

Supervision quality at the
Graduate School in Geography and Earth System Science
University of Zurich

December 2017, final version

Hans Sonneveld

Amsterdam 20-12-2017

J.F.M. Sonneveld

Executive Summary: Supervision quality at the Zürich Graduate School in Geography	7
1. Purpose and method	7
2. Response rate	7
3. Characteristics of the respondents	7
4. Main questionnaire subjects	8
5. Most important results.....	8
5.1 Expected time to degree	8
5.2 Teaching	8
5.3 Composition of supervision committee	8
5.4 Frequency of meetings with supervision committee	8
5.5 Correspondence between members of supervision team (day-to-day-supervision)	9
5.6 Supervision agreement.....	9
5.7 Supervision – overall perspective.....	9
5.8 What do the candidates appreciate in the primary supervision?	10
5.9 What do the candidates miss?	10
5.10 Fieldwork	10
6. PhD perspective on supervision components.....	10
6.1 Highest scores	10
6.2 Lowest scores	10
6.3 Average supervision quality scores and the importance attached to the quality	11
7. Most important things learned in the research project so far.....	11
1. Introduction.....	12
1.0 Preamble	12
1.1 Reasons for the evaluation.....	12
1.2. Sound supervision of PhD candidates and optimal organizational context.....	13
a. Substantive and topical expertise	13
b. Research expertise	13
c. Interpersonal relationship	14
d. Process management	14
e. Didactic qualities	14

f. Integration and socialization of the candidate	15
g. Consensus between supervisors	15
h. Optimal organization of the PhD process and institutional responsibilities.....	15
2. Method	16
2.1. The questionnaire	16
2.2. Data collection.....	17
3. The respondents.....	18
4. Working conditions and perspective on timely completion.	20
4.1. Intro	20
4.2. Fieldwork and conferences	20
4.3. Expected time to degree and funding.....	20
4.4. Teaching	21
5. Organization of supervision.....	22
The composition of the supervision committee	22
Frequency of meetings with the PhD committee	22
Correspondence between the supervisors	22
Information and supervision agreement.....	23
Composition of the supervision committee.....	23
Correspondence between PhDs' plans and committee expectations	24
6. Overall supervision quality	25
6.1 Supervision: an overall perspective	25
6.2 What the candidates appreciate	25
6.3 The frequency of meetings with the primary supervisor.....	26
6.4 Important things the candidates miss in the supervision	26
6.5 The unhappy ones: trying to explain the dissatisfaction with the primary supervisor.....	26
6.6 The most praiseful candidates	28
7. PhD perspective on six supervision components.....	29
7.1 Overture: Supervision quality scores in relation to importance attached to the quality	29
7.2 Process management	30

7.3 Content knowledge, expertise	31
7.4 Research expertise	31
7.5 Interpersonal relationship.....	31
7.6 Didactic.....	32
7.7 Socialization, supporting contacts with peers.....	33
7.8 Importance of supervision quality compared with quality judgment, revisited.....	33
8. The harvest – what we learned in the PhD trajectory	36
9. Conclusions.....	37
Healthy	37
Food for thought	37
Puzzling.....	38
Concluding note	38
10. Follow up	39
Introduction.....	39
1. The unhappy ones and moments of dissatisfaction.....	39
2. Delay and progress.....	40
3. A weak spot: project management	40
4. Not discussing important issues.....	41
5. Policy suggestions.....	41
5.1. Facilitating the landing of new PhD candidates and ways to discuss inconveniences.....	41
5.2. Making better use of the Supervision Agreement.	42
5.3. The introduction of stronger progress monitoring at the end of the second year.....	42
5.4. The introduction “How to manage your supervisor” in the Project Management Course. ..	43
5.5. Broaden the agenda of the yearly retreat: possibilities for peer support.	43
5.6. Fortify the infrastructure of the graduate school.	43
Acknowledgements	44
Sources	45
Appendix 1. The Questionnaire.....	46

Appendix 2. Evaluation of supervision qualities and their importance	51
--	----

Executive Summary:

Supervision quality at the Zürich Graduate School in Geography

1. Purpose and method

The purpose of this evaluation study is to map the quality of the supervision of PhD candidates at the Zürich Graduate School in Geography, as experienced by the candidates.

Based on interviews with PhD candidates and a draft of a questionnaire from their side, interviews with the management of the Zürich Graduate School in Geography, research literature and existing questionnaires, a questionnaire has been developed that was sent to all the PhD candidates.

2. Response rate

160 PhD candidates have been invited (via the graduate school mailing list) to fill in the on-line questionnaire, including a large number of PhD students that already finished their thesis (probably none of those filled in the survey). 58 have filled the questionnaire. The response rate is 36.2%, though of currently active PhDs the response rate is well over 50%.

3. Characteristics of the respondents

Year of PhD trajectory (n=58)

1 year	3.4%	5 year	12.1%
2 year	25.9%	6 year	3.4%
3 year	29.3%	6+ year	3.4%
4 year	22.4%		

Position in organisation (n=58)

Physical geography	30.5%
Remote sensing / Geographic information science	32.2%
Human geography	37.3%

Gender (n=58)

Male: 39.7% Female: 56.9% Other: 3.4%

Nationality (n=58)

Swiss: 34.5% Non-swiss: 65.5%

Origin of research proposal (n=58)

Project defined in a research proposal which I was not involved in writing	50%
Project defined through discussions between me and my supervisor / committee	36.2%
Project defined by me alone	13.8%

4. Main questionnaire subjects

On the basis of research literature and our earlier evaluation studies, we have identified six overarching supervision qualities a supervisor has to meet:

1. Subject knowledge (having detailed knowledge of the candidate's topic).
2. Research expertise (being able to guide the candidate through the research trajectory).
3. Building the interpersonal relationship.
4. Caring for the process management.
5. Didactic qualities.
6. Caring for the integration and socialization of the candidate, including the post-PhD labor market.

The qualities are not sharply separated from each other and do overlap partially. They meet in the feedback the supervisor is giving his or her candidate. Besides, the questionnaire focusses on:

7. Functioning of the supervision committee (next to the supervision team taking care of the day-to-day supervision).
8. Funding of the PhD trajectory.
9. The teaching by the candidates.
10. Delay and perspective on timely completion of the dissertation.
11. The position of the fieldwork in the PhD trajectory.
12. The output of the PhD process – what did the candidates learn.

5. Most important results

5.1 Expected time to degree

49.1% of the respondents (n=57) don't feel that the original time-frame for their PhD trajectory will be sufficient to finish it. Nevertheless, 84.2% are of the opinion that their progress is "good – excellent" (24.6%) or "sufficient" (59.6%).

5.2 Teaching

A timely completion of a PhD trajectory is also dependent on activities other than the research project itself. One of the most time-consuming elements can be the teaching in Master or Bachelor programs. Many of the respondents are teaching regularly (76.3%, n=59). And many of them do like it (89.5%, n=57). Overall, 86.4% (n=59) of the respondents do feel alright with their teaching.

5.3 Composition of supervision committee

46.6% of the respondents confirm that their supervision is split between a nominal committee head (professor with promotion right) and a day-to-day supervisor, possibly without promotion right. 53.4% inform us that this is not the case. 90% of the respondents don't feel that the situation that the day-to-day supervisor is not the chair of the committee (and thus possibly having no promotion rights) is problematic. Also the day-to-day supervisor being the committee chair is not seen as problematic by a huge majority of the respondents (83.9%).

5.4 Frequency of meetings with supervision committee

58 respondents gave information about the frequency of the meetings of the entire committee. A majority of them (65.5%) is meeting their committee once every year. 69.6% do assess this just right as it is. 28.6% answer "Not often enough".

5.5 Correspondence between members of supervision team (day-to-day-supervision)

Considerable disagreements between staff members involved in the supervision of a PhD candidate are almost absent.

5.6 Supervision agreement

- ✓ 77.6 % of the respondents (n=58) are of the opinion that they are well-informed about all formal requirements for the completion of the PhD.
- ✓ The supervision agreement is an important building block in this respect. 93.1% of the respondents have a signed supervision agreement.
- ✓ This agreement lays the foundation for the regular meetings a candidate is supposed to have with the supervision committee. 86.4% of the respondents document the outcomes of the committee meetings. 62% do use the template as developed by the graduate school. 38% use an equivalent, drafted by the candidate him or herself or another version.
- ✓ Asked with whom they discuss the agreement, only 43.8% mention their primary supervisor.
- ✓ 81.4% of the respondents confirm that the agreement is discussed regularly (for instance at an annual meeting), but only 45.7% state that the milestones agreed upon in the meeting are written down and confirmed by signature.

5.7 Supervision – overall perspective

Besides evaluating specific aspects of the supervision, we invited the PhD candidates to rate the quality of the supervision in a more summarizing way, first as regards the quality of the primary/daily supervisor, next as to the quality of all supervisors together. We used a scale of 1 to 10.

Quality of primary supervisor and of all supervisors together

	Primary supervisor (n=57)	All supervisors together (n=44)
1 Very poor	0 %	0 %
2 Poor	0 %	0 %
3 Very insufficient	0 %	2.3 %
4 Insufficient	3.5 %	6.8 %
5 Weak	10.5 %	9.1 %
6 Sufficient	10.5 %	18.2 %
7 More than sufficient	8.8 %	6.8 %
8 Good	26.3 %	29.5 %
9 Very good	22.8 %	20.5 %
10 Excellent	17.5 %	6.8 %

The primary supervisors score on average a 7.8. Team wise, the supervisors are getting a 7.2.¹

We dare to conclude that the primary supervisors are performing well at the Zürich Graduate School of Geography. As a team, the supervisors get a lower score. Nevertheless, they too score a “more than sufficient”.

¹ On behalf of a comparative perspective on this result, we can look at the data of two earlier studies among Dutch PhD candidates where the same kind of quality scale has been used. The PhD candidates of a local graduate community at Utrecht University gave their supervisors an average score of 7.6 (Research Institute of History and Culture, 2008). In an evaluation of a much broader scope (covering all the graduate schools), hundreds of PhD candidates at the highly ranked Utrecht University scored the supervision by the primary supervisor with an average of 7.4.

5.8 What do the candidates appreciate in the primary supervision?

We have specifications from 42 respondents:

- Interpersonal qualities (26x), and connected to this category.....
- Support (20x)
- Availability (15x)
- Substantive value of the supervision (14x), meaning content knowledge and support
- Supporting Independence (12x)
- Feedback quality (9x)
- Planning qualities (5x)

5.9 What do the candidates miss?

42 candidates answer this question. They mention: *Expertise (12x), Timing of the project, structuration (9x), Stimulation, enthusiasm, appreciation, support, supervision (7x), Availability (3x), Feedback quality (3x), Preparation of post-PhD life (3x).*

5.10 Fieldwork

- ✓ 64.9% of the respondents are doing fieldwork. For 92% of them the fieldwork is seldom or never in conflict with other activities that require their presence at the university.
- ✓ 37 respondents give information about areas of the fieldwork they feel not (yet) adequately prepared for. 8 mention ethical aspects, 10 the safety of the fieldwork and 5 aspects of technical know-how.
- ✓ 51.4 % of the respondents inform us that agreements concerning a budget for the fieldwork are made before each fieldwork period. For 32.4% this is not the case, and 16.2% have independent funding.

6. PhD perspective on supervision components

6.1 Highest scores

Top ten of qualities receiving highest scores (at least 80% of respondents [fully] agree with the presence of the quality on the side of the primary supervisor).

- | | |
|---|---------------------|
| ➤ ... has a trust in my ability. | 89.5% [fully] agree |
| ➤ ... shows respect for me as an individual. | 89.5 |
| ➤ ... does his/her best to ensure I have the essential facilities for my work | 86.2 |
| ➤ ... responds timely when I have a question or send in my work. | 82.8 |
| ➤ ... allows me to choose my own direction | 82.7 |
| ➤ ... is available when I need him/her. | 82.5 |
| ➤ ... is someone I can rely on. | 84.2 |
| ➤ ... keeps his/her appointments. | 84.2 |
| ➤ ... carefully read the drafts of my texts. | 81.0 |

6.2 Lowest scores

Top eight of qualities receiving lowest scores (at least 25% of respondents [fully] disagree with the presence of the quality on the primary supervisor's side)

- | | |
|---|-------------------------|
| ➤ ... helps me making plans for my near future (after dissertation). | 41.4 % [fully] disagree |
| ➤ ... provides sufficient information on graduate school guidelines and routines. | 41.4 |
| ➤ ... regularly monitors my progress in regard of the deadlines. | 31% |
| ➤ ... guided me in my search for relevant literature. | 29.3 |
| ➤ ... discussed with me each other's' expectations. | 29.3 |

- ... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own. 28.1
- ... is a source of new ideas for my research. 27.6
- ... structures discussions clearly. 27.6

If we bundle the qualities into 6 families, we get the following results

Average "Process management"	2,6	49.6% (fully) agree with the presence of this quality
Average "Content knowledge, expertise"	2,3	61% (fully) agree with the presence of this quality
Average "Research expertise"	2,1	66.7% (fully) agree with the presence of this quality
Average "Interpersonal relationship"	1,6	84.7% (fully) agree with the presence of this quality
Average "Didactic"	2,4	57.7% (fully) agree with the presence of this quality
Average "Socialization"	2,5	56.8% (fully) agree with the presence of this quality

In an umbrella conclusion, we can state that because of the excellent interpersonal relationships there is a fertile ground for working on those aspects of the supervision deserving extra attention, especially the process management side of the supervision.

There is one big note to the positive conclusions. Even when an average score is (very) positive, a minority of candidates might feel very unhappy with a specific aspect of the supervision. The central question is whether they are in contact with other members of the Graduate School community, for example the director, the coordinator or an ombudsperson, to brainstorm about possibilities to solve the issue. Noticing a positive average score, always needs to be combined with analysing how many candidates give a low score. The question is: are we in contact with them?

