation partnerships ;
- **any organisation active in the field of higher education** that wishes to develop projects aimed at enhancing the attractiveness, profile, visibility and image of European higher education worldwide.

Program Structure

Erasmus Mundus 2009-2013 is implemented through of the following actions:

- **Action 1:** Erasmus Mundus joint programmes of outstanding quality at masters (Action 1 A) and doctoral (Action 1 B) levels including scholarships/fellowships to participate in these programmes;
- **Action 2:** Erasmus Mundus Partnerships between European and Third Country higher education institutions including scholarships and fellowships for mobility at all academic levels;
- **Action 3:** Promotion of European higher education through projects to enhance the attractiveness of Europe as an educational destination and a centre of excellence at world level.

Action 1 Erasmus Mundus Joint Programmes (including scholarships)

Action 1 provides:

- Support for high-quality joint masters courses and doctoral programmes offered by a consortium of European and possibly Third-Country HEIs.
- Scholarships/fellowships for the Third-Country and European students/doctoral candidates respectively to follow these Erasmus Mundus joint masters courses and doctoral programmes.
- Short-term scholarships for Third-Country and European academics to carry out research or teaching assignments as part of the joint masters programmes.

This Action will foster cooperation between higher education institutions and academic staff in Europe and Third Countries with a view to creating poles of excellence and providing highly trained human resources.

In order to make the programme more attractive for Third-Country nationals, the amount of the fullstudy scholarship will be higher for Third-Country master students than for European master students.

Enrolled students will study in at least two of the countries represented in the consortium and will be awarded joint, double or multiple degrees on behalf of the consortium after the successful completion of their studies.

Action 2 – Erasmus Mundus Partnerships (former External Cooperation Windows)

Action 2 provides:

- Support for the establishment of cooperation partnerships between European HEIs and HEIs from targeted Third Countries with the objective of organising and implementing structured individual mobility arrangements between the European and the Third-Country partners.
- Scholarships of various length - depending on the priorities defined for the Third Country concerned, the level of studies or the particular arrangements agreed within the partnership - for European and Third-Country individuals (students, scholars, researchers, professionals).

Action 3 – Promotion Projects

Action 3 provides support to transnational initiatives, studies, projects, events and other activities aimed at enhancing the attractiveness, profile, image and visibility of, and accessibility to, European higher education in the world. Action 3 activities relate to the international dimension of all aspects of higher education, such as promotion, accessibility, quality assurance, credit recognition, recognition of European qualifications abroad and mutual recognition of qualifications with Third Countries, curriculum development, mobility, quality of services, etc.

Although Third-Country HEIs can participate as active members of the consortium/partnership/network in exactly the same actions as European HEIs, **they cannot submit a grant proposal** on behalf of the entire consortium/partnership/network. Such applications have to be presented by European organisations.

Programme management

The European Commission is responsible for the running of the Erasmus Mundus Programme 2009-2013. It manages the budget and sets priorities, targets and criteria for the Programme. Furthermore, it guides and monitors the general implementation, follow-up and evaluation of the Programme at European level. The Education, Audiovisual and Culture Executive Agency (EACEA) is responsible for the implementation of the Erasmus Mundus Programme.

Since 2004, 122 students, 65 academics and 12 institutions from Canada have taken part in Erasmus Mundus.

References:

European Commission. EACEA. *Erasmus Mundus 2009-2013. Programme Guide*. Brussels: EC EACEA, 2010. Web. http://eacea.ec.europa.eu/erasmus_mundus/programme/programme_guide_en.php. 15 June, 2010.

Association of Universities and Colleges of Canada. *The Bologna Process and Implications for Canada's Universities: Report of the 2009 AUCC Symposium*. Ottawa: AUCC, 2009. Web. http://www.aucc.ca/pdf/english/publications/bologna_report_e.pdf. 14 June, 2010

G13 Supervision Practices

All thesis students must have a Supervisor (or co-supervisors) and a Supervisory Committee. In many departments the appointment of a supervisor is a pre-requisite for admission into the program.

The Interim Advisor (faculty advisor)

Most academic units assign an interim advisor to all students who do not have a definite thesis supervisor and topic at the time of admission. The interim advisor helps acquaint a student with the research interests of professors in the academic unit and also helps identify the most suitable thesis supervisor.

Contracts (Letters of Understanding between Supervisors and Students)

Some supervisors have contracts that the students they are supervising must sign. These contracts set out mutual expectations and obligations.

Supervisory Committees

The supervisory committee consists of the supervisor and at least two faculty members. Its role is to provide support to the student and the supervisor by broadening and deepening the range of expertise and experience available, and by offering advice about, and assessment of, student's work. Universities have different guidelines and regulations about frequency of meetings of Supervisory Committees.

McMaster University (Example)

Students must organize bi-annual meetings of their committee (usually September/October and February/March), to discuss progress and goals. In preparation for these meetings, students submit a student progress report to the supervisory committee.

In some schools additional Advisory Committee are also used.

Co-supervision (Dalhousie University Example)

The Faculty of Graduate Studies recognizes four types of co-supervision:

1. where a co-supervisor is added because the other supervisor does not have an appropriate academic qualification;
2. which arises from the desire of a student to draw equally upon the expertise of two individuals, or where an interdisciplinary project may require the equal expertise of two supervisors from different disciplines;
3. which introduces a new faculty member to the standards of the department by providing an opportunity to work with an experienced supervisor; and
4. which conforms to the Faculty of Graduate Studies practice regarding external supervisors or supervisors not from the student's department or program. An Adjunct faculty member may be the academic supervisor of a Dalhousie student provided the student also has an internal advisor to handle the administrative details.

Quebec Schools have Cotutelle agreements which include provisions on joint supervision.

Almost every Faculty of Graduate Studies (or its equivalent) outlines responsibilities of students, supervisors, departments (program, academic units), and FGS. Dalhousie University in addition to that outlines rights of supervisors and students.

Supervisors have the following rights:

- to expect students to give serious and considered attention to their advice concerning what they regard as essential changes in the thesis;
- to terminate supervision and advise the student to find another supervisor if the student does not heed advice and ignores recommendations for changes in the thesis, or if the student is not putting forth a reasonable effort;
- to have their thesis supervision properly credited by the department as an intrinsic part of their workload so that, in the assignment of duties, they are not overburdened to the point of having their effectiveness impaired as supervisors;
- to have the thesis-writer acknowledge, by footnoting, all portions of the supervisor's own research over which the supervisor wants to retain future rights of authorship;
- to have thesis-writers give permission for the results of their research to be used for the benefit of a larger project when they are working as assistants with their supervisor on research that is part of such a project.

Students have the following rights:

- to have a clear understanding of what is expected in thesis writing (expected length, acceptable methodology, validity of topic, notification of progress);
- to expect help from their supervisor in establishing a feasible topic and in solving problems and assessing progress as the thesis is being written;
- to receive a fair assessment of the completed thesis and explanations of negative criticism;
- to be allowed to have a new supervisor when they can offer convincing reasons to the department for the change and the change can be reasonably accommodated by the department;
- to be protected from exploitation by their supervisor or other faculty members if the latter should :
 - a. intrude upon the student's right of authorship or fail to give a student authorship credit for team research (where applicable, the department's protocols on authorship should be provided to students before they embark on research), or
 - b. divert the student's efforts from the timely completion of the thesis;
- to submit a thesis even if the supervisor is not satisfied, although such action should be taken only in extreme cases and after full consultation with the department.

Supervision Quality Reviews

University of Waterloo

Graduate Officers should evaluate the performance of all supervisors of doctoral students (normally reviewed by the Faculty every five years). A supervisor who does not meet the requirements of this review will assume the role of co-supervisor with an approved supervisor, until such time as he/she is reinstated.

University of Alberta

The department oversees the supervision of all graduate students enrolled in its programs and is responsible for ensuring that the student receives proper supervision and that the regulations and

requirements of the FGSR are met. Once a supervisory committee has been appointed, it shall be reviewed annually by the department.

Supervisor Training

Faculty of Graduate and Postdoctoral Studies at *McGill University* provides workshops for supervisors and makes resources from the workshops available online. Examples of workshops:

"Strategies for Supervising Graduate Student Writing"

"Best Practices for Graduate Supervision"

"An open discussion on Supervising Graduate Students"

The School of Graduate studies at *McMaster University* also provides workshops ("Defining and developing roles in graduate supervision relationships"). Center for Continuing Education (MVP Professional Development) provides additional workshops (e.g. Supervision Essentials).

FGSR at the *University of Alberta* provides workshops on supervision and mentorship.

Supervision Resources

- *Handbook of Graduate Supervision* (University of British Columbia)
- *Handbook of Supervision and Examination* (University of Calgary)
- *Graduate Supervision Guidelines for Students, Faculty, and Administrators* (University of Toronto)
- *A Guide for Graduate Research and Supervision at the University of Waterloo*
- *Western Guide to Graduate Supervision* (University of Western Ontario)
- *Letters of Understanding between Supervisors and Students* (University of Western Ontario)
- *Roles and responsibilities in Graduate Supervision: A Guide for Students, Faculty and Departments* (Queens' University)
- *Graduate Supervision Manual* (Faculty of Nursing, University of Alberta)

References

G13 websites

Individual Supervision

Conceptual Framework

The framework is integrative in that it includes organisational, sociological, philosophical, psychological and emotional dimensions.

The five approaches to supervision that were identified were:

Functional

This approach is very important in helping the student to complete to a deadline. The academic is aware of all of the procedures and timetables that need to be followed and keeps appropriate records. They agree a project plan with the student and monitor progress. They are clear about the assessment criteria that are going to be applied for examining, and can communicate them to the student. They have an ethical approach to teaching and supervision and meet the requirements of departmental, institutional and European codes of practice.

Elements of the functional approach to supervision include:

- Understanding the level of work required
- Recruitment of students
- Obtaining funding
- Induction and arranging co-supervision
- Probation or transfer arrangements from M Phil to PhD
- Project management
- Research ethics and following relevant codes of practice
- Record keeping and preparing relevant material for postgraduate research boards
- Arranging the examination process

“Enculturation”

This refers to the process of socialisation or acculturation into the discipline, the working milieu (e.g. the academic department and the university) and the national culture. A person is “enculturated” when they are comfortable being or working at all these levels. It usually requires a long period of study and an ability to acquire tacit knowledge.

Critical thinking

This approach has four aspects to it:

1. An understanding of different beliefs about knowledge and an ability to assess statements in relation to those beliefs;
2. An ability to define and evaluate the argument in a manner appropriate to the relevant discipline or discipline(s);
3. An ability to solve problems in a logical manner, and
4. To be able to reflect metacognitively on performance.

Emancipation

In this approach the academic wants the student to find their own direction and values and to decide to apply them to their research. They offer support and challenge at appropriate times and are careful not to impose their own agenda. Supervision meetings will be characterised by the supervisor offering and seeking information and seeking the student's opinions. Occasionally they may decide to allow a student to fail at a particular task and then help the student to identify learning from that experience.

Relationship

Here teaching and supervision will be characterised by friendship. The academic and student will anticipate and normally avert unnecessary conflict. Problems will be solved with goodwill, and overt rationalisation will not always need to be expressed for either party to do what is requested. Appropriate boundaries will be observed but the student and supervisor may introduce each other to friends and family.

These different approaches are complementary, and the boundaries between them are permeable.

A framework for concepts of research supervision

	Professional self → Personal self				
	Functional	Enculturation	Critical thinking	Emancipation	Relationship development
Supervisor's activity	Rational progression through tasks	Gatekeeping	Evaluation challenge	Mentoring, supporting constructivism	Supervising by experience, developing a relationship
Supervisor's knowledge & skills	Directing, project management, negotiation	Diagnosis of deficiencies, coaching	Argument, analysis	Facilitation, reflection	Emotional intelligence
Possible student reaction	Organised, obedience, negotiator	Role modelling	Constant inquiry, fight or flight	Personal growth, reframing	Emotional intelligence

References

Lee, Anne, "Some implications of European initiatives for doctoral supervision." *Information Services*. Paper 13. 2009. Web. http://epubs.surrey.ac.uk/info_sci/13. 15 June, 2010.

Joint Supervision

Social Sciences

Joint supervision in social sciences is rare with traditional one supervisor models predominating; joint supervision tends to be organized around a concern for different specialism which different supervisors could bring to the relationship. Joint supervision in the social sciences also acts as a means of providing training in supervision for inexperienced staff. This type of supervision usually means two supervisors. There is a clear demarcation as to which of the supervisors is the senior partner – supervisory partnership is not equal.

Natural Sciences and Engineering

Joint supervision is far more common in the natural sciences and the number of supervisors involved tends to be larger. There is usually a senior supervisor having overall responsibility for the student, this person may not, however, play a lead or central role in the supervision of the student. It is rare for all supervisors to meet together with the student; emphasis was placed much more on the individual student seeking out members of the supervisory team when necessary. Doctoral student conduct their research as part of a wider team or group of researchers who are engaged in the same wider research project. The research group or team often act as an important resource of support for the doctoral student and whilst not officially attributed as such, may be the supervisory group for the student.

Models of Joint Supervision

Mixed expert-support teams

These teams are usually made up of a mix of subject experts and guidance supervisors. While the whole team may not always meet with a student as co-supervisors, there will be some joint meetings and there is an expectation that the team will meet, discuss and agree supervision strategy outside of supervision meetings. Sometimes tasks may be shared out and there is often one senior supervisor.

Serial mixed teams

This 'team' does not automatically act as a team or co-supervise, rather the student goes from one to another separately and acts as the go-between – meeting with those who offer overall mentoring and those who offer subject-specific expertise.

Serial experts

The student moves from one subject expert to another over the time of the doctorate.

Supervisor support teams

In this model support is not offered to the student but to the supervisor. A subject expert individually supervises the student, but has access to regular mentoring meetings either with an experienced colleague alone or in a group with other supervisors.

University of Auckland, New Zealand: Application of Joint Supervision Model

All PhD candidates have the following supervision arrangement *in addition to the appointment of a main supervisor*:

- either one or more co-supervisors, or
- an advisory committee or advisor.

The benefits of joint supervision

- provides back-up for supervisors on leave or suffering illness;
- broadens the range of expertise, perspectives, world-views available to the student;
- broadens the range of personalities available to the student;
- the supervisor develops more links with other staff on campus, extends their knowledge, may learn different skills for supervision, shares responsibility for the student;
- the student can tap into more resources and networks, can share needs and demands around, may be less likely to have to move in one direction (e.g., of a particular supervisor's expertise);
- thesis, being more broadly prepared, may be more likely to pass;
- different supervisors can fill different positions of value to the student (e.g., culture, gender etc).

The risks of joint supervision

- the student can get caught between supervisors with different views;
- it may be practically difficult to arrange times for meeting together;
- in the end, no-one may manage the process overall;
- the student may get no supervision;
- requires good negotiation skills on part of both student and supervisors which can't be taken for granted;
- complex relationships can occur e.g., in which one person plays off the others, or two people unite to pressure the other;
- may be harder to agree on a direction for the project;
- different expectations, such as attitudes to deadlines, in different departments or faculties could lead to difficulties;
- status, cultural, gender, philosophical differences between supervisors could create tensions.

Some models for joint supervision

- *co-supervision* (50/50) in which supervisors contribute more or less equally;
- *primary/secondary* (30-40/70-60) in which one supervisor oversees the research and the other makes specific but substantial contributions in area of expertise;
- *primary/advisors* (80/20) in which one supervisor oversees the research and the other/s make specific but limited contributions in area of expertise;
- *primary/advisory committee* (90/10);
- *primary/nominal secondary* (100% primary unless leave, illness occurs).

University of Leeds, Graduate School, Faculty of Biological Sciences, United Kingdom

The Postgraduate Progression Tutors allocate an appropriate research support group to each student. The faculty has two models of supervision

Recommended Model

- Model 1**
- Main Supervisor
 - Co-Supervisor
 - Assessor
 - 2nd Assessor (if appropriate)

Co-Supervision: Academics have joint responsibility for the student. It is expected that both contribute to the academic and administrative support for the project. The student also has an academic assessor and their role is to independently assess and evaluate student progress; they are responsible for providing formative feedback. Postgraduate tutors, where appropriate, may also appoint a 2nd Assessor who can provide advice to the student. Additional external or internal co-supervisors may be added to the supervisory team.

Alternative Model

- Model 2**
- Main Supervisor
 - Project advisor
 - Assessor

Main Supervisor with project advisor: this is where a single supervisor has overall responsibility for the project. The project advisor is expected to be able to provide academic and administrative support for the project.

All students are allocated an independent advisor who is normally the relevant Postgraduate Progression Tutor. Progression Tutors are experienced and able to deal with supervisory issues sensitively and in confidence. If the student does not wish to approach the Progression Tutor they may request the appointment of an independent advisor at any stage of their research programme.

Six months after commencing the PhD project the student and supervisor complete a confidential questionnaire addressing issues such as progress of the work, the working relationship and interaction with the research group. Within the first month of commencing studies the supervisor and student should meet to discuss training requirements and the student should complete and submit the training needs questionnaire. Students should normally have ten formal recorded meetings per year with their supervisors. The meetings require a short written report from the student addressing progress during the previous month, possible problems and a research plan for the next month.

References

Code of Practice of the Faculty of Biological Sciences Graduate School for allocation, training and supervision of postgraduate research students 2007/08, University of Leeds, Web.

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Pole, Christopher. "Joint Supervision and the PhD: safety net or panacea?" *Assessment and Evaluation in Higher Education* 23.3 (1998): 259-271.

Research Training Groups

Deutsche Forschungsgemeinschaft (German Research Foundation)

(www.dfg.de)

Program Description

International Research Training Groups provide opportunities for joint doctoral training programmes between German universities and universities abroad. The research and study programmes are jointly developed and supervised. Doctoral students in the programme complete a six-month research stay at the respective partner institution.

Objective - to enable speedy research related qualification of doctoral researchers.

International Research Training Groups

International Research Training Groups promote systematic research cooperation through joint research and cooperation programs, cooperative, cross-border supervision of doctoral researchers from both partner groups.

Participants

- *Two small teams of professors* (in Germany and abroad) of 5-10 members with expertise in the topic of the research group and in supervision of young researchers. Young postgraduate researchers can be given responsible positions. Participating scientists come from a single location in each country.
- *Up to 20 doctoral researchers* per partner institution;

- *undergraduate students* with exceptional scientific and academic talent maybe included.