6.3 Average supervision quality scores and the importance attached to the quality

1. Apart from the provision of graduate school information, no supervision quality scores in the range of 'neutral – (full) disagreement'.
2. The discussion of each other's expectations is an urgent agenda item.
3. The discussion of plans for the future (upon completion of the dissertation) deserves more attention.
4. A weak spot in the relationship between supervisor and PhD candidate is the focus on the planning of the project (monitoring, advising on planning, intervening, instructing). One of the most efficient ways to make a doctoral project fail is a neglect of its planning and an underestimation of the dangers of delay. A considerable number of PhD candidates are of the opinion that supervisors may be more outspoken in steering the project of their candidate and in emphasizing the importance of the planning.

7. Most important things learned in the research project so far

Most often are mentioned by 44 respondents:

- Communication skills (11x)
- Independence & autonomy (15x)
- Managing supervisors (5x)
- Networking (5x)
- Organising (22x)
- Personal aspects of a PhD trajectory & personal growth (20x)
- Growth in knowledge and skills (22x)
- Supervising students

1. Introduction

1.0 Preamble

A strong Graduate School distinguishes itself by:

- A high completion rate of the PhD program.
- An average time to degree exceeding minimally the original time-frame set.
- Thorough and open discussion of the dissertation quality the graduate school community is aiming for.
- A regular consultation of the PhD candidates concerning the doctoral working conditions and the supervision quality.
- A regular consultation of the supervisors as regards the problems they meet in the supervision.

This report deals with the evaluation by the PhD candidates of the Zürich Graduate School in Geography of the doctoral working conditions, with a focus on the supervision quality.

1.1 Reasons for the evaluation

Training and research institutes have a direct interest in ensuring that PhD candidates finish their research trajectory successfully and without delay. Research shows that the quality of supervision plays a crucial role in the successful completion of master thesis and dissertations (Armstrong, 2004; Hockey, 1991; Paglis, Green, & Bauer, 2006; Seagram, Gould, & Pyke, 1998). Other factors that influence the return of doctoral projects are: the quality of the PhD student, discipline and type of research, social isolation, personal circumstances, psychological factors such as lack of trust or perfectionism and problems associated with the work, such as writing problems or methodological difficulties (Ballantyne, 2001; Hockey, 1991; McCormack, 2005; Sinclair, 2004). The relatively large transition from student to PhD candidate can also be a problem (Berger & Jonge, 2005; Hockey, 1991; Johnston & Broda, 1996; Wisker, 2003). This transition is characterized by greater freedom, independence and responsibility and less structure and peer group formation. A greater appeal is made to planning skills, self-discipline and the ability to motivate yourself. Nevertheless, in all these investigations on causes of failure and delay in doctoral programs, quality of supervision is repeatedly referred to as a central factor. Berger and Jonge (2005) investigated the reasons for delay and failure at Dutch universities, and concluded that the quality of supervision strongly influenced the success of doctoral programs.

The training component (size of the program, structure) and formal arrangements (training and supervision plan, progress monitoring and the like) hardly influence the completion rates (Berger & Jonge, 2005). Other Dutch studies confirm the crucial role of supervision (Grasp I, 2007; Meijer, 2002; Promood, 2006).

These findings correspond to a significant extent with the research results of Oost & Sonneveld (2006). They asked which factors the directors of 19 Dutch research schools consider to be the most important in order to successfully complete the doctoral process. The directors agreed on the importance of clear expectations and agreements between supervisor (s) and PhD candidates, a well-timed formulation of the central research problem, a professional, enjoyable and supportive relationship between PhD candidate and supervisor (s), and sufficient contact time between PhD candidates and their supervisor (s). Raising the issue of supervision problems is a difficult and sensitive subject. PhD candidates often require more help but will not always be able to arise this issue because they also find it important to show their independence (Gardner, 2008). In addition, PhD students do not always know what they may expect from their supervisor, and find it difficult to express criticism as to their supervisor from their dependent position.

The purpose of this research is to map the satisfaction of Zürich's PhD candidates in Geography and to contribute to the discussion about opportunities to improve the supervision of PhD candidates. Based on interviews

with PhD candidates, the graduate schools' management, research literature, existing questionnaires, and most and for all a questionnaire developed by the PhD candidates themselves, a definite version has been developed. It has been sent to all the graduate school's PhD candidates. In this report, the reader will find the results of this survey.

1.2. Sound supervision of PhD candidates and optimal organizational context

What are the features of good doctoral supervision? We don't find direct answers to this question in the extensive research literature about this topic. Most and for all, the complexities and subtlety of this kind of teaching is mentioned (Brown & Atkins, 1988, p. 115).

PhD students differ in their capacities and in their need for support, and that requires flexible adaptation of the way of supervising. A certain style can work excellently for one candidate while another cannot stand it. The relationship between supervisor and PhD student is also dynamic and changes throughout the course of the project. Once upon a time, the supervisor is called as a medical doctor who writes a recipe, then as a judge pronouncing a judgment, or as a friend who listens, or as a car mechanic who suggests technical repairs.

During the process, a balance must be struck between the need for autonomy and management, the need for approval and criticism, directions at a global level and very detailed feedback. The consequence of the individual nature of the relationship and the complexity of the task is that there is no one best way to advice and guide PhD candidates (Hockey, 1991; Kam, 1997; Pearson & Kayrooz, 2004). The effective support of PhD candidates requires multiple qualities that can be used flexibly. Although this conclusion is widely accepted in the field of educational research, most research focuses on a single aspect of teaching research, such as the importance of integration in the research culture, matching of students and supervisors, personal factors, specific categories of candidates (for example international ones). Little efforts have been made to develop overarching didactics of teaching, supervising and advising research (Pearson & Kayrooz 2004). In the paragraphs below, we have distilled out the many perspectives those that are most important for the quality of PhD supervision. We have identified six overarching supervision qualities a supervisor has to meet:

- subject knowledge (having detailed knowledge of the candidate's topic),
- research expertise (being able to guide the candidate through the research trajectory),
- building the interpersonal relationship
- caring for the process management,
- didactic qualities
- caring for the integration and socialization of the candidate.

a. Substantive and topical expertise

This expertise plays an essential role in the definition and demarcation of the project. If the supervisor doesn't have a thorough knowledge of the field of study, the supervisor will not be able to support the candidate in engaging existing knowledge and to find out where his or her project will lead to an important contribution to the state of the art. By being an insider, the supervisor will also be able to refer the candidate to other specialists.

b. Research expertise

A doctoral process is a creative process, where focus on the details and keeping grip on the bigger context do alternate. This dialogue does not follow a fixed scheme. However, there are a few standard situations that every candidate will encounter: the definition of the central research question and its sub-questions, engaging the existing knowledge, defining the originality of the proposed project, deciding which data are needed to answer the research questions and the methods for collecting these data. In the design process, the supervisor plays an essential role.

c. Interpersonal relationship

Within a doctoral project, candidate and supervisor will establish an intensive relationship for four or more years. A good interpersonal contact between both parties is a prerequisite for a successful supervision and completion of the dissertation (Hockey, 1991; Manderson, 1996). For some aspects of the project, such as substantive or methodological support, the PhD candidate will be able to consult other experts, but this does not apply to developing a good understanding. Engagement, trust and respect are key words for a good relationship (Gurr, 2001; Hockey, 1991).

What is especially important, is clarity about roles and expectations (Aspland, Edwards, O'Leary, & Ryan, 1999; Brown & Atkins, 1988; Kam, 1997). Many problems can be prevented if mutual expectations return regularly as a topic of discussion.

d. Process management

Process management mainly involves planning the route, monitoring progress and signaling and solving problems. Good process counseling starts with enough time for supervision. A lack of time and availability of the supervisor plays an important role in progress (Grasp !, 2007; Meijer, 2002; Moses, 1994). Lack of time for supervision means that the candidate is experiencing a shortage of structure, feedback, involvement and enthusiasm. Frequent contact is especially important in the first phase of the dissertation project (Hockey, 1991). It is clear that each dissertation project has its own course and its own problems, depending on the subject, the PhD student, the supervision and other situational facets. Doing research is a creative process that does not always run linearly. Nevertheless, there are milestones that come back in each trajectory: defining the research question, the design of the research plan, conducting the research and foreseeable products at the end of each doctoral year. Each of these phases can cause difficulties and delays, and it is important for a supervisor to keep a finger on the wrist to ensure that the phases are run smoothly and to minimize any delay. A big danger of delay is that it can induce a downward spiral. The longer the dissertation process takes, the greater the likelihood that other internal or external factors will interfere and can contribute to a greater delay or termination of the project (Hockey, 1991; Sonneveld, 2015). Ensuring a good start-up phase gives the most chances of preventing retardation. Some supervisors may question the statement "If it cannot be planned, it probably cannot be done". However, for most PhD candidates the planning of the project is one of the utmost points of concern.

e. Didactic qualities

For a long time, the advising and supervision of PhD candidates has been considered a derivative research task. A good researcher was also considered to be good at educating young researchers. In recent decades, awareness has grown that being an active and good researcher is a prerequisite for supervising PhD candidates, but not a guarantee of optimal supervision (Brown & Atkins, 1988; Manderson, 1996). Supervision is not only transferring knowledge, but requires also didactic qualities. Kiley & Mullins (2005) asked supervisors about their vision on necessary didactic qualities. The most often mentioned were the ability to dialogue, looking for the motivation and interest of the PhD student and the possibilities to create a manageable research plan. "Good listening is important", says Manderson (1996, p. 413): "Above all, a teacher is a good listener, for such students must be encouraged to find their own voice." A second widely used technique is the fostering of ideas by the continuous challenging of PhD candidates through asking questions. Making use of 'peer support groups' is a third strategy that supervisors consider as successful. In this way, PhD candidates are exposed to other examples, experiences and methods. They will learn by giving feedback to colleagues, coming to new ideas themselves in that way.

f. Integration and socialization of the candidate

Good integration in the institute and in the research culture in the broader sense is seen as an important factor for successful completion of the doctoral research (Berger & Jonge, 2005; Hockey, 1991). Lovitts' Leaving the Ivory Tower (2001) considers a non-integration as the most important cause of departure from doctoral study. Helping the PhD student to become part of the research culture, to get acquainted with colleagues, find suitable conferences and to stimulate his / her work to be published is essential. Dutch research into causes of delay (Berger & Jonge) confirms this insight.

g. Consensus between supervisors

In most cases, PhD candidates will have multiple supervisors. Differences of opinion between the supervisors will certainly occur and may encourage the PhD candidate to find his or her own way. However, at key moments, the supervisors must agree on the approval of the PhD candidate's plans. If disagreement becomes structural, this will ultimately lead to damage to the doctoral project. In view of this, some questions about the relationship between the supervisors have been included.

h. Optimal organization of the PhD process and institutional responsibilities

The supervision of PhD students has slowly but surely developed from a predominantly individual master-apprentice relationship to one that is characterized by involvement of several supervisors and embeddedness in a graduate school playing a role itself as regards the organization of the PhD process. Still, the following conclusion of Barbara Lovitts (2001) is in force: "A student's relationship with his or her adviser is probably the single most critical factor in determining who stays and who leaves (P. 270)." But more and more becomes clear that the context in which that relationship is situated has a significant impact on the chance of success. Research and advisory reports share a set of recommendations (for example Byrne 2013; Metcalfe 2002; Ostriker 2011; Sonneveld 2005).

Below we mention the most important organizational aspects influencing the doctoral projects and their supervision. Within the context of this study, not all features will be dealt with. We underline those aspects that are covered by one or more questions in the survey.

- 1) The quality of the research environment.
- 2) The quality of the doctoral environment: Completion rates - Time to degree - Quality of the procedures for awarding the doctorate.
- 3) Facilitation of pre-dissertation experiences.
- 4) The quality of selection and admission procedures.
- 5) Adequate yearly inflow of new candidates.
- 6) **Recording and monitoring candidates' progress** (next to supervisor's attention)
- 7) The foundations of the PhD trajectory and its supervision: **adequate financing, of a sufficient duration**, the **time available for working on the dissertation**, the **time available for advising and supervision**, adequate workspace, research facilities.
- 8) **Integration of (new) PhD candidates** in graduate school environment and research groups
- 9) Training and education on behalf of PhD candidates
- 10) **The composition of the supervision teams**, professionalization of supervision. Flexibility of supervision arrangement (in case of problems between candidate and primary supervisor). Monitoring supervision quality.
- 11) **Attention for labor market perspectives** of PhD recipients
- 12) Quality assurance – Consultation of PhD candidates – Feedback by external funders - Feedback by employers
- 13) **Institution's code of practice for example a supervision agreement** - Appeals & complaint mechanisms

2. Method

2.1. The questionnaire

For this research, a questionnaire was developed in co-operation with PhD representatives of the Zürich Graduate School in Geography and the Graduate School's management. The questionnaire is composed of two parts: questions that concern the working conditions of the PhD candidates and questions that focus on the supervision proper, including the co-operation between supervisors.

In order to enable non-Swiss PhD candidates to complete the survey, the questionnaire has been prepared in English. The questionnaire contains questions with closed answer categories, with open answer categories and some open questions at the end that inquire after a more general perspective on the doctoral project.

In the section that asks for evaluation of the supervision quality, two questions are asked per supervision issue: "How satisfied are you?" and "How important is this item for you?"

The questionnaire can be found in Appendix 1.

Scales

In line with previous Dutch research (Hulshof, 1996; Sonneveld 2007, 2008, 2011) and English and Australian traditions (Postgraduate Research Experience Survey and Postgraduate Research Experience Questionnaire), PhD candidates have been able to make their assessments of the supervision quality on a five-point scale. In this report, we not only show the scores but also draw conclusions regarding the level of satisfaction that can be linked to the respective outcomes. Thus, we introduce a standard that is open for discussion. It is up to the Zürich Geography community to determine if one wants to follow that, or to be more or less critical. Our norms are partly motivated by the results of earlier studies.

According to English reports, an institute must be alarmed if scores are less than 3.5. The scale going from 1 (lowest score) to 5 (highest score). In the Zürich questionnaire, we use the same five-points scale, but with an opposite scoring: 1 is the highest score, 5 the lowest.

On basis of the English precedent, we suggest as to the Zürich situation that we have reason to come into action in terms of policy if an average score per supervision quality is higher than 2,5. Of course, it the Graduate School community that decides on the demarcation lines between "good" – "acceptable" – "below what we accept".

Based on these comparable studies we come to the following qualifications:

- 1 - 1,9 (very good)
- 2 - 2,4 (good)
- 2,5 – 3,5 (reason for concern and attention),
- > 3,5 (unacceptable).

There is one big note to this approach. Even when an average score can be positive, a minority of candidates might feel very unhappy with a specific aspect of the supervision. The central question is whether they are in contact with other members of the Graduate School community, for example the director or coordinator or an ombudsperson, to brainstorm about possibilities to solve the issue. Noticing a positive average score, always needs to be combined with analyzing how many candidates give a low score.

2.2. Data collection

The survey was sent by email by to 160 candidates (including a number of PhD recipients). The PhD candidates got the warranty of anonymity when filling in the questionnaire. The invitation to fill in the questionnaire was repeated three times. After the third request, there was a response of 58 PhD candidates (36.2%).

Note that the mailing list contained many PhDs who have completed, and the response rate amongst current PhDs is > 50%.

3. The respondents

Year of PhD study? (n=58)

1 year	3.4%
2 year	25.9%
3 year	29.3%
4 year	22.4%
5 year	12.1%
6 year	3.4%
6+ year	3.4%

Position in the organisation (n=59)

Physical geography	30.5%
Remote sensing / Geographic information science	32.2%
Human geography	37.3%

Type of position (n=59)

Cantonal assistant	35.6%
Swiss National Science Foundation (SNF) project funded	33.9%
Other third party project funded	20.3%
Without funding and employment at the university	3.4%
Employed externally (e.g. WSL, EAWAG, SLF, Agroscope ...)	6.8%
Other	5.1%

Planned duration of PhD trajectory at moment of start (n=59)

1 year	0%
2	1.7%
3	27.1%
3 (+1)	40.7%
4	22%

5	1.7%
6	6.8%
6+	0%

Gender (n=58)

Male:	39.7%
Female:	56.9%
Other:	3.4%

Nationality (n=58)

Swiss:	34.5%
Non-swiss:	65.5%

Origin of research proposal (n=58)

Project defined in a research proposal which I was not involved in writing	50%
Project defined through discussions between me and my supervisor / committee	36.2%
Project defined by me alone	13.8%

Observations

- Characteristics show a nice spread. There are no concentrations in terms of year of PhD trajectory, location within the graduate school, nationality and gender. This justifies trust that the results of this research show a broad picture of the main features of the doctoral program in different stages and for different parts of the doctoral population.
- Promising is the number of candidates having been strongly involved in the design of the PhD project. For an international observer, this comes as a surprise in a world where many PhD projects are starting on the basis of a research design developed by a senior scientist. This is perhaps indicative of the value of cantonal positions, which are not attached to specific projects.

4. Working conditions and perspective on timely completion.

4.1. Intro

A doctoral project is not only depending on the qualities of the candidate and the supervision team, but is also strongly affected by the financial support for the project and the presence of other activities that may be attached to the agenda, for example teaching at MA and BA level. In the case of geography, the financial aspects of doing fieldwork are important. In a more general sense, financial support for making contacts with the community of peers, for example via conferences, is also important. Below, we first will deal with these building blocks of a successful doctoral project.

4.2. Fieldwork and conferences

64.9% of the respondents are doing fieldwork. For 92% of them the fieldwork is seldom or never in conflict with other activities that require their presence at the university. There are 15 candidates mentioning conflicts “mostly” (3) or “seldom” (12). Reasons are: teaching every term, teaching taking place in the best period of the year for fieldwork, and – most mentioned - conflicts with taking courses.

37 respondents give information about areas of the fieldwork they feel not (yet) adequately prepared for. 8 mention ethical aspects, 10 the safety of the fieldwork and 5 aspects of technical know-how.

51.4 % of the respondents inform us that agreements concerning a budget for the fieldwork are made before each fieldwork period. For 32.4% this is not the case, and 16.2% has independent funding.

The fieldwork is funded by:

Funding of fieldwork (n=37)

UZH	16.2%
Unit/Professor	45.9%
SNF	40.5%
Other third party funding	18.9%

For 91.9% of the respondents, the budget is sufficient. 94.6% never had any issues related to the reimbursement of fieldwork expenses.

The same goes for the reimbursement of conference expenses. 93.1% of the respondents never had any issues concerning the reimbursement of conference expenses.

4.3. Expected time to degree and funding

49.1% of the respondents (n=57) don't feel that the original time-frame for their PhD trajectory will be sufficient to finish it. Nevertheless, 84.2% are of the opinion that their progress is good – excellent (24.6%) or sufficient (59.6%).

Timely completion is, among other things, related to a sound financial basis for the project. The question has been asked who is responsible for additional funding, if the candidate is not employed as a cantonal assistant and the funding is not thought to be sufficient. We got the following responses.

Responsible for finding additional funding, if not employed as cantonal assistant (n=39)

You	25.6%
Your supervisor	12.8%
Project leader of the project	28.2%
We haven't discussed this question	38.5%
Other	2.6%

58.3% (n=36) of the candidates, not employed as a cantonal assistant and feeling that the given timeframe will not be sufficient to complete the PhD, have other funding possibilities for the additional time.

66.7% of those candidates who don't have these alternative funding options are experiencing this as stressful and would like to discuss this issue as soon as possible with the supervisor.

4.4. Teaching

Timely completion can be influenced by other activities. Very often teaching duties are mentioned in this respect. Do the PhD candidates of the Zürich Graduate School of Geography feel that teaching (or other activities) is slowing down their progress towards the PhD? 61% (n=59) responds to this question with 'yes'.

Many of the respondents are teaching regularly (76.3%, n=59). And many of them do like it (89.5%, n=57).

Overall, 86.4% (n=59) of the respondents do feel alright with their teaching.

How regular do they teach?

Regularity of teaching (n=45)

Every term (meaning autumn and spring term)	26.7%
Every second term (only autumn or only spring term)	35.6%
On flexible terms (time of teaching is negotiated every year)	37.8%
Other	0%

And how many hours have they been teaching so far? (n=59)

0-60 hours	20.3%
61 - 100	15.3%
101 - 300	35.5%
301 - 420	15.3%
More than 421	13.6%
I don't keep a record	0%

96.6% (n=58) are not struggling to reach the 100 hours, 79.3% (n=59) are not trying to avoid teaching beyond the limit of 420 hours.

Extra payment can be an issue if teaching tasks go beyond the limit of 420 hours. Do they get paid extra? 3.4% answer with 'yes'. 44.1 % tell us this is not the case. And a surprising 52.5% don't know.

As many non-Swiss candidates are present at the graduate school, the language of teaching can be an issue. For 54.2% (n=59) there is a need to teach in German. Of those who don't need to teach in German for the moment (n=27), 48.1 % would feel at ease to teach in German if required.

There are 8 candidates not feeling alright with the teaching they are doing. Reasons mentioned are: too much workload, not feeling competent to teach in German or English, not feeling competent pedagogically or feeling not competent as regards the content.

5. Organization of supervision

The composition of the supervision committee

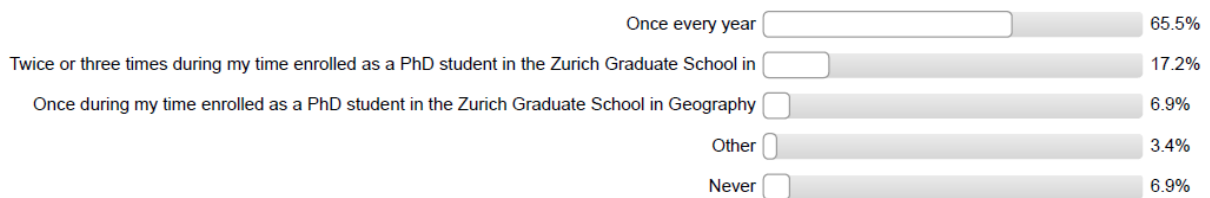
46.6% of the respondents confirm that their supervision is split between a nominal committee head (professor with promotion right) and a day-to-day supervisor, possibly without promotion right. 53.4% inform us that this is not the case. Would they prefer to meet more regularly with the head of the committee in case the day-to-day supervisor is not the head of the committee? 70.4% answer “no”.

90% of the respondents don't feel that the situation that the day-to-day supervisor is not the chair of the committee (and thus possibly having no promotion rights) is problematic. Also in the case the day-to-day supervisor is the committee chair is not seen as problematic by a huge majority of the respondents (83.9%).

Frequency of meetings with the PhD committee

58 respondents gave information about the frequency of the meetings of the entire committee:

How often has your entire PhD committee met?



69.6% do assess this just right as it is. 28.6% answer “Not often enough”.

Correspondence between the supervisors

Could it be that the quality score of the supervision team is lower than that of the individual primary supervisor because of a lack of unanimity between the team members? Of course, the first question is how many people are involved in supervising the project.

22% of the respondents (n= 59) tell us that they are supervised and advised by one supervisor. 25.4% have two persons in their supervision team. 27.1 % mention three, and 25.4% more than three supervisors.

Disagreements between these members of the supervision team as to the scope and focus of the dissertation are not a major worry.

Agreement between members of supervision team (n= 45) regarding scope and focus

Very much	22.2 %
Much	60 %
Neither much nor little	13.3 %
Little	4.4 %
Very little	0 %

Also with respect to the feedback on the content of the thesis, inconsistencies are not mentioned on a large scale.

Consistency in feedback with respect to content of thesis and management of the PhD process (n=45)

	Consistency in feedback regarding content	Agreement with respect to management of PhD process
Very much	13.3 %	26.7 %
Much	46.7 %	46.7 %
Neither much nor little	26.7 %	26.7 %
Little	13.3 %	0 %
Very little	0 %	0 %

Conclusion

Considerable disagreements between staff members involved in the supervision of a PhD candidate are almost absent.

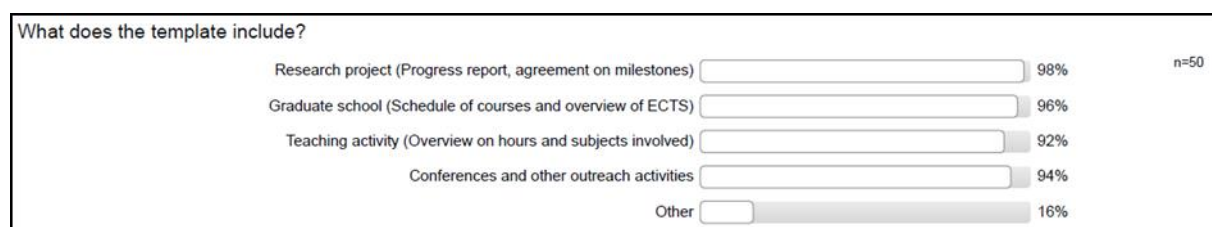
Let's have a look at the details of the committee interaction and the tools that are available, especially the Supervision Agreement.

Information and supervision agreement

77.6 % of the respondents (n=58) are of the opinion that they are well-informed about all formal requirements for the completion of the PhD. The supervision agreement is an important building block in this respect. 93.1% of the respondents have a signed supervision agreement.

This agreement lays the foundation for the regular meetings a candidate is supposed to have with the supervision committee. 86.4% of the respondents document the outcomes of the committee meetings. 62% do use the template as developed by the graduate school. 38% use an equivalent, drafted by the candidate him or herself or another version.

The respondents are giving information about the topics that are dealt with in the template:



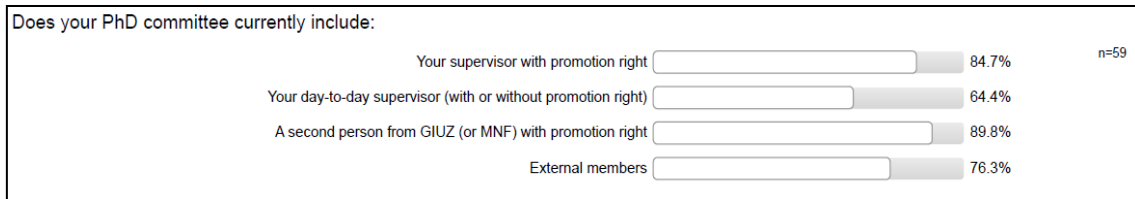
81.4% of the respondents confirm that the agreement is discussed regularly (for instance at an annual meeting), but only 45.7% state that the milestones agreed upon in the meeting are written down and confirmed by signature. 28.3% mention that this happens "sometimes", and 26.1% answer this question with a robust "no".

The data contain another surprise. Asked with whom they discuss the agreement, 43.8% mention their supervisor and 81.3% the supervision committee.

Composition of the supervision committee

How was that committee chosen? Again, we see that many candidates are playing an important role (like the position many have vis à vis the design of the project). 3.4% composed a list of possible committee members, 70.7% did that together with the supervisor. 24.1% of the respondents inform us that it was their supervisor who did take the decisions in this respect.

How many members does the supervision committee have? 3 (44.8%), 4 (50%), 5 and 5+ (5.1%). And who are members of the committee?



The composition looks logical, with a sound position for external members. Some candidates formulate observations vis à vis a double position for the supervisor (member of supervision team that takes care of the daily supervision, and also being member or chair of the committee) and see this as undesirable because of the great power that a supervisor receives over the candidate.

As we have seen before, a clear majority of the respondents (83.9%) don't see that double-function as problematic.