Research Program

Program core is an *innovative research concept*. The main topic serves as foundation for a coherent research program. Partners undertake joint research program. Key element of the program is the *reciprocal research visits* (one or more with an overall duration of 6-12 months) of the doctoral researchers at the respective partner institutions.

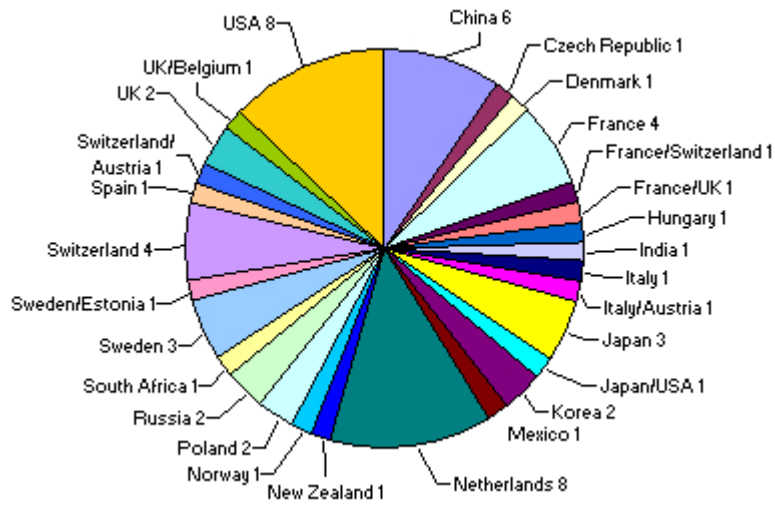
Organizational and Supervisory Concept

- transparent and innovative supervision structures;
- joint supervision through the Group's partner institutions (by 2 researchers or by an advisory committee);
- a healthy balance of intensive supervision and the encouragement of independence.

Research Areas of Research Training Groups

- Humanities and Social Sciences;
- Life Sciences;
- Natural Sciences;
- Engineering.

**International Research Training
Groups (61)**



Supervision Panel

The University of Melbourne, Faculty of Arts, School of Social and Political Sciences (Australia)

Supervision panels have been introduced for all PhD candidates.

Purpose

The purpose of the supervision panel is:

- to improve candidate's experience by providing a wider range of academic staff committed to a candidate's progress;
- to expand the feedback a candidate receives on the progress of their work;
- to increase the breadth of ideas and insight to which candidates are exposed;
- to ensure that the candidate has access to academic advice at all times, in particular in the absence of her/his main supervisor;
- to provide advice to the candidate about opportunities during or after the PhD
- to improve completion patters by providing candidates with structured planning of their research work.

Membership

PhD panels must consist of at least three members of staff:

- Two supervisors: the principal supervisor (who will be responsible for regular supervision, the associate supervisor (who may take over regular supervision when the principal supervisor is absent for more than two months, and also read a full, final draft of the thesis before it is sent to examiners). In cases of co-supervision, both co-supervisors will form part of the panel;
- A panel chair;
- All panels will include representation of senior academic staff.

Requirements for Meetings

As a minimum requirement, supervision panels must meet annually. Panel members are required to have read the candidate's report prior to the meeting and discuss the candidate's work and issues flagged in the candidate's submission. The Panel is also required to discuss with the candidate the following:

- Human Research Ethics (if applicable);
- Any difficulties experienced by the candidate;
- Timeline for completion
- Upcoming milestones or hurdle requirements;
- Milestones set for the next period under review;
- Supervision
- Publications, presentations, funding opportunities, tutoring and any relevant workshops or short courses that may assist the candidate;
- Career objectives and developmental opportunities available to the candidate.

Reporting Requirements

The supervision panel's comments and recommendations should be clearly documented, and the Chair should record what has been discussed and what milestones have been agreed upon. Copies of these notes should be placed on the candidate's student file, and a copy should be provided to the candidate.

KTH Royal Institute of Technology, School of Computer Science and Communication (Sweden)

The ***purpose*** of the supervisor panel is to give each graduate student the opportunity to discuss his/her research development with senior researchers other than the main supervisor.

Composition

Each graduate student is assigned a supervisor panel consisting of other supervisors within the same research area. If the thesis subject includes other disciplines, a member of the panel can also be chosen within the relevant discipline. The supervisor panel should consist of at least two people. The main supervisor may be a member of the supervisor panel.

Task

At least once a year, the graduate student and the supervisor panel may meet and review the student's development

Preparations

At least one week prior to the meeting, the student will submit his/her study program to the members of the panel.

Meeting

It is important that the meeting ends with at least an oral summary which reviews the progress of the student. The specific actions and any follow up meetings should be specified. If the main supervisor or the co-supervisor is a member of the supervisor panel the student must be given the opportunity to discuss the supervision without the presence of these individuals. The student must be given the possibility to discuss problems with the supervision without this fact being conveyed to the supervisor(s).

References

PhD Supervision Panels. School of Social and Political Science, University of Melbourne. Web. <http://www.ssps.unimelb.edu.au/research/current/supervision>. 15 June, 2010.

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Supervisor Training Models

Supervisor Training in Europe: Overview of Best Practices

At the *University of Newcastle upon Tyne* (UK) all academics who wish to register as supervisors have to undertake training. In case of their first supervision, they are usually required to act as a second supervisor for one complete cycle before becoming a primary supervisor.

University of Wolverhampton (UK) has had a formal and obligatory programme for new supervisors in operation since 1998. The programme lasts three years and is designed to support a new supervisor through her/his first doctoral candidate. The programme incorporates about ten hours a year of workshops and seminars, plus a mentoring scheme whereby each new supervisor is assigned an experienced mentor. Successful completion of the three-year staff development programme plus a successful supervision to doctoral level is regarded as a minimum qualification to become a lead member of a supervisory team.

At the *University of Leeds* (UK), the Staff and Departmental Development Unit runs courses for supervisors. All staff new to supervision have to undergo training in research degree supervision and examination.

In 2003 the *University of Edinburgh* introduced a requirement that staff had to undertake at least one day of continuing professional development every five years in order to remain in good standing as a supervisor

Sweden has made training for doctoral supervision compulsory. In July 2007 a Swedish Higher Education Ordinance was passed saying that all PhD students have the right to have a trained supervisor. In 2003 *Umeå University* made it obligatory for supervisors to attend a training programme; they cannot be promoted to become a Reader without completing this training. The *University of Kalmar and Växjö University*, also in Sweden, are merging to form the new *Linnaeus University*, but together they already run a 9 day programme for new doctoral supervisors in groups of 24. The programme includes an introduction to policy issues, recruitment, procedures, linking their own experience as students to their practice as supervisors and discussing individual cases and case studies.

Supervisor Training Examples

The Australian National University

Research Supervision Graduate Course

This course is intended to encourage supervisors to extend their repertoire of supervisory strategies and their awareness of current issues in research and research training which are impacting on supervisory practices. This course consists of four main parts:

- 1) Participation in the equivalent of a one-day (3 modules) of a supervision workshop.
- 2) Undertake a series of mini assignments to assist participants in working through the web site [Research Supervision @ ANU](#) .

- 3) Engage in regular online discussion through the Wattle site.
- 4) Design and undertake an individual or small group project due at the end of the course.

Participants are typically expected to be supervising at least one research student, or be a member of a supervisory panel. However, this course is also be relevant to participants who are about to commence supervision.

Karolinska University, Sweden

Doctoral Supervision Training course

The aim of the courses is to give the course participants insights into the role of supervisor and prepare them for their new role. The course themes are: different approaches to doctoral supervision from a philosophical and historical perspective, communication, intercultural awareness, scientific misconduct, research ethics, rules and regulations concerning Swedish higher education and KI, equality, gender and diversity.

Applicants should be active researchers affiliated to KI or one of KI's partner universities. Priority will be given to researchers who have not yet been main supervisors of doctoral candidates who have obtained a Swedish doctoral degree. In addition, the researcher should intend to register a doctoral candidate as main supervisor during the coming term.

In accordance to new rules regarding requirements for supervisors in the new Higher Education Ordinance (ch 6, 32 §), the Board of Doctoral Education has decided the following:

- For students enrolled after July 1, 2007, at least one of the supervisors must have undergone supervisor training or possess equivalent competence.
- For students enrolled after July 1, 2008, the main supervisor must have undergone supervisor training.

Supervisor competence is acquired in one of the following ways:

- Whoever has been main supervisor for at least one doctoral student who has since obtained a Swedish doctoral degree is required to undergo online supervisor training arranged by the Board of Doctoral Education.
- Whoever has not been a main supervisor for a doctoral student who has obtained a Swedish doctoral degree is required to undergo more thorough supervisor training on a course approved by the Board of Doctoral Education.

Monash University, Australia

Research Supervision Accreditation

Under the *apprenticeship model*, trainee supervisors need to first undertake the role of associate supervisor for the duration of a candidature, from admission through to submission of thesis and successful award of degree, before they are eligible to be a level 1 main supervisor in their own right.

In the *fast-track model*, intending supervisors need to complete a series of nine modules to be accredited as level 1 supervisors.

Rules for Attributing Accreditation Levels and Supervision Percentages to Doctoral, MPhil & Research Masters Supervisors - effective 01 January 2007

Supervision Level	Unaccredited	Level 1	Level 2
Maximum Allowable Supervision %	Not more than 25%	100%	100%
Maximum Status Permitted	Associate	Main	Main
Maximum EFTSL/ Students	1 EFTSL or 3 students	4 EFTSL or 6 students	8 EFTSL or 12 students
	Supervisor has had no completions and has not yet completed the Monash accreditation program	Supervisor has had 1 or 2 successful PhD completions, supervising from start to finish of candidature AND (after applying for exemption) is deemed Level 1 by the Steering Committee of the Research Graduate School Committee OR has completed all 9 modules of the Monash accreditation program Level 1	Experienced supervisor who has had 3 or more successful PhD completions as a MAIN supervisor from start to finish of candidature (one at Monash) AND (after applying for exemption) is deemed Level 2 by the Steering Committee of the Research Graduate School Committee OR has attended 5 Master Classes in the Monash accreditation program Level 2

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Three-Pronged Supervision

Master of Education Programme at the University of Bergen, Norway

Model Description

This type of supervision consists of the combination of:

- supervision groups (2-3 supervisors and their Master's students);
- student colloquia (same students, no supervisors); and
- individual supervision.

The three supervision arenas are supplementary to each other:

Student colloquia provide personal support and are first filters for ideas and texts.

Supervision groups provide multi-voiced feedback on student texts and enculturation into the discipline.

Individual supervision provides more specific advice.

Objectives

General aim of this model is to counteract the negative effects of students having to rely on just one person for supervision.

Particular aims are:

- to improve students' academic writing;
- to provide support and help students solve the problems they encountered in the different phases of their research; and
- to help students finish on time.

Format of Supervision Arenas

Student Colloquia

Participants: 4-6 Master's students.

Meetings: once a week in 1st and 2nd terms; later meetings are on demand.

Topics/content: theoretical and methodological concepts; first stage of written drafts and first drafts; personal problems and frustrations.

Organization and format: 2 hour sessions; all students present problems or submit texts; oral conversation; feedback and discussions.

Structure of session: loose, informal.

Purpose: to provide personal and disciplinary support.

Supervision Groups

Participants: 2-3 supervisors and their Master's students (4-6 in each group) *Meetings:* every third week in 2nd term, once a month in 3rd and 4th terms. *Topics/content:* written drafts of maximum 3 pages; 1st term – project plan; 2nd term – data collection, methods chapter, analysis; 3rd and 4th terms – chapter by chapter thesis writing.

Organization and format: 2.5 hour sessions; discussion of texts from 2-3 students each time; texts are distributed 3 days before the session; feedback and discussions.

Structure of session: strictly structured with clear leadership.

Purpose: project progress, help with specific, common problems, inspiration.

Individual Supervision

Participants: 1-1

Meetings: vary with stage of project; typically once a month.

Topics/content: late versions of drafts; longer texts (drafts of chapters in thesis); specific problems related to research methods, theory, and writing.

Organization and format: vary; typically written feedback is provided, which is discussed face to face.

Structure: varied.

Purpose: progress, advice, quality assurance of thesis.

Contributions of Supervision Arenas

Student Colloquia ('safe haven')

Contribution: a place to share problems and emotions; support and encouragement.

Characteristics of feedback: low threshold; peers are good at reformulation, questions, and confidence building.

Supervision Groups ('enculturation')

Contribution: mutual engagement and participation; multi-voiced discussions; disciplinary knowledge.

Characteristics of feedback: high threshold; supportive, but critical; many suggestions and new ideas; text models; models for peer response strategies.

Individual Supervision ('quality assurance')

Contribution: engagement in a project; specific advice; sharing responsibility; criteria and progress; quality assurance.

Characteristics of feedback: focus on overall structure and on all levels of texts; focus on revision: multiple versions of the same text.

References

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Trends in European Supervision

Doctoral education in Europe has been undergoing a major transformation. This transformation has occurred in response to several challenges: the changing nature of the labour market in the globalized economy; the European Union's common agenda in research and education, which seeks to make Europe the most competitive knowledge-based economy in the world; and the intergovernmental European initiative called the Bologna Process, the aim of which is to create the European Higher Education Area by implementing reforms that will improve cooperation among European universities, raise quality, foster mobility of students and academic staff, and increase the employability of graduates.

One practice, increasingly being introduced at universities, is the use of a *contract of shared responsibilities and rights*, which is signed by the doctoral candidate, the supervisor, and the institution and includes a clearly defined research plan.

Instead of continuing to follow the traditional model of individual supervision, many universities are encouraging *multiple or team supervision*. Several models for such supervision exist.

- two or three supervisors with one of them as a principal one;
- one supervisor who is responsible for administrative and quality part of the doctoral training and one who is responsible for the research progress;
- three supervisors, e. g. University of Bradford (principal supervisor – focus on research topic; supervisor with complementary skills with respect to the main one; and pastoral supervisor who bears in mind the professional development of the candidate after getting the degree);
- one supervisor and the Scientific Board of a Faculty (providing assessment of the progress).

The continuous *professional development of supervisors* themselves is another broadly discussed way to improve supervision. Countries like the United Kingdom, Sweden, Denmark, and Finland have introduced the practice of training supervisors, and in many universities such training is a precondition for new, junior scholars.

Supervision should have a proper *recognition*:

- Some universities deduct teaching load depending on the number of candidates.
- In some countries supervisors are paid extra money (premium) for supervision.
- Being a supervisor is one of the conditions in academic promotion.
- Being a supervisor to doctoral candidates means less undergraduate teaching.
- Working with doctoral candidates is stimulating (new ideas, enthusiasm, creativity, curiosity).

Some universities in the UK introduced the annual *Award for the best supervisor*. Doctoral candidates can nominate supervisors for this award.

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Triadic Supervision

Counselor Preparation Program Virginia Polytechnic Institute and State University, US

Definition

Triadic supervision is the tutorial and mentoring relationship between a supervisor and two counselling students that involved all three members simultaneously.

A variation of triadic supervision is “individual supervision in a group”. In this model of supervision, one supervisor provides one to one supervision on a rotational basis within a group. Supervisees alternate between being the focus of the supervision and being the observer when the other supervisee is the focus of the supervision.

Model Description

This model of supervision combines elements of individual, group, and peer supervision. There are two commonly used types of triadic supervision. In the *split-focus* form, each supervisee receives approximately half of the time available during each supervision session, whereas in *single-focus* form, one supervisee (the presenting supervisee) receives the entire time available in each session and supervisees alternate roles from session to session.

Virginia Polytechnic Institute and State University Model Application

Since 2002, triadic supervision has been the primary supervision structure for the master's-level students enrolled in this university's counselor education program. Master's students are supervised by both doctoral students and faculty members, and triadic supervision is used in combination with group supervision seminars throughout the practicum experience and into the first semester of the internship. Doctoral students provide most of the triadic supervision to the master's students, and program faculty members provide group supervision. Faculty members also provide triadic supervision periodically, in an effort to better understand the dynamics of the process and to model effective supervisory skills for doctoral students.

Advantages of the Model

- support and learning opportunities provided by peers;
- presence of a third perspective, which was an asset and a source of additional information and insights; and
- multiple sources of feedback available to supervisees.

Challenges of the Model

- occasional supervisee incompatibility;
- inadequate amount of time and attention that supervisors could give to individual supervisees;
- supervisors' inability to develop a close relationship with supervisees;

- feeling uncomfortable with giving feedback to their peers;
- less flexibility to schedule supervision meetings; and
- recognizing (and respecting) the boundary between (a) providing critical feedback that is appropriate and beneficial for both supervisees and (b) withholding feedback when an issue is unique or too sensitive and when discussing it privately with a supervisee is indicated.

Suggestions for Improvement

- pairing supervisees to maximize diversity;
- incorporating individual supervision into the structure of triadic supervision;
- having faculty members (rather than doctoral students) conduct some of the supervisory sessions;
- giving supervisors more information and training related to triadic supervision; and
- making the length and the structure of the supervision' meetings more flexible.

McGill University

The 2:1 Peer Coaching Model of Supervision. Clinical Educators supervise two students simultaneously.

References

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Supervision Model 1 (“Three-pronged Supervision”)

Objectives/ Rationale

This alternative supervision model was created at the University of Bergen (Norway) and tried out with Master of Education students. Its objective was to create a richer learning environment and better supervision and learning practices.

General Aims

- To counteract the negative effects of students having to rely on just one person for supervision
- To increase the potential of group learning in the research and writing processes

Particular Aims

- To improve students’ academic writing
- To provide support and help students solve the problems they encounter in the different phases of their research
- To help students finish on time

Description

This approach consists of the combination of three supervision arenas: supervision groups, student colloquia, and individual supervision. Additional writing workshops can be provided to students during the first term (before the start of supervision groups).