Correspondence between PhDs' plans and committee expectations

We finish this part of the report with the correspondence between the plans of the PhD candidate and the expectations of the supervision committee. 65% of the respondents seldom (28.1%) or never (36.8%) register differences between the committee expectations and their plans. Sometimes differences are registered (33.3%).

6. Overall supervision quality

6.1 Supervision: an overall perspective

Besides evaluating specific aspects of the supervision, we invited the PhD candidates to rate the quality of the supervision in a more summarizing way, first as regards the quality of the primary/daily supervisor, next as to the quality of all supervisors together. We used a scale of 1 to 10.

Quality of primary supervisor and of all supervisors together

	Primary supervisor (n=57)	All supervisors together (n=44)
1 Very poor	0 %	0 %
2 Poor	0 %	0 %
3 Very insufficient	0 %	2.3 %
4 Insufficient	3.5 %	6.8 %
5 Weak	10.5 %	9.1 %
6 Sufficient	10.5 %	18.2 %
7 More than sufficient	8.8 %	6.8 %
8 Good	26.3 %	29.5 %
9 Very good	22.8 %	20.5 %
10 Excellent	17.5 %	6.8 %

The primary supervisors score on average a 7.8. Team wise, the supervisors are getting a 7.2.

Annotation

On behalf of a comparative perspective on this result, we can look at the results of two earlier studies among Dutch PhD candidates where the same kind of quality scale has been used. The PhD candidates of a local graduate community at Utrecht University gave their supervisors an average score of 7.6 (Research Institute of History and Culture, 2008). In an evaluation of a much broader scope, hundreds of PhD candidates of a great variety of graduate schools at the highly ranked Utrecht University scored the supervision by the primary supervisor with an average of 7.4.

We dare to conclude that the primary supervisors are performing well at the Zürich Graduate School of Geography. As a team, the supervisors get a lower score. Nevertheless, they too score a “more than sufficient”.

6.2 What the candidates appreciate

What are the most important things the candidates have appreciated in the supervision? In their explanations, 42 respondents highlight:

Interpersonal qualities
(26x)

the ability to work with the candidate in a cooperative way and to work in a positive mood, taking the candidate seriously, fairness, kindness, reliability, respect, trust, and showing interest in the project. Of course, this quality is closely related to the next one.....

Support
(20x)

also, mentioned as regards specific aspects like the intensity of the support, a positive attitude, and being there especially in situations of crisis.

Availability
(15x)

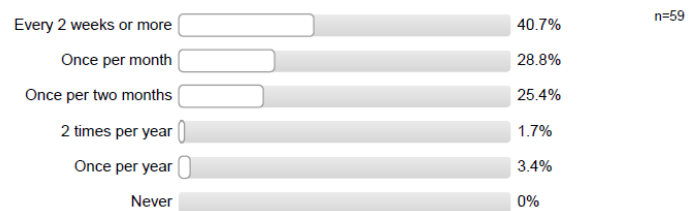
also by way of punctuality and timely reaction

Substantive value of the supervision (14x)	the value of the advices concerning the substance of the project.
Supporting Independence (12x)	the space the supervisor is giving to the candidate to steer his or her project.
Feedback quality (9x)	
Planning qualities (5x)	among which the balancing of pressure and self-control

6.3 The frequency of meetings with the primary supervisor

The satisfaction of many candidates as to their primary supervisor is reflected in their judgment on the frequency of meetings with the supervisor to discuss the progress.

How often do you meet and discuss your progress with your "day-to-day" supervisor (approximately)?



71.4% do assess this 'just right as it is' (n=56), 3.6% answer "too often" and 25% is of the opinion that they are not meeting enough their day-to-day supervisor.

6.4 Important things the candidates miss in the supervision

We asked the PhD candidates also to inform us about important things they miss in the supervision. 42 candidates did write down specifications. 12 candidates mentioned lack of expertise from their supervisors, 9 a need for more structure and time management from supervisors, 7 a lack of enthusiasm for the project, and 3 availability, good quality feedback and preparation for life post-PhD respectively.

6.5 The unhappy ones: trying to explain the dissatisfaction with the primary supervisor

As we have seen, there are 14 candidates who gave their primary supervisor a score of 6 or less. We have studied more in detail the responses of the eight who are of the opinion that their day-to-day supervisor is not performing at an adequate level (score of 5 and 4).

Do they differ from the total group of respondents in terms of gender, nationality and origin of their research proposal? Four of them are male (50%), while the percentage of male candidates in the total population is 39.7%. Three of them have the Swiss nationality (37,5%), not that different in comparison with the percentage of Swiss candidates among all respondents (34,5%). Also in view of the origin of their proposal and their role in the research design, there are no striking differences. Four of eight were not involved in the original design (matching the 50% of the total population that were not involved). Three did develop the research design together with their supervisor (matching the 36.2% of the total population). One has defined the project her or himself.

These data indicate that the dissatisfaction with the supervision is not concentrated in a specific part of the PhD population in terms of gender, nationality or involvement in the research design.

Do the eight candidates differ in terms of their view on a timely completion of their doctoral project and their appreciation of the progress in terms of sufficient or insufficient?

This is a small group with considerable worries. Is the original time frame sufficient to finish the project? Three answer “yes”. That is 37.5%, compared with the 50.9% of the total population that answer in this affirmative way². More telling is the number of respondents that are of the opinion that their progress is insufficient. Five of eight tell us that their progress is insufficient, two mention a good/excellent progress and one speaks in terms of sufficient. Of the total population, 14% inform us about insufficient progress (compared with the five out of eight in this sub-group, meaning 62.5%).

We have good reasons to propose the following working hypothesis as to an explanation of the dissatisfaction:

In comparison with the total population, the candidates who are dissatisfied with their primary supervisor give low marks as to those aspects of the supervision that are related to steering, intervening, designing, planning and inspirational power.³

Does the eight and the total populations differ as regards *the importance* attached to these qualities? There are some differences, but in general we have to conclude that the eight and the total population share their view on the importance of the steering, guiding capacity of the supervisor.

The difference between our eight candidates and the total population is that the total population is much more positive in their quality judgment regarding these guiding qualities.

Substantiation of the working hypothesis.

In the table below, we give the scores vis à vis a set of supervision qualities that share the supervisor’s capacity to take the lead, to intervene, to guide.

The first column mentions the specific supervision quality. The second one shows the average score of the group of eight, the third column gives the average score of the total population.

Aspects of supervision, quality score

<i>Aspect of supervision</i>	<i>Average quality score group of eight⁴</i>	<i>Average quality score of total population</i>	
Guided me in my search for relevant literature	4,0	2,7	
Helps me in defining a research scope	3,4	2,4	
Swiftly takes action when I say I get ‘stuck’	3,4	2,3	

² For reasons of comparison, we work with percentages as to the different answers of our small group of 8 candidates. We do this on behalf of developing of a possible interpretation of our findings, not for reasons of drawing hard and final conclusions.

³ In a Dutch study on doctoral delay (Sonneveld 2015), we discovered a considerable reserve as to robust interventions by the supervisors. We called this “intervention anxiety”.

⁴ Remember: 1 = fully agree with the supervisor disposing of that quality, 2 = agree, 3 = neutral, 4 = disagree, 5 = fully disagree. Remember also our proposed normative framework: average scores higher than 2,4 can be interpreted as “worries, work to be done”, higher than 3,5 as “unacceptable”.

Is a source of new ideas for my re- search	4,1	2,5	
Provides good advice on my work planning	3,9	2,6	
Provides helpful advice on the re- search design and methodology	3,5	2	
Has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own	3,9	2,6	
Helps me to maintain a clear focus on my research objectives	3,75	2,2	
Regularly monitors my progress in re- gard of the deadlines	3,1	2,9	
Provides helpful instructions about the steps I should take	3,75	2,5	

Earlier in this report, we already mentioned that the candidates on average do not give high scores as regards the process management, the hard side of the supervision.

This table shows that the group of eight is even more critical about this pro-active, guiding aspect of the supervision. Do note that the eight do not give one average positive score on the qualities mentioned in the table above.

If these worries are discussed with the supervisors, a fruitful plan of action can be developed. But, are these worries on the agenda of the meetings between supervisor and candidate? We can't give a definite answer to this question, but the reaction of the candidates on the statement "the supervisor discussed with me each other's expectations" is not very promising. The eight give an average qualitative score of 4.2 (lying between "disagree" and "totally disagree"), while the total population scores on average 2.7 (lying between "agree" and "neutral").

Thus, a low qualitative score seems to be connected with worries about timely completion of the project and a missing steering capacity on the side of the supervisor. This in combination with an insufficient communication between the two parties about worries and what to do.

6.6 The most praiseful candidates

We finish this part of the report with some specifications by the respondents who are most laudatory in their evaluation of the day-to-day supervisor (scoring with a 9 or 10).

More than once, they mention approachability and availability, granted and stimulated autonomy, support – also in situations of setback, feedback quality, capacity to motivate, project management, substantive inspiration, fairness, punctuality, flexibility (for example concerning deadlines), trust and understanding.

7. PhD perspective on six supervision components

In the Introduction we presented six overarching supervision themes. Per theme, we have asked the PhD candidates to rate their daily supervision and to indicate the importance of the respective elements. ‘How satisfied are you with this specific aspect of supervision’ and ‘How much importance do you attach to this aspect?’.

Below, we give an overview of the average scores per supervision theme, based on the average scores of the components of that supervision aspect. We repeat our note vis à vis the interpretation of scales and averages:

Based on these comparable studies we come to the following qualifications:

- 1 - 1,9 (very good)
- 2 - 2,4 (good)
- 2,5 – 3,5 (reason for concern and attention),
- > 3,5 (unacceptable).

There is one big note to this approach. Even when an average score can be positive, a minority of candidates might feel very unhappy with a specific aspect of the supervision. The central question is whether they are in contact with other members of the Graduate School community, for example the dean or coordinator, to brainstorm about possibilities to solve the issue. Noticing a positive average score, always needs to be combined with analyzing how many candidates give a low score.

7.1 Overture: Supervision quality scores in relation to importance attached to the quality

In the table below, we give an overview of those supervision qualities receiving the lowest average evaluative scores and the importance attached to them by the candidates.⁵

Supervision quality	Average evaluation score	Average score in terms of importance attached to quality
...discussed with me each other's expectations	2,7	1,6
...provides sufficient information on graduate school guidelines and routines	3,2	3
... guides me in my search for relevant literature	2,7	2,3
... regularly monitors my progress in regard of the deadlines	2,9	2,4
... structures discussions clearly	2,6	2,3
... provides helpful instructions about the steps I should take	2,5	2,1

⁵ We repeat:

1 = fully agrees with the presence of the quality, 2 = agrees, 3 = neutral, 4 = disagrees with the presence of the quality, 5 fully disagrees.

1 = very important in the eyes of the candidates, 2 = important, 3 = neutral, 4 = not important, 5 = not at all important.

... is a source of new ideas for my research	2,5	2,1
... provides good advice on my work planning	2,6	2,2
... helps me making plans for my near future (after dissertation)	3	2,3
... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own	2,6	2

Observations:

1. Apart from the provision of graduate school information, no supervision quality scores in the range of 'neutral – (full) disagreement'.
2. The discussion of each other's expectations seems to be an urgent agenda item.
3. The discussion of plans for the future (upon completion of the dissertation) deserves more attention.
4. A weak spot in the relationship between supervisor and PhD candidate is the focus on the planning of the project (monitoring, advising on planning, intervening, instructing). We know that one of the most efficient ways to make a doctoral project fail is a neglect of the planning and an underestimation of the dangers of delay. Supervisors may be somewhat more robust in the eyes of a considerable number of PhD candidates.

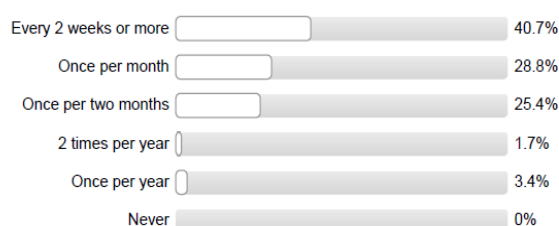
In the tables below, we show the average score per quality, the percentage per answer category, and the total average score for the umbrella supervision component. In *italics* and **bold**, we present those supervision aspects that seem to be candidate for further discussion in the Graduate School community.

7.2 Process management

	Average	Fully agree	Agree	Neutral	Disagree	Fully disagree
<i>...regularly monitors my progress in regard of the deadlines</i>	2,9	17,2	20,7	31	15,5	15,5
...swiftly takes action when I say I get 'stuck'	2,3	34,5	24,1	27,6	8,6	5,2
<i>...provides good advice on my work planning</i>	2,6	21,1	28,1	28,1	19,3	3,5
<i>... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own</i>	2,6	26,3	26,3	19,3	19,3	8,8
<i>Average "Process management"</i>	2,6					

We can complement these data with information on how often the candidates meet their "day-to-day" supervisor and their assessment of this frequency:

How often do you meet and discuss your progress with your "day-to-day" supervisor (approximately)?



n=59

7.3 Content knowledge, expertise

	Average	Fully agree	Agree	Neutral	Disagree	Fully disagree
... is enthusiastic about my research subject.	1,8	55,2	22,4	8,6	12,1	1,7
... asks questions that make me look at my work from a new perspective	2,3	36,2	22,4	25,9	10,3	5,2
...guided me in my search for relevant literature.	2,7	15,5	34,5	20,7	19	10,3
...is a source of new ideas for my research .	2,5	29,3	24,1	19	19	8,6
...has up to date expertise on the topic of my research.	2,4	31,6	28,1	21,1	10,5	8,8
...provides helpful advice on the research design and methodology	2	40,4	26,3	26,3	5,3	1,8
Average "Content knowledge, expertise"	2,3					

7.4 Research expertise

	Average	Fully agree	Agree	Neutral	Disagree	Fully disagree
... helps me to maintain a clear focus on my research objectives	2,2	31,6	31,6	22,8	10,5	3,5
...advises me constructively on writing and composing research texts	1,9	44,8	32,8	8,6	12,1	1,7
...provides helpful instructions about the steps I should take.	2,5	22,4	31	29,3	10,3	6,9
...discusses the expected product and scope of my dissertation (book, articles)	2,2	34,5	34,5	10,3	15,5	5,2
...helps me define a research scope.	2,4	26,3	28,1	31,6	12,3	1,8
...does his/her best to ensure I have the essential facilities for my work.	1,6	58,6	27,6	8,6	3,4	1,7
helps me in overcoming research difficulties.	2,2	26,3	36,8	26,3	10,5	0
Average "Research expertise"	2,1					

Adequate average performance on the side of the supervisors.