Individual Supervision

- Purpose: Progress, advice, quality assurance of thesis
- Composition: 1 supervisor and 1 student
- Content: late versions of drafts; longer texts (drafts of chapters in thesis); specific problems relating to research methods, theory and writing
- Meeting schedule: Varies with stage of project; typically once a month

Student Colloquia (organized by students)

- Purpose: personal and disciplinary support
- Composition: 4-6 students
- Content: Theoretical and methodological concepts; first stage of written drafts: free writes, think texts, first drafts; personal problems and frustration; loose and informal structure of sessions.
- Meeting schedule: as determined by students (with the input from departments)

Supervision Groups

- Purpose: project progress; help with specific, common problems; inspiration
- Composition: 2-3 supervisors and their students (same as in student colloquia)
- Content: written short drafts; the work can be divided according to the structure of the program (coursework, candidacy, thesis writing)
- Meeting schedule: as determined by supervisors (with input from the department); very strictly structured with clear leadership.

Role of students

- Organize and participate in student colloquia
- Attend and participate in supervisor groups
- Regularly attend all meetings and be adequately prepared
- Give feedback to other students' texts and receive feedback on own texts

Role of supervisors

- Organize and facilitate supervision group meetings
- Provide feedback to students' texts in supervision groups and individually
- Help students solve problems that might arise during their research
- Ensure quality of students' theses

Research findings

Contributions of supervision arenas:

Student colloquia (safe haven):

- A place to share problems
- A place for emotions
- Support
- Encouragement
- Low threshold of feedback

Supervision groups (enculturation)

- Mutual engagement and participation
- Multi-voiced discussions
- Ways of thinking and arguing
- Disciplinary knowledge
- Negotiation of divergent voices
- High threshold of feedback (anxiety of sharing unfinished texts), supporting, critical

Individual supervision (quality assurance)

- Engagement in project
- Specific advice
- Sharing responsibility
- Criteria and progress
- Quality assurance
- Focus on overall structure and on all levels in text
- Revisions

The students felt that the supervision groups and colloquia took the onus off the individual supervision meeting. Findings indicate that: 1) less time was spent on individual supervision; 2) it was not critical if the chemistry between student and supervisor was not perfect; and 3) controversies were less threatening. Students were less vulnerable if the individual relationship did not function since they had two other supervision arenas.

Critical factors and implication for practice

- Motivation (value of participation in all three supervision arenas)
- Engagement in peer projects (developing mutual knowledge and interest among students)
- Training in feedback strategies
- Commitment (regular attendance and thorough preparation)
- Clear routines (strict framework for supervision groups)
- Multiple perspectives (supervisors who belong to different research traditions)
- Realistic time allocation (the use of time should be monitored and discussed; the purpose of each arena should be clearly defined; and texts for discussion carefully selected)

Progressive training in giving feedback is a prerequisite for the improvement in writing. More symmetrical, dialogic and multi-vocal relationships in the groups supplement the asymmetrical relationship in the supervisor-student dyad and enhance learning.

Motivation to use

Value for students

- Multifaceted feedback on their own texts
- Giving response to peers sharpens their own ability to self-assess
- Learning effective feedback strategies
- Having a place to share common problems and frustration in an informal collegial environment
- Decreased dependence on a single relationship with one supervisor

Value for supervisors/ faculty

- More time to focus on text quality in individual supervisory sessions
- Enriching supervisory practices and experiences for students as a recruitment strategy
- Decreasing capacity for problems with individual supervision becoming very serious

Value for university

- Developing excellence in graduate student supervision
- Developing culture of continuous improvement in supervision among faculty
- Increased competitiveness of the University in recruitment of new graduate students and faculty members

Documents Recommended

Clear defined routines of supervision groups

Guidelines for providing effective feedback

Guidelines for student colloquia

Supervision contacts

Supervision Model 2 (Supervision Panels)

Objectives/ Rationale

The objectives of this model are:

- ¾ to improve candidate's experience by providing a wider range of academic staff committed to a candidate's progress;
- ¾ to expand the feedback a candidate receives on the progress of their work;
- ¾ to increase the breadth of ideas and insight to which candidates are exposed;
- ¾ to ensure that the candidate has access to academic advice at all times, in particular in the absence of her/his main supervisor;
- ¾ to provide advice to the candidate about opportunities during or after the PhD
- ¾ to improve completion patterns by providing candidates with structured planning of their research work.

Description

Composition

PhD panels consist of at least three members of staff:

- Supervisor(s): the principal supervisor (who will be responsible for regular supervision), and, possibly, the associate supervisor (who may take over regular supervision when the principal supervisor is absent for more an extended period of time, and also read a full, final draft of the thesis before it is sent to examiners). In cases of co-supervision, both co-supervisors will form part of the panel;
- A panel chair;
- All panels will include representation of senior academic staff.

A different version of this model has the following composition:

- Supervisor panel consists of other supervisors within the same research area (if the thesis subject includes other disciplines, a member of the panel can also be chosen within the relevant discipline). The supervisor panel should consist of at least two people. The main supervisor may be a member of the supervisor panel.

Content

Panel members should have read the candidate's report prior to the meeting and discuss the candidate's work and issues flagged in the candidate's submission. The Panel should also discuss with the candidate the following:

- Research Ethics (if applicable);
- Any difficulties experienced by the candidate;
- Timeline for completion
- Upcoming milestones or hurdle requirements;
- Milestones set for the next period under review;
- Supervision
- Publications, presentations, funding opportunities, tutoring and any relevant workshops or short courses that may assist the candidate;
- Career objectives and developmental opportunities available to the candidate.

It is important that the meeting ends with at least an oral summary which reviews the progress of the student. The specific actions and any follow up meetings should be specified. If the main supervisor or the co-supervisor is a member of the supervisor panel the student must be given the opportunity to discuss the supervision without the presence of these individuals. The student must be given the possibility to discuss problems with the supervision without this fact being conveyed to the supervisor(s).

Meetings: as determined by the department, at least once per term.

Reporting requirements

The supervision panel's comments and recommendations should be clearly documented, and the Chair should record what has been discussed and what milestones have been agreed upon. Copies of these notes should be placed on the candidate's student file, and a copy should be provided to the candidate.

Role of students

- Attend panel meetings;
- Prepare progress reports for each panel meeting;
- Discuss the progress of work and possible problems with research and supervision.

Roles of panel members

- Organize and facilitate panel meetings (for panel chair);
- Read students' drafts before meetings and give feedback during meetings;
- Act on follow-up actions after meetings, if required;
- Document meeting outcomes;
- Give student an opportunity to discuss supervision without the presence of the supervisor.

Research Finding: None.

Motivation to use

Value for students

- Diverse feedback from different faculty members
- A backup should the principal supervisor be absent for any reason
- Opportunity to discuss supervision without presence of the supervisor
- Regular feedback and progress monitoring

Value for supervisors/ faculty

- Professional development opportunity for new supervisors;
- Clear and formalized process;
- Exposure to various supervision styles, experiences and expertise.

Value for university

- Possibility of involvement of external experts and providing enriching experiences for students and faculty;

- Developing formalized structure and clear processes for graduate student supervision;
- Developing excellence in graduate student supervision.

Examples

University of Western Sydney, Australia

University of Melbourne, Faculty of Arts, School of Social and Political Sciences, Australia

KTH Royal Institute of Technology, Sweden

Documents Recommended

Reporting guidelines

Panel operations guidelines

Supervision Model 3 (“Individual Supervision”)

Objectives/ Rationale

This model is the most commonly used and is preferred in many disciplines. The objectives of this model are:

- Help students with all aspects of their graduate program;
- Encourage development of professional skills;
- Developing professional networks that will have positive impact on students’ academic careers

The supervisor’s approach to their student will have an impact on how that student will approach their research, and that the academic’s approach to teaching graduate students will have an impact on how those students develop.

Description

According to research finding, this is the most preferred type of supervision and is the cornerstone of professional growth. A framework was developed to define different approaches to the individual supervision. This framework enables examination of different values, beliefs and concepts. Its underlying premise is that an experienced academic will be able to move through and to any area, and, in relation to thesis writing, will set tasks as they become appropriate.

The five approaches to individual supervision that were identified were:

- Functional
- Enculturation
- Critical thinking
- Emancipation
- Relationship

The purpose of the Functional approach is helping the student to complete to a deadline. The academic is aware of all of the procedures and timetables that need to be followed and keeps appropriate records. They agree a project plan with the student and monitor progress. They are clear about the assessment criteria that are going to be applied for examining, and can communicate them to the student. They have an ethical approach to teaching and supervision and meet the requirements of departmental and institutional codes of practice.

Role of supervisors using this approach are:

- Understanding the level of work required
- Recruitment of students
- Obtaining funding
- Induction and arranging co-supervision
- Project management
- Research ethics and following relevant codes of practice
- Record keeping
- Arranging the examination process

Role of students:

- Follow deadlines
- Develop project plan with supervisors and adhere to it
- Communicate progress to supervisors
- Follow ethics regulations

The purpose of the “Enculturation” is to help student with socialization or acculturation into the discipline, the working milieu (e.g. the academic department and the university) and the national culture. A person is “enculturated” when they are comfortable being or working at all these levels. It usually requires a long period of study and an ability to acquire tacit knowledge.

Major role of supervisors using this approach is to introduce ways for students of socialization into their discipline at the levels specified above:

- Encourage students attend conferences and workshops
- Create opportunities for students to present their work
- Create opportunities for students to engage in common activities within the discipline (joint projects, etc).