7.5 Interpersonal relationship

	Average	Fully agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Fully disagree (5)
... has a trust in my ability.	1,5	64,9%	24,6%	8,8%	1,8%	0%
... allows me to choose my own direction	1,7	53,4	29,3	12,1	5,2	0
... responds timely when I have a question or send in my work.	1,6	63,8	19	8,6	6,9	1,7

... shows respect for me as an individual.	1,3	84,2	5,3	5,3	3,5	1,8
...is available when I need him/her.	1,7	48,3	36,2	10,3	3,4	1,7
...is someone I can rely on.	1,7	57,9	26,3	10,5	1,8	3,5
...keeps his/her appointments.	1,5	66,7	17,5	12,3	1,8	1,8
We discuss, and I am happy with, the assignment of co-authorship of my articles	1,8	53,6	26,8	10,7	7,1	1,8
Average "Interpersonal relationship"	1,6					

Observations:

- On almost all indicators, 80% or more of the PhD candidates (fully)agree with the presence of this supervision quality on the supervisor's side. The interpersonal relationship of PhD candidates and supervisors looks (very) healthy.
- An important question is whether those candidates who are unhappy with aspects of this supervision quality do get the opportunity to brainstorm about the issue with somebody who is not involved in the supervision proper.

7.6 Didactic

	Average	Fully agree	Agree	Neutral	Disagree	Fully disagree
... discussed with me each other's' expectations.	2,7	29,3	17,2	24,1	17,2	12,1
... asks questions that make me look at my work from a new perspective.	2,3	36,2	22,4	25,9	10,3	5,2
... provides sufficient information on graduate school guidelines and routines.	3,2	17,2	17,2	24,1	12,1	29,3
...provides constructive feedback on my work.	1,9	51,7	20,7	17,2	5,2	5,2
...carefully read the drafts of my texts.	1,7	70,7	10,3	8,6	3,4	6,9
...structures discussions clearly.	2,6	32,8	17,2	22,4	15,5	12,1
...provides helpful instructions about the steps I should take.	2,5	22,4	31	29,3	10,3	6,9
...advocates for my needs and interests.	2,1	38,6	26,3	24,6	5,3	5,3
Average "Didactic"	2,4					

Observations

- Discussion of expectations. This can be a point of attention, also taking into account that 88% of the PhD candidates do find this (very) important.
- On the supervisors' side, there might be an interest in discussing opportunities how to stimulate their candidates to look at their work from a new perspective, how to structure the discussions with their candidates or how to structure the PhD trajectory. These are typical subjects for professional intervention.
- Graduate school guidelines and routines. A low score. It might be that the providing of this information is in safe hands with the coordinator of the graduate school.

7.7 Socialization, supporting contacts with peers

	Average	Fully agree	Agree	Neutral	Disagree	Fully disagree
... promotes me with peers and colleagues in the field.	2,4	34,5	22,4	24,1	6,9	12,1
... encourages me to present my work at various research forums.	2	37,9	37,9	15,5	6,9	1,7
...helps me making plans for my near future (after dissertation).	3	20,7	17,2	20,7	20,7	20,7
Average "Socialization"	2,5					

Observations

- 92% of the candidates think it is very important that their supervisor promotes them with peers and colleagues. As regards this aspect of the supervision, we see a discrepancy between the score of this quality and the importance attached to it.
- 65% of the candidates find it (very) important that supervisor supports them in making plans for the future.

Many candidates comment on the importance of the stimulation of contact with peers and colleagues. 23 of the 41 PhD candidates are giving details about the importance of good, almost daily contacts with their fellow PhDs. They focus on the scientific value of the contacts, the social side and the facilitating of the landing of PhD candidates who come from outside.

Five of the respondents give mixed messages. They have enough contacts, and sometimes they are useful

Three respondents are negative in their response. One doesn't bother, another just determines the fact, but a third candidate deplors it very much.

Six PhD candidates explicitly mention the importance of contacts with peers outside their direct research environment.

Observation

One gets the impression that the great importance the PhD candidates attach to the contact with their (direct) peers is a bit in unbalance with the score of the supervisors on the question "promotes me with peers and colleagues in the field". 57% of respondents confirm their supervisor's quality in this respect with a "(fully)agree".

7.8 Importance of supervision quality compared with quality judgment, revisited

We also look from a different standpoint at the quality judgments. What do the candidates find the most important aspects of the supervision, and which quality score do they give as to these aspects. This information will contain clues concerning the priorities that can be given when graduate school, PhD candidates and supervisors would like to come into action.

The ranking below is based on the average score per supervision aspect in terms of importance and quality judgment. A maximum score is an average of 1. That would mean that 100% of the respondents find this **very important**, or **fully agree** that the supervisor is meeting that supervision quality.

We have chosen as a lowest limit an importance score of 1,9. That means that 75% of the candidates do see that supervision quality as (very) important.

Again, in bold and italics we highlight those qualities that are candidate for further reflection, meaning that there is a high importance attached to a quality that scores not that impressive in the qualitative evaluation.

Top of supervision aspects candidates find most important and their quality score per aspect

	Importance, average	Quality score, average
Shows respect for me as an individual ⁶	1,1	1,3
Has trust in my ability	1,2	1,5
Allows me to choose my own direction	1,3	1,7
Provides constructive feedback on my work	1,3	1,9
Responds timely when I have a question or send in my work	1,4	1,6
Advises me constructively on writing and composing research texts	1,4	1,9
Is someone I can rely on	1,4	1,7
Is enthusiastic about my research subject	1,5	1,8
<i>Ask questions that make me look at my work from a new perspective⁷</i>	1,5	2,3
Is available when I need him/her	1,5	1,7
Carefully read the drafts of my texts	1,5	1,7
Keeps his/her appointment	1,5	1,5
<i>Discussed with me each other's expectations</i>	1,6	2,7
<i>Promotes me with peers and colleagues in the field</i>	1,6	2,4
Does his / her best to ensure I have the essential facilities for my work	1,6	1,6
Provides helpful advice on the search design and methodology	1,6	2
Helps me in overcoming research difficulties	1,6	2,2
Helps me to maintain a clear focus on my research objectives	1,7	2,2
Discusses the expected product and scope of my dissertation	1,7	2,2
<i>Swiftly takes action when I say I get 'stuck'</i>	1,7	2,3
<i>Has up to date expertise on the topic of my research</i>	1,7	2,4
<i>Helps me define a research scope</i>	1,9	2,4
Advocates for my needs and interests	1,9	2,1

The careful reader will see that in this table are missing the supervision qualities that can be labeled with "Process management". For example, "Regularly monitoring progress in regard of the deadlines" is seen by only 58% of the respondents as (very) important.

As we know how important the planning of a PhD trajectory is, we should be careful not to take the importance PhD candidates attach to a supervision quality as the only criteria for deciding whether further action is necessary or not.

⁶ Illustrative explanation: 98% do see this supervision quality as (very) important. 89% of the respondents (fully) agree that their primary supervisor is meeting that quality.

⁷ Explanation: 92% find this quality (very) important. 59% (fully) agree that the supervisors is meeting this quality.

8. The harvest – what we learned in the PhD trajectory

Before I draw my final conclusions, I present the responses to the question “What are the most important things you learned in the research project so far?”

Most often are mentioned:

- Communication (11x)
- Independence & autonomy (15x)
- Managing supervisors (5x)
- Networking (5x)
- Organising (22x)
- Personal aspects of a PhD trajectory & personal growth (20x)
- Growth in knowledge and skills (22x)
- Supervising students

We present some illustrations of these themes

“Time management isn't something I can learn once and then be fine, but I need to constantly work on it and adapt. A PhD project changes all the time and change is necessary and inevitable, but also sometimes difficult to understand and to accept. “

“It's important to inform supervisors regularly - short emails pointing out current work, problems, intended courses and to meet each of my supervisors at regular intervals. To inform them regularly, but also when I need specific input (during work on a paper for instance). I aim for at least one additional meeting each year (beside the annual committee meeting) with each of my four supervisors, regardless whether I currently work on a project with them or not.”

“I have gained experience in dealing with difficult supervision situations. This was related to the different expectations we had of the supervision and the different previous experiences we had. It has been not a very nice experience, but a good one. Looking back, I would have been more proactive and would have asked for more involvement.”

“Nothing goes by itself, and you have to keep moving to make progress. And that if you think some things are interesting you should just go ahead and explore this a bit too. Widen your perspective and see what is possible/accepted.”

“Writing a PhD is a process of emancipation. Often feels lonely, but also allows to develop your independence and your individual project.”

“I think it is important to have and develop the confidence within oneself to request for supervision! To have freedom to work within own responsibility is showing a huge trust and respect for the PhD student and his/her self-responsibility towards the work. I personally think it is better to have not too many interactions with the supervisor but to develop a research confidence and to request when problems appear. I felt the balance of being free and having requested for guidance really helpful and also respectful! Personally I think the PhD program should encourage and train PhD students better in becoming a confident researcher rather than being a passive waiting researcher who wants to be asked to be guided!!”

9. Conclusions

Healthy

Overall, my conclusion is that the doctoral study situation at the Zürich Graduate School in Geography is healthy.

- ✓ The day-to-day supervisors are evaluated in a positive to very positive way.
- ✓ The teaching by the candidates is well organized and is not hindering the progress of the doctoral project.
- ✓ The financial basis of fieldwork and conference visits is in order.
- ✓ A big majority of the candidates has more than one supervisor.
- ✓ The involvement of more than one supervisor is not leading to confusion or misunderstandings.
- ✓ 90% of the respondents don't feel that the situation that the day-to-day supervisor is not the chair of the committee (and thus possibly having no promotion rights) is problematic.
- ✓ 93.1% of the respondents have a signed supervision agreement.
- ✓ There is a considerable group of candidates who give (very) high scores for the quality of their day-to-day supervisor. Explaining their praise, they more than once mention approachability and availability, granted and stimulated autonomy, support – also in situations of setback, feedback quality, motivation, project management, inspiration vis à vis the substance of the research, fairness, punctuality, flexibility (for example concerning deadlines), trust and understanding.
- ✓ The respondents are very clear about what they learn in their doctoral project: Communication, Independence & autonomy, managing supervisors, Networking, Organizing, Personal growth, Growth in knowledge and skills, Supervising students.
- ✓ Because of the excellent interpersonal relationships, there is a fertile ground for working on those aspects of the supervision deserving extra attention, especially the process management side of the supervision.

Food for thought

With respect to some issues, I have information that could lead to further investigation or immediate action.

1. There are candidates who don't feel themselves well prepared for the fieldwork in terms of safety (27%, n=37).
2. 32.4% of the respondents report that they are not making agreements concerning a budget for the fieldwork before each fieldwork period.
3. 25% of the respondents meet their primary supervisor once per two months. These candidates differ clearly from their colleagues who see their supervisor once per two weeks or once per month (69%). Are these 25% of the candidates the ones who also tell us that they don't see their supervisor enough?
4. We get much information about what the candidates miss and appreciate in the supervision. Those who are not very satisfied, do they have possibilities to brainstorm about these issues with somebody who is not involved in the supervision proper. Items with priority are: the expertise in the supervision, the timing and structuration of the project, stimulation and support.
5. A low qualitative score for supervision quality seems to be connected with worries about timely completion of the project and a missing steering capacity on the side of the supervisor. This combines with an insufficient communication between the two parties about worries and what to do.
6. Studying families of supervision qualities, the issue of Process Management is candidate for further deliberations.
7. Of the specific supervision qualities *the discussion of each other's' expectations* deserves attention. Not all the possibilities of a yearly discussion of the supervision agreement seem to be used.

8. The great importance the PhD candidates attach to the contact with their (direct) peers is a bit in unbalance with the score of the supervisors on the question “promotes me with peers and colleagues in the field”. Only 57% of respondents confirm their supervisor’s quality in this respect with a “(fully)agree”.

Puzzling

- ✓ 49.1% of the respondents (n=57) don’t feel that the original time-frame for their PhD trajectory will be sufficient to finish it. Nevertheless, 84.2% are of the opinion that their progress is good – excellent (24.6%) or sufficient (59.6%).
- ✓ This is an intriguing combination of information. The question is also whether these candidates are in intensive communication with the supervisors about possible solutions. Finishing a dissertation after the termination of the appointment or scholarship is a real threat to successful completion of the dissertation.
- ✓ Asked with whom they discuss the agreement, only 43.8% of the respondents mention their supervisor.
- ✓ Extra payment can be an issue if teaching tasks go beyond the limit of 420 hours. Do they extra paid? 3.4% answer with ‘yes’. 44.1 % tell us this is not the case. And a surprising 52.5% don’t know.

Concluding note

There is one big note to the many positive conclusions. Even when an average score is (very) positive, a minority of candidates – and they exist! - might feel unhappy with a specific aspect of the supervision. The central question is whether they are in contact with other members of the Graduate School community, for example the director, the coordinator or an ombudsperson, to brainstorm about possibilities to solve the issue. Noticing a positive average score, always needs to be combined with analyzing how many candidates did give a low score. The question is: are we in contact with them?

10. Follow up

Introduction

The report is reason for satisfaction and can be a source of inspiration to fortify the graduate school's performance as regards some issues. The yearly PhD retreat of the graduate school, 9 – 10 November 2017 – has been the start of brainstorming about the possibilities for improvement.

The author of this report has presented to the participants of this retreat – 40 PhD candidates and 7 supervisors – four topics for further consideration. Below, the reader will find a brief description of the issues, followed by suggestions for improvement, also based on suggestions formulated by four groups of PhD candidates during the retreat.

1. The unhappy ones and moments of dissatisfaction.

Introduction

"Among you, there are 8 – 14 candidates that are not that happy with their primary supervisor. They give a score of 6 (just sufficient), 5 (weak) or insufficient (4). An exceptional candidate at this graduate school shows dissatisfaction as regards many aspects of the supervision. You might feel quite ok with your supervision, but you too will encounter moments in the co-operation with your supervisor that you really get angry, frustrated or worried. If this happens rarely, you will find a way to live with it. But if a specific issue pops up again and again, there seems to be good reason for "doing something".

I am inviting you to remember your own frustrations or to position yourself in the position of a colleague who is really unhappy with the supervision.

Questions

How can we prevent the emergence of such candidate – supervisor problems? And if they occur nevertheless... What can we expect from a candidate in such a situation?

A regular discussion of each other's expectations seems to be an important way to prevent or solve problems, how difficult it may be for a candidate to speak out in openness. How can we organize this clarification of expectations structurally, so that it is not a last resort after problems did occur? And if problems threaten to get out of hands (beware, we don't have clues that this is really happening), what are possible safety valves?

Which role could the Supervision Agreement play in this respect?

And do we see a role for the graduate school management to monitor the relationships between candidates and supervisors (for example periodical monitor interviews to discuss with a candidate if everything is going all right)?

Do you know of candidates who were dissatisfied with the supervision but have been successful in solving this problem?

2. Delay and progress

Introduction

The questionnaire leads to the following insights:

49.1% of the respondents (n=57) don't feel that the original time-frame for their PhD trajectory will be sufficient to finish it.

84.2% are of the opinion that their progress is "good – excellent" (24.6%) or "sufficient" (59.6%).

Questions

For an outsider, this is an amazing combination of responses. Delay seems to be a serious problem. And via our own research we know that delay can entail serious risks of non-completion.

- Do you share this observation?
- How should PhD candidate, supervisor and management come into action if there is a serious risk of delay and non-completion of the project?
- Do you know of candidates and supervisors who successfully came into action when it became clear that delay caused serious risks of non-completion?
- In Flanders and the Netherlands, research results become available as regards personal issues playing a possible role in delay and drop out (burn out, stress, mental problems etc.). Are these personal issues an issue at your own graduate school?

3. A weak spot: project management

Introduction

The results of the questionnaire teach us that candidates do miss important qualities in the supervision, for example:

Timing of the project, structuration (9x)

- Clearer structure.
- Deadlines (3x): Set a clear deadline of PhD time... I think I would profit from having more hard deadlines for writing things... deadline monitoring.
- A spreadsheet that lists anything one HAS to do when doing a PhD at GIUZ. There is many things that are somewhat flexible, but those few things that aren't, including some details, could be listed and made available to every PhD student.
- Better time management... structure, efficiency.
- I feel that there are sometimes unreasonable deadlines and expectations placed upon me....I sometimes think I am performing too slowly. ...I feel that when we talk about project goals and timelines that my committee head is not being realistic about how long it takes to do things.
- Sometimes I miss a little pressure, but only very rarely."

Combining the responses to several questions, we can conclude that the supervisors don't score convincingly on project management. Operationalizations of project management are: monitoring, advising on planning, intervening, instructing, guiding in search of literature, defining research scope, swiftly taking action when candidate is in problems, helpful advice in planning, courage to intervene when candidate encounters problems.

Questions

Do we agree in claiming that a good process management is essential for a timely and successful completion of the doctoral project? Do you agree that some work is to be done vis à vis this aspect of the supervision? How can we get this issue higher on the candidate-supervisor agenda? What are the responsibilities of the PhD candidate in this respect? Which pro-active initiatives may we expect from the supervisor? Should the graduate

school management play a steering role in this respect? Is the supervision agreement an important tool in getting more attention for the process management? Can you give examples of strong doctoral project management ('good practices').

4. Not discussing important issues

Introduction

The respondents gave the following information by filling in the questionnaire

- Meetings with supervision committee: frequency not enough, 28.6%
- Only 43.8% discuss supervision agreement with primary supervisor
- 25% is of the opinion that they are not meeting enough their day-to-day supervisor.
- Only 45.7% state that the milestones agreed upon with supervision committee are written down.
- 32.4 % inform us that agreements concerning a budget for the fieldwork are not made before each fieldwork period.
- Responsible for finding additional funding at the end of scholarship/employment, if not employed as cantonal assistant (n=39): "We haven't discussed this question" – 38.5%.
- Extra payment can be an issue if teaching tasks go beyond the limit of 420 hours. Do they get paid extra? 52.5% don't know.

Questions

There seem to be a couple of blind spots in the communication between candidate and supervisor (and management of graduate school).

- Can you formulate some suggestions per item mentioned above? What could PhD candidate, supervisor and school management do?
- What to do if the frequency of meetings with committee or primary supervisor (!) is insufficient in the eyes of the candidate?
- What to do in case of uncertainties as regards the financial conditions of a project?
- How to get career perspectives higher on the agenda?
- Can you give examples of candidates who were successful in finding solutions for one or more of these issues?

5. Policy suggestions

Taking into account the results of the survey and the results of the PhD break-out groups during the retreat, we do formulate a limited set of possibilities for improvement. We do found these suggestions on the strengths of the graduate school. They don't imply a radical change of course and build also on suggestions by the PhD candidates during the retreat. Before we present the specific suggestions, it is important to underline the importance the PhD candidates attach to the leading role of the candidates themselves: the management of the doctoral project is in their hands, butthe supervisors should be there to give feedback, to take a pro-active position, to co-steer and to intervene when necessary.

5.1. Facilitating the landing of new PhD candidates and ways to discuss inconveniences

PhD candidates, and certainly those who come across inconveniences in their relationship with the supervision team, can benefit from possibilities to discuss their situation with colleagues. Some facilities do already exist, the graduate school's coordinator, and some other possibilities were mentioned by the PhD candidates during

the retreat: mentors, support by post-docs or an ombudsperson. In some cases experiences have already been gained at the level of research groups. Next to these possibilities, we suggest a pilot with a buddy program. The Buddy Program is an integral part of the graduate school's orientation program for new doctoral candidates. We do base these suggestions on Dutch experiences and guidelines found on <https://www.hr.com> (Designing a Buddy Program). We translate their suggestions as follows:

Not knowing what is "normal" in the graduate school – what is "right" and "wrong" – what is expected of me, what is the school's culture makes every new PhD candidate feel like an "outsider" - at least for a while.

By matching new PhD candidates with a "buddy" - someone who has been in the organization for a while - will assist in cultural integration and orientation.

The Buddy Program matches new PhD candidates with PhD candidates who have been with the graduate school for some time (typically 6 - 12 months), for a period of six months, with two goals:

- (1) To provide the new candidate with a point of contact for general queries regarding day-to-day operational issues, [such as the location of facilities, the Supervision Agreement, relevant school policies like the functioning of the supervision committee, the yearly monitoring of progress, financial aspects of the doctoral project, etc] and
- (2) to help the new candidate integrate with the school by providing access to someone who is familiar with our culture, attitude and expectations.

It is intended that the new candidate will feel more at home with the graduate school, in a quicker period; that our new candidates find out how best to "manage" their supervisor, their supervision committee and graduate school in a supportive and risk-reduced environment.

By creating a Buddy Program we also promote peer support in case a candidate feels unhappy with (some aspects of) the supervision arrangement.

5.2. Making better use of the Supervision Agreement.

The format of the Supervision Agreement looks good. In view of the non-discussion of some important aspects of the doctoral trajectory, we suggest to add a limited set of items to the Agreement, stating as a preamble that PhD and supervisor, should see this agreement as an important document! Essentially, the agreement is not a bureaucratic act, but a way to create mutual clarity of expectations.

- The number of meetings with the supervision committee, if more than once per year is desirable
- The "rhythm" of the meetings with the supervisor (every two weeks, once per month or once per two months)
- Wishes and expectations from both sides vis-à-vis the PhD candidate – supervisor relationship
- Milestones of the project as discussed with primary supervisor and committee
- Financial aspects of delay and extension of the doctoral trajectory
- Financial aspects of extra teaching

In view of the Supervision Agreement, the PhD candidates did emphasize during the retreat: clear rules as regards the meetings with the committee, the balance in attention for substantive, organizational and personal issues, the discussion of a clear time frame, a stronger emphasis on the progress monitor at the end of the second year and a sound root cause analysis of scientific, organizational and personal aspects if problems do occur. Project management should be a topic in one of the courses.

5.3. The introduction of stronger progress monitoring at the end of the second year.

Delay seems to be a serious issue for many candidates. Our own research has showed the main reasons for delay:

- Delay is always associated with
 - substantive issues!

- deferred decisions on key issues of the dissertation, such as the research question and the theoretical framework.
- keeping track of the developments of the subject (perfectionism, constantly updating literature and topical developments)
- missing skills or insights!
- problems with the structuring of the research

Striking: A disturbed relationship with the primary supervisor is not a cause!

If delay at the Zürich Graduate School in Geography shows the same characteristics, a stronger emphasis on the progress monitoring at the end of the second year is an option. Candidate and primary supervisor will explain to the supervision committee whether a timely completion of the project is still feasible. If not, they will propose a plan of action to make timely completion into a realistic option again.

5.4. The introduction “How to manage your supervisor” in the Project Management Course.

During the retreat, PhD candidates did emphasize that it is the candidate who plays an important role in making the relationship with the supervisor into a success. Information about the implicit rules of the game is an essential aspect of the support by more advanced buddies, next to the information from the side of the coordinator of the graduate school. In addition to this, we suggest to pay attention to the management of the supervision in the Project Management Course. That also will give an opportunity to the new comers to exchange their first experiences.

5.5. Broaden the agenda of the yearly retreat: possibilities for peer support.

The break-out groups during the retreat 2017 did show the importance of an exchange of experiences and suggestions at a level above that of research groups and departments. It may be wise to introduce these opportunities for intervision and peer support in the yearly retreat program, next to the research presentations.

5.6. Fortify the infrastructure of the graduate school.

In other doctoral programs, regular meetings with the coordinator have proven to be very useful. In the Zürich situation one could think of structural meetings with the coordinator

1. At the start of the doctoral trajectory, to discuss among other things the filled in Supervision Agreement
2. At the end of the second year, to discuss the results of the progress monitoring and the measures taken on behalf of a timely completion
3. At the end of the project, the so called exit interview

A rough estimate of the needed time for these activities plus the organization of the Buddy Program leads to the working hypothesis that an extra 150 - 200 (8%/month) hours on the side of the coordination team of the graduate school will suffice to initiate these new initiatives.

Acknowledgements

I am thankful for the support I received in designing the questionnaire and the execution of the project from the management of the graduate school, Ross Purves and Isabelle Gärtner-Roer, and the PhD representatives, Oliver Burkhard, Leonie Kiewiet, Ulrich Hanke, Darshan Karki, Christin Bernhold and Nico Mölg. It was Manuel Bär who has played an essential role in preparing the raw data for the analysis and the writing of the report.

Sources

- Armstrong, S. J. (2004). The impact of supervisors cognitive styles on the quality of research supervision in management education. *British Journal of Educational Psychology*, 74, 599-616.
- Aspland, T., Edwards, H., O'Leary, J., & Ryan, Y. (1999). Tracking New Directions in the Evaluation of Postgraduate Supervision. *Innovative Higher Education*, 24(2), 127-147.
- Ballantyne, C. (2001). Reasons for Discontinuing: Survey of Non-completing Postgraduate Research Students. *Murdoch University Teaching and Learning Centre* Retrieved 14-8-2007, from www.tlc.murdoch.edu.au/eddev/evaluation/survey/PGexit.html
- Berger, J., & Jonge, J. d. (2005). *Rendement verkend, Succes- en faalfactoren van promotietrajecten aan Nederlandse universiteiten*. Zoetermeer: EIM Onderzoek voor Bedrijf en Beleid.
- Brown, G., & Atkins, M. (1988). *Effective teaching in higher education*. London: Routledge.
- Connell, R. (1985). How to supervise a PhD. *Vestes*, 28(2), 38-42.
- Gardner, S. (2008). What's too Much and What's Too Little? *The Journal of Higher Education*, 79(3), 326-350.
- Grasp! (2007). *Report on PhD and Supervisor Survey 2006-2007*. Groningen: University of Groningen.
- Gurr, G. M. (2001). Negotiating the "Rackety Bridge"-a Dynamic Model for Aligning Supervisory Style with Research Student Development. *Higher education research and development*, 20(1).
- Hockey, J. (1991). The social science PhD: A literature review. *Studies in higher education*, 16(3), p319-314p.
- Johnston, S., & Broda, J. (1996). Supporting educational researchers of the future. *Educational Review*, 48(3), 269.
- Kam, B. H. (1997). Style and quality in research supervision: the supervisor dependency factor. *Higher education*, 34(1), 81-103.
- Lovitts, Barbara E. (2001), *Leaving the Ivory Tower. The causes and consequences of departure from doctoral study*. Rowman & Littlefield Publishers, Inc.
- Manderson, D. (1996). Asking better questions: approaching the process of thesis supervision. *Journal of Legal Education*, 46(3), 407-419.
- McCormack, C. (2005). Is non-completion a failure or a new beginning? Research non-completion from a student's perspective. *Higher Education Research & Development*, 24(3), 233-247.
- Meijer, M.-M. (2002). *Behoud Talent!*
- Moses, I. (1994). Planning for Quality in Graduate Studies. In O. Zuber-Skerritt & Y. Ryan (Eds.), *Quality in Postgraduate Education*. London: Kogan Page Limited.
- Paglis, L. L., Green, S. G., & Bauer, T. N. (2006). Does adviser mentoring add value? A longitudinal study of mentoring and doctoral student outcomes. *Research in Higher Education*, 47(4), 451-476.
- Pearson, M., & Kayrooz, C. (2004). Enabling Critical Reflection on Research Supervisory Practice. *International Journal for Academic Development*, 9(1), 99-116.
- Promood. (2006). *Promood PhD Questionnaire 2005, The Results*. Delft: TU Delft.
- Rose, G. L. (2003). Enhancement of mentor selection using the ideal mentor scale. *Research in Higher Education*, 44(4), 473-494.
- Seagram, B. C., Gould, J., & Pyke, S. W. (1998). AN INVESTIGATION OF GENDER AND OTHER VARIABLES ON TIME TO COMPLETION OF DOCTORAL DEGREES. *Research in Higher Education*, 39(3), 319-335.
- Sinclair, M. (2004). *The pedagogy of 'Good' PhD Supervision: A Cross-Disciplinary Investigation of PhD Supervision*
- Sonneveld, Hans (2015). Verslag project Langpromoveerders. (PhD candidates who take very long for the completion of their doctoral thesis). Tilburg Law School, Tilburg University
- Sonneveld, Hans, Evelyn Hello, Rens van de Schoot (2011), Promovendimonitor 2011. Promovendi van de Universiteit Utrecht. Hun oordeel over opleiding, begeleiding en onderzoeksfaciliteiten. (Universiteit Utrecht)
- Sonneveld, H., & Oost, H. (2006). Het promotiesucces van de Nederlandse onderzoekscholen. Afsluiting van een drieluik. Beleidsgerichte studies Hoger onderwijs en Wetenschappelijk onderzoek nr 123. Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschap
- Scager, Karin & Hans Sonneveld (2008), De kwaliteit van de Promotiebegeleiding bij het Onderzoeksinstituut Geschiedenis en Cultuur. Evaluatierapport.(IVLOS / Nederlands Centrum voor de Promotieopleiding)
- Wisker, G. R., G.; Trafford, V. . (2003). From Supervisory Dialogues to Successful PhDs: strategies supporting and enabling the learning conversations of staff and students at postgraduate level. *Teaching in higher education*, 8(3), 383.