Major role of students within this approach is to find ways of socialization into their discipline

- Attend conferences and workshops
- Present their work and get acquainted with work of other researchers within their discipline
- Participate in common activities within discipline

The goal of Critical Thinking approach is to help student develop skills necessary in their approach to research. This approach has four aspects to it:

1. An understanding of different beliefs about knowledge and an ability to assess statements in relation to those beliefs;
2. An ability to define and evaluate the argument in a manner appropriate to the relevant discipline or discipline(s);
3. An ability to solve problems in a logical manner, and
4. To be able to reflect metacognitively on performance.

The major role of the supervisor using this approach is to create opportunities for students to develop their critical thinking skills when approaching their research.

Role of students is to make an effort to develop these skills with the help of their supervisor.

The goal of Emancipation approach is to let the student to find their own direction and values and to decide to apply them to their research. The role of Supervisors is to offer support and challenge at appropriate times and be careful not to impose their own agenda. Supervision meetings are characterized by the supervisor offering and seeking information and seeking the student’s opinions. Occasionally supervisor may decide to allow a student to fail at a particular task and then help the student to identify learning from that experience.

The Relationship approach to individual supervision is characterized by ‘friendship’. The academic and student will anticipate and normally avert unnecessary conflict. Problems will be solved with goodwill, and overt rationalization will not always need to be expressed for either party to do what is requested. Appropriate boundaries will be observed but the student and supervisor may introduce each other to friends and family. The goal of this approach is to develop atmosphere of mutual trust and cooperation. The major role of students and supervisors within this approach is to do all possible to avoid conflicts and to find constructive solutions if they arise.

These different approaches encompass the different aspects of supervision and are complementary, and the boundaries between them are permeable.

Research findings

Some research findings suggest that a larger number of supervision participants might inhibit the supervisee’s ability to be open. Research in clinical supervision implies that individual supervisors who demonstrated the relationship characteristics of empathy, genuineness, positive regard, and concreteness promoted these characteristics in their supervisees. Some studies also note that that learning was greatest in individual supervision.

Motivation to use

Value for students

- Consistency of provided feedback
- Developing stronger professional relationship and networks within a discipline that will benefit students’ academic careers
- Individual approach to difficulties with research

Value for supervisors/ faculty

- Enriching the most popular approach to supervision at the University
- Developing stronger professional relationship with students
- Better connection with supervised students
- Avoiding conflicting points of views on supervision

Value for the university

- Developing strong professional networks among faculty and students
- Developing culture of continuous improvement in supervision among faculty
- Developing clear processes for graduate student supervision while leaving space for individual supervision styles.

Implications for practice

This framework can be interrogated in several ways, for example: each approach can be looked at in terms of problem-solving or moving the student from dependence to independence; supervisors can look at the professional and personal tensions that each approach might cause them; the model can be used as a way of identifying different approaches to academic writing; co-supervisors can each identify their strengths and any

gaps in their overall strategy and supervisors and students can use the framework to share their expectations

Documents recommended

Supervision contracts

Supervision guidelines – program requirements.

Supervision Model 4 (“Joint Supervision” – Mixed Expert Support Teams)

Objectives/ Rationale

Joint/ group supervision models are becoming increasingly popular. Joint supervision is considered more open and transparent and allows the doctoral candidate to consult and seek advice from others in addition to her/his main supervisor. The goals of joint supervision are:

- To provide support and contribute to professional development of supervisors;
- To decrease workload by separating duties and responsibilities;
- To provide wider ranges of experiences and expertise for students;
- To provide back-up supervision for students when main supervisor is not available.

Description

Joint supervision is defined as two or more supervisors sharing responsibility for the academic support and development of a research student’s doctoral education.

Mixed expert support teams are usually made up of a mix of *subject experts* and *guidance supervisors* (although these will probably be drawn from those with relevant subject expertise). While the whole team may not always meet with a student as co-supervisors, there will be some joint meetings and there is an expectation that the team will meet, discuss and agree supervision strategy outside of supervision meetings. Sometimes tasks may be shared out and there is often *one senior supervisor* who oversees progress, documentation and review or examination arrangements. It provides a safety net for changes of supervisor (it can support, for example, where the subject expert is advising from another university).

Role of a senior supervisor

- To oversee student’s progress;
- To keep proper records and provide administrative support;
- To set up examination arrangements;
- To organize supervisory meetings with the student.

Role of subject experts

- To help student with the subject area of their research by providing feedback and giving advice.

Role of guidance supervisors

- To help students with professional development and general aspects of their program.

Role of supervisory team

- To develop proper workload allocation;
- To meet, discuss and agree supervision strategy outside of supervision meetings.

Role of students

- To attend supervisory meetings and discuss their progress and difficulties;

- To work with guidance supervisors to participate in professional development opportunities and to learn about requirements of a graduate program;
- To develop the confidence and social skills to manage group meetings.

Research findings

Joint supervision takes different forms depending on the discipline; it is more collaborative in natural sciences; and is more individual (subject experts) in social sciences. Some of the researchers argue that social science subjects are more amenable to the democratic principles of collegiality, which they see as having the potential to structure student-supervisor interactions in a more egalitarian way.

Motivation to use

Value for students

- Broader range of expertise, perspectives, world-views available to the student;
- Broader range of personalities available to the student;
- The student can tap into more resources and networks, can share needs and demands around, may be less likely to have to move in one direction (eg, of a particular supervisor's expertise);
- Thesis, being more broadly prepared, may be more likely to pass;
- Different supervisors can fill different positions of value to the student (eg, culture, gender etc);
- Easier to change supervisor in the situation of conflict.

Value for supervisors/faculty

- For supervisors' support and development, especially if new to supervision;
- Separate tasks can be allocated to different members of a team: e.g. supporting writing, supporting the 'finishing' stages, research design, and responsibility for student progression;
- Provides back-up for supervisors on leave or suffering illness;
- The supervisor develops more links with other staff on campus, extends their knowledge, may learn different skills for supervision, shares responsibility for the student.

Value for university

- It is less problematic to change supervisors if there are disagreements between a student and a supervisor;
- Developing excellence in graduate student supervision;
- Developing culture of continuous improvement in supervision among faculty;
- Increased competitiveness of the University in recruitment of new graduate students and faculty members.

Recommended Documents

Detailed outline of workload distribution among member of the supervisory team
Clearly defined expectations and duties of the students (supervisory agreement)

Example: University of Leeds, UK, University of Auckland, New Zealand.

Model 1: Using Annual Report Data to Examine Supervision Effectiveness

Objectives

The goal of this supervision evaluation model is to collect data about students' and supervisors' satisfaction with progress and supervision (including frequency of interaction).

Description

Data Source: Data from the detailed annual reports of progress by graduate students.

Data Analysis:(Quantitative)

Satisfaction and progress measures

The report structure is designed to monitor progress by:

- Identifying degree of progress in such areas as literature review, proposal development and ethics and safety approvals, independent problem solving, data collection/creative activity, analysis and interpretation, drafting chapters, writing papers for publication and presentation
- Identifying whether or not expectations for progress were met (and maintained over time)
- Matching the above responses from the student with a separate set of responses from the supervisor to the same questions

Interaction is determined by

- Identifying frequency of interaction
- Effectiveness of interaction (i.e., supervisor provides useful assistance)
- Productiveness of interaction (i.e., there is progress as a result)

Planning is indicated by

- Asking students to present clearly articulated goals that are consistent with progress, interaction, and estimated completion date
- Identifying mismatch between student goals and supervisor expectations
- Identifying slippage in goals and progress over time

The progress measure asks students and supervisors to assess the amount of progress overall for the year (compared against the previous year's stated expectations) on four response categories (excellent, good, moderate, little or none).

Data should be considered in the context of previous years.

Advantages

- Data is taken from the existing document (no need to introduce new procedures)
- Responses are elicited from both supervisors and students
- Flexibility of the annual report (new items specific for the supervision can be added)

Limitations

- Self-report from both students and supervisors (possible inconsistency between what is reported and what is done)

- Supervisors and students can be aware of each other comments and may even work together to complete the report

Holbrook, Allyson. "Using research candidate Annual Report data to examine supervision effectiveness," *Quality in postgraduate research: Knowledge creation in testing times*. Ed. M. Kiley & G. Mullins. Canberra: CEDAM, The Australian National University, 2006. 83-98.

Model 2: Combination of three evaluation tools (Questionnaires and Rating Scales)

Objectives

The goal of this evaluation model is to facilitate regular and ongoing feedback between students and supervisors. It is argued that use of a single feedback procedure is inadequate, and a suite of strategies promoting flexibility is required. This model was developed on the premise that the giving and receiving of regular and ongoing feedback between students and supervisors plays a crucial role in addressing previously identified student and supervisor concerns.

Description

Data Source:

Special guidelines have been developed for discussion and reflection between student and supervisor.

Three evaluations tools have been developed for the postgraduate supervision process.

- “Role Perceptions Rating Scale”;
- “Student Evaluation of Postgraduate Supervision”;
- “Student Profile Proforma”

All these tools are compiled into a booklet titled “*Tracking postgraduate supervision.*”

Data Analysis:

“Role Perceptions Rating Scale”

- a series of pairs of statements (each statement expresses a standpoint students or supervisors may take);
- recommended to use at regular intervals (every 6 months);
- scale from 1 to 5 for each statement;
- important to emphasize that there is no correct or incorrect response;
- the rating scale is designed to assist students and supervisors to share, discuss and reach agreement about fundamental expectations and responsibilities.