Appendix 1. The Questionnaire

1. EMPLOYMENT AND FUNDING

- 1.1 What year of your PhD studies at Department of Geography (GIUZ) are you currently in?
- 1.2 What part of GIUZ are you based at?
- 1.3 Are you on a "cantonal assistant" position, on third part funding, or else? (tick all as appropriate)
- 1.4 What was the planned duration of your PhD at the moment you started?
- 1.5 Do you feel that the original time-frame set for your PhD will be sufficient to finish it?
- 1.6 My progress in the PhD trajectory is:
 - 1.7 If you are not employed as a cantonal assistant, and the funding you receive is not thought to be sufficient, who is responsible for finding additional funding?
 - 1.8 If you are not employed as a cantonal assistant, and you feel that the given timeframe will not be sufficient to complete your PhD, do you have other funding possibilities for the additional time?
 - 1.9 If "No", do you feel this is stressful and would you like your supervisor to discuss alternative funding options as early as possible with you?
- 1.10 Please feel free to add comments on employment and funding issues if you want:

2. TEACHING AND OTHER ACTIVITIES

- 2.1 Are you teaching regularly (e.g. classes, excursions and supervision of exams, thesis)?
- 2.2 If "Yes" (meaning you teach regularly), do you usually teach:
- 2.3 Do you like teaching?
- 2.4 How many hours have you been able to teach at GIUZ so far? (based on your own records or on guessing)
- 2.5 Do you struggle to reach 100h?
- 2.6 Do you struggle to avoid teaching more than 420h?
- 2.7 Do you get paid extra for teaching tasks beyond the limit of 420 h?
- 2.8 Do you need to teach in German?
- 2.9 If "No", would you feel at ease to teach in German if required?
- 2.10 Overall, do you feel alright with the teaching you are doing?
- 2.11 If "No" (2.10), please specify:
- 2.12 If "Other" (2.11), please specify:
- 2.13 Do you feel that teaching (or other activities) slows down your progress towards your PhD?

2.14 If there are non-teaching activities which slow down your progress towards your PhD, please let us know which ones:

3. SUPERVISION, THE ORGANIZATIONAL CONTEXT

3.1 How often do you meet and discuss your progress with your "day-to-day" supervisor (approximately)?

3.2 What is your assessment of this frequency?

3.3 Is your supervision split between a nominal committee head (professor with promotion right) and a day-to-day supervisor, possibly without promotion right?

3.4 If "yes" (meaning your day-to-day supervisor is not the head of your committee), would you prefer to meet more regularly with the head of the committee?

3.5 If "yes" (meaning your day-to-day supervisor is not the head of your committee), do you feel that the situation that the day-to-day supervisor is not the chair of the committee (and possibly has no promotion rights) is problematic?

3.6 If "No" (meaning your day-to-day supervisor is the committee chair), is there anything problematic?

3.7 If "Yes" (3.6), please elaborate:

3.8 Please feel free to add comments on supervision issues if you want:

4. THE DAILY SUPERVISOR: YOUR EVALUATION

Your quality judgment

Mark the answer category best representing your quality judgment on this supervision aspect
[Agree - Mostly agree - Neutral - Mostly disagree - Disagree]

Importance of the aspect for you

Mark the answer category best representing your judgment on the importance of this supervision aspect.
[Important - Mostly important - Neutral - Mostly not important - Not important]

My primary/ daily supervisor ...

... has a trust in my ability.

... allows me to choose my own direction

... is enthusiastic about my research subject.

... discussed with me each other's' expectations.

... asks questions that make me look at my work from a new perspective.

... promotes me with peers and colleagues in the field.

... provides sufficient information on graduate school guidelines and routines.

... encourages me to present my work at various research forums.

... responds timely when I have a question or send in my work.

... shows respect for me as an individual.

... helps me to maintain a clear focus on my research objectives

...advises me constructively on writing and composing research texts.

...provides constructive feedback on my work.

...guided me in my search for relevant literature.

...is available when I need him/her.

...regularly monitors my progress in regard of the deadlines

...carefully read the drafts of my texts.

...structures discussions clearly.

...provides helpful instructions about the steps I should take.

...discusses the expected product and scope of my dissertation (book, articles)

...helps me define a research scope.

...swiftly takes action when I say I get 'stuck'.

...advocates for my needs and interests.

...is a source of new ideas for my research .

...is someone I can rely on.

...keeps his/her appointments.

...does his/her best to ensure I have the essential facilities for my work.

...has up to date expertise on the topic of my research.

...provides good advice on my work planning.

...provides helpful advice on the research design and methodology.

...helps me in overcoming research difficulties.

...helps me making plans for my near future (after dissertation).

... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own.

We discuss, and I am happy with, the assignment of co-authorship of my articles

5. CORRESPONDENCE BETWEEN SUPERVISORS

5.1 How many people are involved in supervising your project?

5.2 These people agree with each other with respect to the overall scope (focus) of the thesis.

5.3 The feedback of these people with respect to the content of my thesis is consistent .

5.4 These people agree with respect to the management of my PhD process.

6. SUPERVISION: AN OVERALL PERSPECTIVE

6.1 Please rate the quality of your primary / daily supervisor on a scale of 1 to 10

6.2 Please rate the quality of the supervision you get (all supervisors together) on a scale of 1 to 10

7. SUPERVISION AGREEMENT AND COMMITTEE INTERACTION

7.1 Do you feel like you are well-informed about all formal requirements for the completion of your PhD?

7.2 If "No" (meaning you do not feel well-informed enough about formal requirements for your PhD)(7.1), please explain why:

7.3 Have you signed a supervision agreement?

7.4 Do you document the outcomes of the committee meetings?

7.5 If "Yes" (7.4), what template do you use?

7.6 If "Other" (7.5), please specify:

7.7 What does the template include?

7.8 If "Other" (7.7), please specify:

7.9 Do you discuss the agreement regularly (for instance at an annual meeting)?

7.10 If "Yes", with whom do you discuss the agreement?

7.11 If "Other" (7.10), please specify:

7.12 If "yes", at these discussions of the agreement, do you write down and confirm by signature the milestones agreed upon in the meeting?

7.13 How many members does your PhD supervision committee currently have?

7.14 Does your PhD committee currently include:

7.15 How was your PhD committee chosen?

7.16 How often has your entire PhD committee met?

7.17 If "Other" (7.16), please specify:

7.18 How do you assess this frequency

7.19 Do your PhD plans differ from the expectations of your committee?

7.20 If there are differences, please specify:

7.21 How much (social and/or scientific) contact do you have with your peers and how useful is this contact to you?

7.22 Please feel free to add comments on supervision agreement and the interaction with the committee if you want:

8. FIELDWORK AND CONFERENCES

8.1. Are you doing any fieldwork?

- 8.2 Is the fieldwork in conflict with any activities that require your presence at the university?
- 8.3 If "Mostly" or "Seldom", why is this?
- 8.4 If "Other" (8.3), please specify:
- 8.5 Do you usually agree upon a budget for fieldwork before each fieldwork period?
- 8.6 If "No" (8.5), please specify:
- 8.7 By whom is your fieldwork funded?
- 8.8 If you have other third party funding, please specify:
- 8.9 Do you feel the budget granted for your fieldwork is sufficient?
- 8.10 If "No" (meaning you feel the budget granted for fieldwork is not sufficient) (8.9), please elaborate
- 8.11 Have you ever had any issues relating reimbursement of fieldwork expenses?
- 8.12 If "Yes" (meaning you have had issues relating reimbursement of fieldwork expenses) (8.11), please specify:
- 8.13 In what areas do you not (yet) feel adequately prepared for fieldwork?
- 8.14 Please elaborate on the issues (8.13) you ticked:
- 8.15 Have you ever had any issues relating reimbursement of conference expenses?
- 8.16 If "Yes" (8.15), please elaborate:
- 8.17 Please feel free to add comments on fieldwork or conference issues if you want:

9. OVERALL FEELING ABOUT RESEARCH AND SUPERVISION

- 9.1 What are the most important things you learned in the research project so far?
- 9.2 What are the most important things you appreciate in the supervision you get?
- 9.3 What are the most important things you miss in the supervision you get?
- 9.4 Do you have any further comments or suggestions?

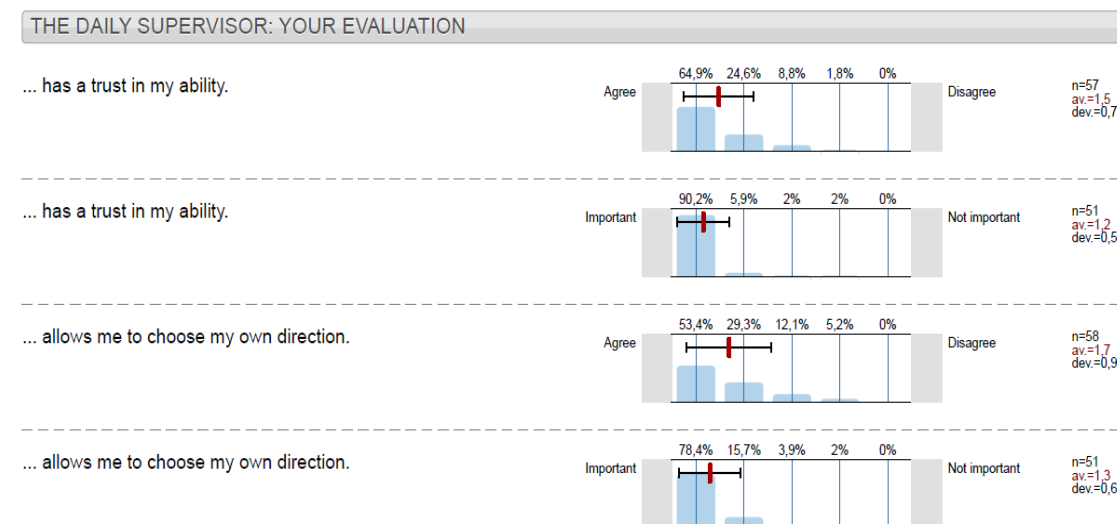
10. PhD CANDIDATE SITUATION

- 10.1 Gender
- 10.2 Nationality
- 10.3 Origin of research proposal

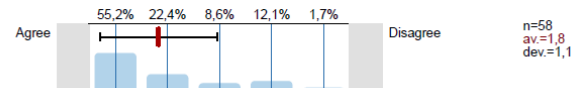
Appendix 2. Evaluation of supervision qualities and their importance

Below, you will find the responses to the questions inviting the respondents to comment on the presence of specific qualities on the side of their primary supervisor and to indicate the importance for them of those aspects.

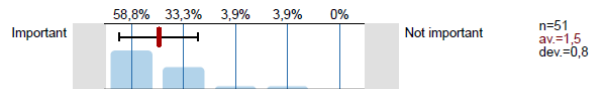
The maximum score is 1 (Fully agree, Very important), the lowest score is 5 (Fully disagree, Not at all important).



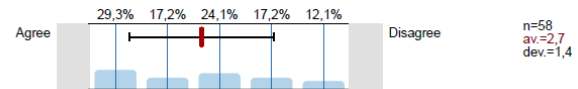
... is enthusiastic about my research subject.



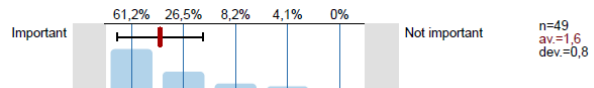
... is enthusiastic about my research subject.