“Student Profile Proforma”

- helps students to define more clearly how they are progressing, what they expect from themselves and from their supervisors; and how well their supervisor is meeting their needs;
- series of statements relating to student expertise and supervisor support, guidance and interpersonal communication;
- scale 1-10 for each statement;
- recommended at regular intervals (every 6 months);
- student and supervisor should collaboratively set goals using the statements provided and then independently assess how each is progressing towards these goals.

Student Evaluation of Postgraduate Supervision

- designed to allow students an opportunity to provide feedback to their supervisors about their experiences of the supervision process;

- series of questions (administrative matters and work environment; the supervisory process).

Principles of implementation

- The strategies are not intended to be prescriptive;
- Students and supervisors are encouraged to choose, adapt, delete or add elements to suit their particular needs;
- It is essential that the strategies are used in cyclical ongoing manner;
- The strategies should be used to support reflective practices rather than merely documenting performance;
- Completed questionnaires should be kept in student's file and revisited at 6 monthly intervals; and
- The strategies can be used formally with negotiations resulting in written agreements or informally as prompts for discussion.

Advantages

- Regular and ongoing feedback between students and supervisors
- Strategies support the development and maintenance of quality student-supervisor relationships; with the potential to increase degree completion rates
- Results of the pilot study suggest that the strategies contribute to improving the learning environment through the provision of regular feedback between students and supervisors and the systematic review of the progress of students' work, the facilitation of agreement over fundamental expectations and responsibilities, and the provision of a mechanism for handling conflict or difficulties, before they arise.
- These strategies encourage the development of students' negotiation, conflict resolution, and goal setting skills and promote students' learning autonomy.
- Strategies were developed in consultation with students and supervisors across disciplines.

Limitations

- Multiple questionnaires may discourage students and supervisors to use this model as it might be seen as increased workload

Aspland, T, H. Edwards, J. O'Leary, and Y. Ryan. "Tracking New Directions in the Evaluation of Postgraduate Supervision." *Innovative Higher Education* 24.2 (1999): 127-147.

***EXAMPLES OF QUESTIONNAIRES WILL BE DISTRIBUTED
AT THE MEETING***

Model 3: Online Research Students' Feedback Survey

Objectives

The goals of this model are:

- to elicit sustained reflective commentary from doctoral students in an anonymous format;
- to provide individual supervisors with useful information for personal feedback and improvement, and also provide evidence of the quality of supervision for institutional performance and recognition processes such as promotion and awards.

Description

Survey trials: After the first version of this survey, the participants were debriefed and the second version of the survey was developed. It was taken to the university wider research supervisor discussion forum for feedback which results in the third version of the survey. The third version was taken to the Graduate School board and faculty research committee. This version is currently available for further trial.

Data Collection:

- open-ended questions in which students are invited to reflect on various aspects of their doctoral program;
- 4 broad questions, each followed by a series of dot points to orient students on aspects that they might consider;
- a section for general comments;
- 2 quantitative questions asking students to rate, on a 5-point scale, their satisfaction with the supervision and with their experiences as a research student;
- students are also invited to comment on the questionnaire and its use;
- minimum 5 students of a single supervisor to protect students' anonymity;
- self-identification by students was discouraged;
- the trial survey was administered online.

University's quality unit set up individual surveys and sent each trial participant the URL; URL was sent to current research students with more than one year's experience with the supervisors and recently graduated students.

Data Analysis (Qualitative):

Results were automatically compiled by the survey tool and were not accessible to the supervisors until staff from the planning unit had closed off the survey; compiled results were sent to supervisors as PDF files.

Advantages

- Potential for providing supervisors with valuable formative feedback and insight into students' experiences of supervision
- After trial debriefing, the students appeared to appreciate the opportunity to give feedback in ways other than the six-monthly progress reports that are seen and signed by their supervisors.

Limitations

- No centralized process for emailing current students and recent graduates of a particular supervisor; only supervisor had access to reliable e-mail addresses – perception that the survey can be open to bias (for University of Technology in Sydney)
- Survey is a work in progress and trials are continuing at University of Technology in Sydney, Australia

Lee, A., J. McKenzie. “Evaluating Doctoral Supervision: Qualitative Steps and Emerging Issues”. *Quality in postgraduate research: Research education in the new global environment – Conference Proceedings*. Ed. M. Kiley & G. Mullins. Canberra: CEDAM, ANU, 2008. 61-73.

Model 4: Student Perceptions of Research Supervision (SPORS)

Objectives

- to improve communication and bring about a better match between the students' needs and the supervisors' style at each stage of the supervision process;
- to address the lack of a formal, structured approach to supervision feedback and to provide a mechanism for facilitating a dialogue between students and their supervisors.

Description

Data Source/Data Collection:

- students and supervisors independently fill in parallel questionnaires in which they indicate how they rate 25 items in terms of priority;
- neither student nor supervisor is asked to judge the quality of provision of any of these items;
- participation is voluntary for both students and supervisors;
- recommended for use early in a research candidature and then on an ongoing basis;
- supervisors indicate their current supervision style and compare this to their student's preferred supervision style.

SPORS tools: supervisor questionnaire, student questionnaire, instructions and information, discussion paper

Data Analysis:

Copies of the completed questionnaires are exchanged between supervisors and their students with a time set aside for discussion of the responses; it is suggested that discussion centres on substantial rating differences.

Initial trial of SPORS was analysed in four different ways:

- comparison of the relative priority assigned to individual items
- identification of items with significant differences between supervisors' perceptions of their current supervision style and students' perceptions of the importance of the style dimension to the success of their research
- correlations between student and supervisor responses to each item
- correlations of student responses with that of their supervisor to the range of items

Results if the analysis of the initial trial: Differences in perceptions of current supervisor style versus student preferred style (University of Western Australia)

Advantages

- designed to help students and supervisors have better understanding of each other's expectations;
- informal, is used as means of facilitating dialogue, not for evaluation of supervisors' performance;
- voluntary for both students and supervisors.

Limitations

- not meant as an evaluation tool;
- not anonymous which might influence students' response.

FIRST 2001 (for Improving Research Supervision and Training). Web.
www.first.edu.au. 15 June, 2010.

***EXAMPLES OF QUESTIONNAIRES WILL BE DISTRIBUTED
AT THE MEETING***

Model 5: Peer Review

Objectives

- to guarantee higher level of anonymity and privacy to the students which is hard with questionnaires as numbers of students of a particular supervisor are usually small;
- to provide supervisors with new critical insights in the teaching which can't be obtained through other sources.

Three key principles:

- Voluntary
- Collaborative
- Done for the purposes of professional learning.

Description

Peer review is a wide range of evaluative practices characterised by being undertaken with colleagues. Peer review involves collaborative partners working together to learn about and improve their teaching practice, not to make summative judgements about one another.

Each partner will have to be clear on:

- The aims and focus of the review process;
- The way in which it will be conducted and the roles each partner will play (briefing session with each reviewer will be useful).

This evaluation method cannot be a substitute for other forms of evaluation.

Data Collection Process:

- Selecting a peer who can evaluate the currency and appropriateness of the disciplinary content of the supervision, perhaps, by examining student's written material and supervisor's feedback, observing discussions with students, discussing aims and supervision practices with the supervisor;
- Selecting a person (preferably different from the one above who has special skills in facilitating discussion; both supervisor and students must have confidence in this person who can be outside of the discipline and might be closer to the students than the supervisor. The "facilitator" is asked to meet with the students individually or as a group and hold a structured discussion on the quality of their supervision.
- Other reviewers might be needed for other special aspects of supervision especially if a supervisor is responsible for a variety of student projects.
- Each of the peers signs a peer review form

It is important to meet with the focus group facilitator to decide on the core questions which will be put to the students; issues of confidentiality should be clarified.

Data Analysis:

The facilitator prepares a report for the supervisor which is seen first by the students so they can be assured that the report does not contain material which may cause unintentional discomfort to them or to the supervisor. A written statement from each of your peers is always valuable and will help to complete the process. A form is signed by each reviewer to establish that they were involved and the process which was used. While indirect, the process does assist in achieving the delicate balance between using peer evaluation for summative purposes and for those valuable formative opportunities. Each report should be quite brief, professional in the criticism given, and constructive in its suggestions for improvement. It is helpful to have a de-briefing session with each of the reviewers after they have completed their reports.

Advantages

- written reports that can be referred to
- experienced facilitator encourages feedback from students
- oral feedback from students is double-checked with them to make sure that nothing is included that they are not comfortable with

Limitations

- students might be uncomfortable giving feedback to a faculty member – anonymity concerns
- supervisors might be uncomfortable having their colleague evaluate their performance
- peer selection can be perceived as biased

Shephard, Kerry. Evaluating the impact of postgraduate supervision on student learning. (Working document). *Higher Education Development Centre*, Otago University, New Zealand. Web. <http://hedc.otago.ac.nz/hedc/asd/Digital-Resources-for-your-Teaching/mainParagraphs/013/document/kerry's%20online%20resource%20draft.doc>. 14 June, 2010.

Sample Supervision Agreement

between

_____ (Doctoral Candidate),

_____ (Primary Supervisor),

_____ (Second Supervisor),

_____ (Speaker).

In the interests of constructive and productive cooperation during the dissertation project, [Doctoral Candidate], [Primary Supervisor] and [Speaker] agree to the following supervision agreement. The basis for the agreement is the [Charter] of the [Doctoral Program] dated [Date] and the guidelines of Humboldt Graduate School of March 20th, 2007.

[Mr/Ms] has been a(n) [Member/Associate Member] in [Doctoral Program] since [Date].

Dissertation Project

1. [Doctoral Candidate] will produce a dissertation with the working title [.....] at the [Doctoral Program]. The dissertation will be written in [English/German]. The project has been described in more detail in the exposé of [Date] and has been accepted by [Supervisor], [Doctoral Program] and the doctoral committee of the [Department] on [Date].
2. It is agreed that the dissertation is to be completed within the following time frame: From [Semester] to [Semester]. This period may be extended with appropriate and documented cause - for example, unexpected family obligations.
3. The work and time plans, dated [Date], and provided in detail as an attachment, have been agreed to by the [Doctoral Candidate] and [Supervisor].
4. This agreement and its attachments will be reviewed regularly - [frequency, for example yearly] - by the supervisor and doctoral candidates and modified if necessary.
5. [Supervisor] commits him/herself to ensuring that no more than six months pass between the completion of the dissertation and the dissertation defense.

Supervision of the Dissertation

6. [Doctoral Candidate] and [one or both supervisors] agree to discuss progress towards the completion of the dissertation [Frequency, at least once per semester], using the exposé, intermediate reports and chapters as a basis for discussion. [Doctoral Candidate] will produce minutes of these meetings which are to be signed by [Supervisor] and provided to the director of the doctoral program.
7. [Supervisor] commits him/herself to regularly monitoring preliminary results and the regular progression of the dissertation, as well as to providing comprehensive commentary and feedback, orally and/or in writing, on the dissertation chapters and texts at these meetings.
8. In addition to the regular meetings specified in Paragraph 6, [Doctoral Candidate] will make a regular presentation, within the framework of the doctoral program, on the current state of the dissertation. He or she will also receive feedback regarding the progress of the dissertation as well as suggestions for improvement.

Training Program

9. Both parties agree that [Doctoral Candidate] will participate in training courses and events as part of the general and subject-matter qualification program. The content and extent of these courses are to be specified in the working plan.
10. Throughout the course of the doctoral program, [Doctoral Candidate] will make regular independent scientific contributions [for example, participating in a conference, publishing articles in scientific journals, organizing a conference, internships, teaching activities, etc]. These activities and the general time frames in which they must take place will be specified in the working plan.
11. [Doctoral Candidate] agrees to spend a portion of the doctoral period outside of Germany (for example as a guest researcher).
12. [Supervisor] commits him/herself to offering regular instruction (seminars and colloquia) on methodologies and subject-matter within the framework of the doctoral program.

Procedure in the Event of Conflicts

13. Membership in the [Doctoral Program] is contingent upon compliance with this agreement. In the event of a conflict, the parties involved must first contact the person responsible at the [Doctoral Program] [Speaker, Director of the Doctoral Program, Ombudsman]. In the event that the supervision relationship is dissolved, [Doctoral Program] will work to establish an alternative supervisory agreement which is appropriate to the subject matter of the dissertation. In the event that the dissertation is abandoned, written explanations will be provided to [Doctoral Program] by [Doctoral Candidate] and [Supervisors].
14. [Doctoral Candidate] and [Supervisor] agree to comply with the rules of good scientific practice as stated in the „Satzung der Humboldt-Universität zu Berlin zur Sicherung guter wissenschaftlicher Praxis und über den Umgang mit Vorwürfen wissenschaftlichen Fehlverhaltens“ (Charter of Humboldt-Universität zu Berlin for the Assurance of Good Scientific Practice and Regarding Accusations of Scientific Impropriety) from July 2, 2002. This includes consultation on the part of [Doctoral Candidate] with [Primary Supervisor] or other trusted persons in situations or instances in which he/she has doubts or concerns. For [Supervisors] this explicitly means the obligation to respect and acknowledge the copyright rights and obligations related to texts and knowledge developed by [Doctoral Candidate].

Additional Agreements

All participants agree that data of a non-personal nature related to the project, which as well as the working plans and meeting minutes may be given to [Director of the Doctoral Program] for statistical purposes and evaluation of doctoral supervision at [Doctoral Program] and the Humboldt Graduate School.

Sign and Date

_____ (Date, Doctoral Candidate),
_____ (Date, Primary Supervisor),
_____ (Date, Secondary Supervisor),
_____ (Date, Speaker)



GRADUATE STUDENT - SUPERVISOR AGREEMENT¹

Student

Name :	Email :
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Course

Degree :	Start Date:
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Title of Project

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Supervisor(s)

Name :	Email :
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Department/College

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Student's Advisory Committee Members

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Student Funding

Source:
Amount:
Duration :

This agreement is to be regarded as an aid to planning and completing the project. It is not intended to be legally binding. The Supervisor and the Student are free to change, omit, or add items to suit their joint purposes.

If the research question or methods change substantially, or issues arise which require that the agreed dates be altered, modify the contract, **highlighting the changes**.

Copies should be provided to both signatories.

¹ Modified from: Hopkins, W.G. (2001). A research agreement for students in exercise and sport science. Sport Science, 5, available at: <http://sportsci.org/>.

What **question(s)** does the project address?

--

1. Describe the **design** of the study, the **subjects**, **sample size**, and the **independent** and **dependent variables**.
For multiple projects, duplicate this panel:

Design :
Subjects :
Sample size :
Independent Variables :
Dependent Variables :

2. Who is giving **statistical advice** on the design and analysis?

--

3. List any **difficult, invasive, or time-consuming measures** that require another person's help. Who is helping, and what is their status on any publication (co-authorship or acknowledgement)?

Measures :
Person(s) :
Publication Status :

4. Describe any **pilot work completed** or needed to be completed to establish the feasibility of the project, including student training (animal care; statistics including commercial software such as SPSS, etc.).

--

5. What is the supervisor's **initial** intellectual contribution to this research project?

--

6. What is the student's **initial** intellectual contribution to this research project?

--

7. Are there any pre-existing contracts that impact on the student's ability to claim **Intellectual Property rights** or that may delay publication?

Supervisor and student should discuss IP rights and append any written agreement to this document.

--

8. What is the **approximate cost** of the research project not including the student's stipend? Where are the funds coming from?

If the student is expected to contribute to the cost of the project this must be made clear at the outset.

Cost :	Funding source(s) :
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9. If ethics approval is required, who will write the first draft of the application? What is the timeline for submission?

Who :	Timeline :
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10. Indicate **who is responsible** for each of the following issues.

Securing assistance of others (e.g. technician, statistician) :

Certification of student (e.g. for lab safety procedures) :

Calibration and maintenance of equipment :

Agreements or contracts for access to outside equipment/facilities :

Intellectual property rights for collaborative work with other institutions :

Issue :	Responsibility :
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11. If human subjects are involved, who will **provide feedback to subjects** when the project is finished?

--

12. What will be the **role, if any, of the supervisor in obtaining and analyzing the data?**

Examples: active assistance with whatever; training of other personnel; guidance with analysis only.

--

13. How many **hours per week** will the student spend on the project generally (when gathering data and when writing up)?

Fall Term:
Winter Term ::
Spring/Summer Term:

14. How many **hours per week of additional, formal commitments** (coursework, marking, demonstrating, teaching, outside work) does the student have?

Fall Term: Winter
Term ::
Spring/Summer Term:

15. When will the student table a **written proposal** and give a **seminar** on the proposal?

Written proposal :	Seminar :
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16. How often or when will the student have **regular meetings** with the supervisor and supervisory committee, and who will keep and circulate minutes of the meetings?

Meetings with supervisor :
Meetings with committee :
Minutes :

17. Who is to take responsibility to **arrange meetings**?

--

18. If **shared equipment or facilities** must be used, who is responsible for booking the equipment or otherwise ensuring it will be available?

List Equipment/Facility :

Booked by:

19. Which **seminars, colloquia and journal clubs/research teams** is the student expected to attend?

20. What is the approximate date for completion of lab/field work/collection of data?

21. What is the approximate date for completion of data analysis?

22. Indicate the approximate dates of submission of the first draft of the thesis (could be subdivided by section of thesis).

23. How long at most will the supervisor take to review and return each draft?

of drafts :

Turn-around time :

24. Will the student write up the project **for journal publication(s)** before extending it into a thesis?

25. If the data are sufficient to **submit for publication**, who will write the first draft of the manuscript, and what will be the order of the authors?

Write first draft :

Order of authors :

26. What is the model for the **form of the thesis** (e.g., traditional chapters, collection of manuscripts with Introduction and Conclusion), **style of the thesis** (styles for headings, references, tables, and figures; e.g., APA, a specific journal, a past thesis), and will it be submitted in paper or electronic form?

Form :

Style :

Paper or Electronic :

27. If the student is **dissatisfied with supervision** and has been unable to resolve it with the supervisor, who will the student consult?

I agree, to the best of my ability, to act in accordance with the above agreement.

Student: **Date:**

Supervisor(s): **Date:**