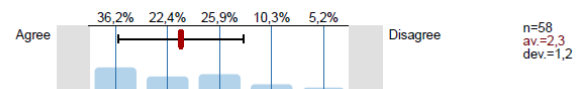
... discussed with me each other's' expectations.



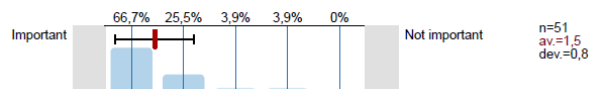
... discussed with me each other's' expectations.



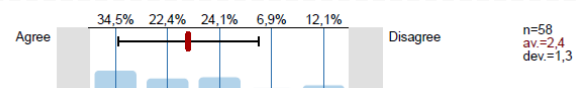
... asks questions that make me look at my work from a new perspective.



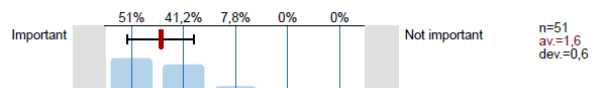
... asks questions that make me look at my work from a new perspective.



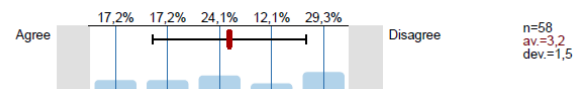
... promotes me with peers and colleagues in the field.



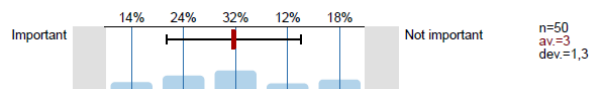
... promotes me with peers and colleagues in the field.



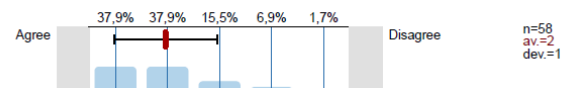
... provides sufficient information on graduate school guidelines and routines.



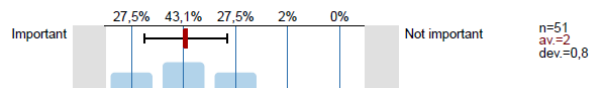
... provides sufficient information on graduate school guidelines and routines.



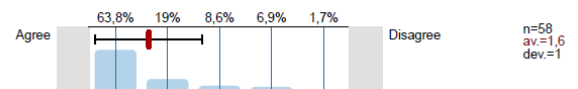
... encourages me to present my work at various research forums.



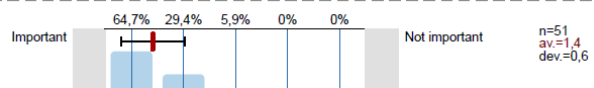
... encourages me to present my work at various research forums.



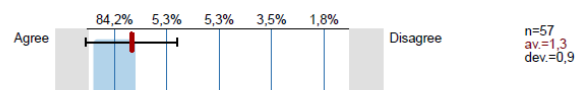
... responds timely when I have a question or send in my work.



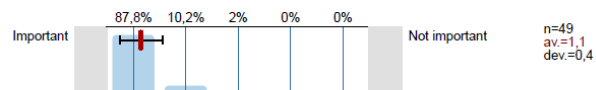
... responds timely when I have a question or send in my work.



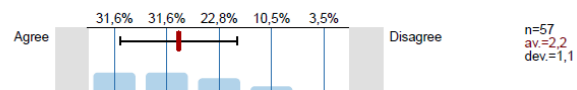
... shows respect for me as an individual.



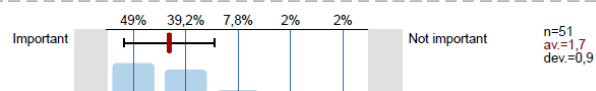
... shows respect for me as an individual.



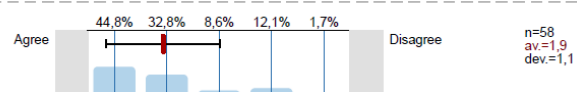
... helps me to maintain a clear focus on my research objectives.



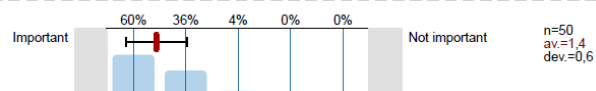
... helps me to maintain a clear focus on my research objectives.



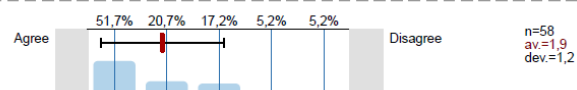
...advises me constructively on writing and composing research texts.



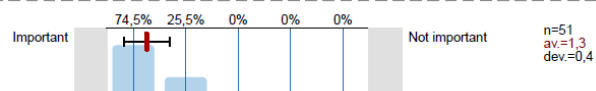
...advises me constructively on writing and composing research texts.



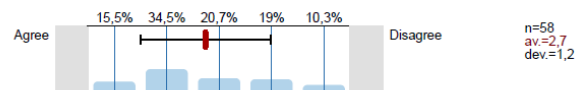
...provides constructive feedback on my work.



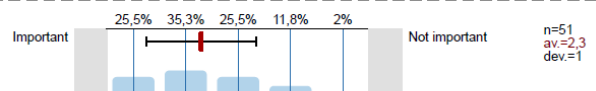
...provides constructive feedback on my work.



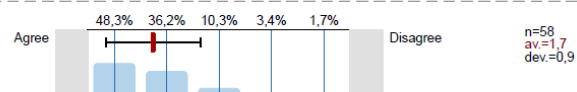
...guided me in my search for relevant literature.



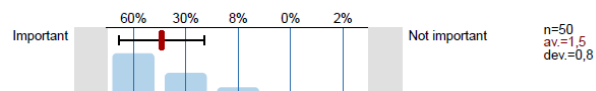
...guided me in my search for relevant literature.



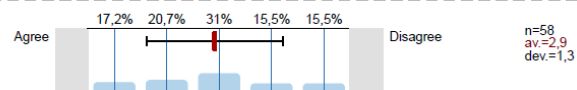
...is available when I need him/her.



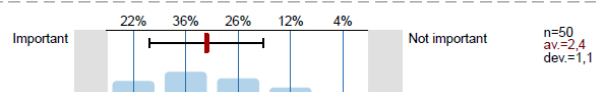
...is available when I need him/her.



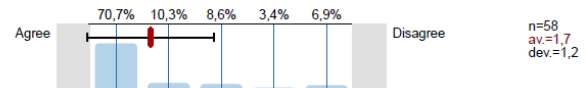
...regularly monitors my progress in regard of the deadlines.



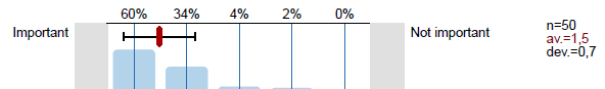
...regularly monitors my progress in regard of the deadlines.



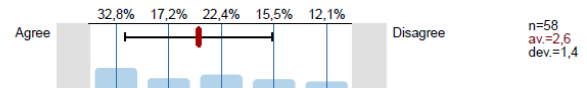
...carefully read the drafts of my texts.



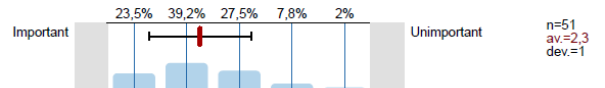
...carefully read the drafts of my texts.



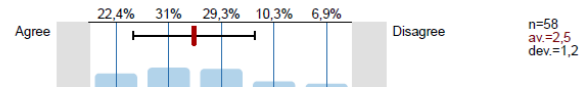
...structures discussions clearly.



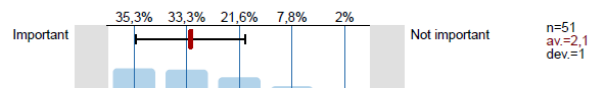
...structures discussions clearly.



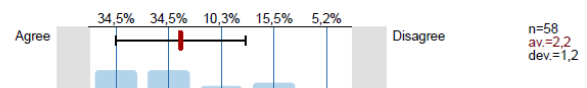
...provides helpful instructions about the steps I should take.



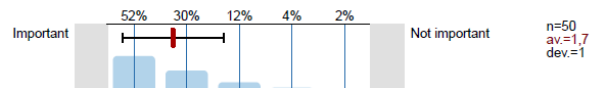
...provides helpful instructions about the steps I should take.



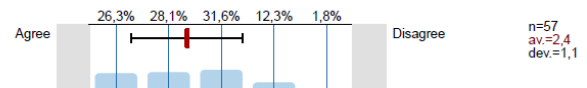
...discusses the expected product and scope of my dissertation (book, articles)



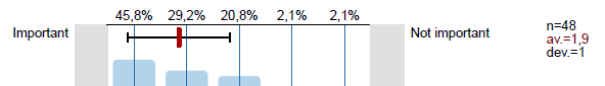
...discusses the expected product and scope of my dissertation (book, articles)



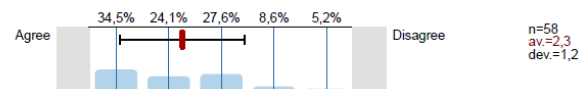
...helps me define a research scope.



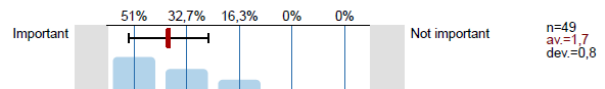
...helps me define a research scope.



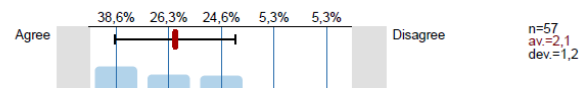
...swiftly takes action when I say I get 'stuck'.



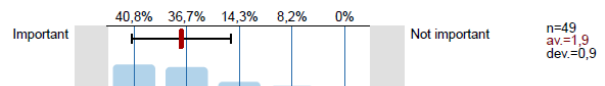
...swiftly takes action when I say I get 'stuck'.



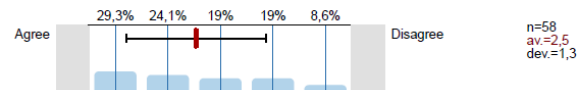
...advocates for my needs and interests.



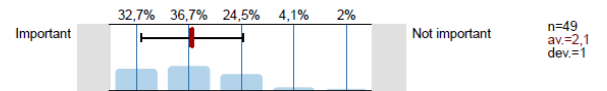
...advocates for my needs and interests.



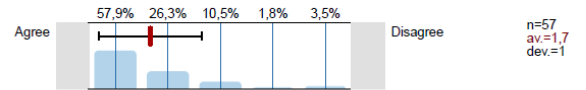
...is a source of new ideas for my research .



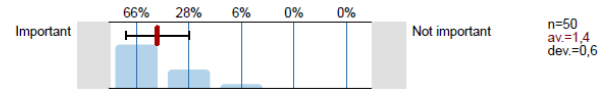
...is a source of new ideas for my research.



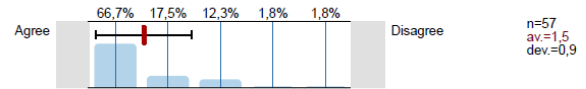
...is someone I can rely on.



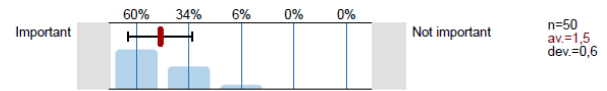
...is someone I can rely on.



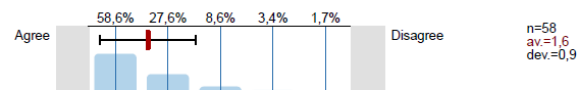
...keeps his/her appointments.



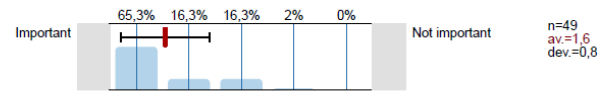
...keeps his/her appointments.



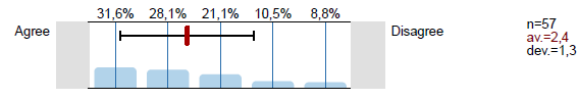
...does his/her best to ensure I have the essential facilities for my work.



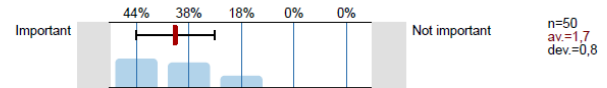
...does his/her best to ensure I have the essential facilities for my work.



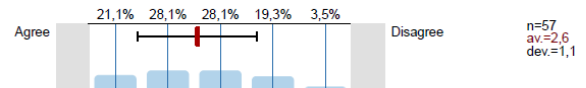
...has up to date expertise on the topic of my research.



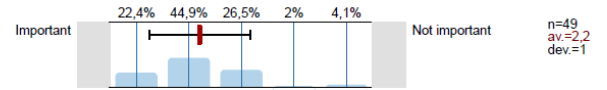
...has up to date expertise on the topic of my research.



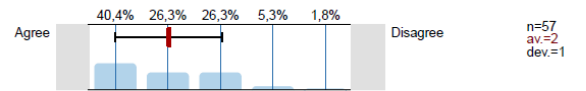
...provides good advice on my work planning.



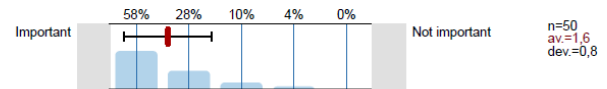
...provides good advice on my work planning.



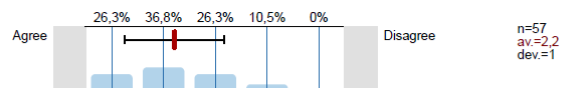
...provides helpful advice on the research design and methodology.



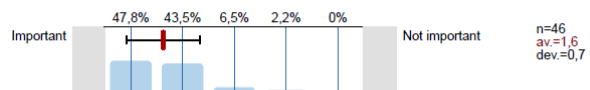
...provides helpful advice on the research design and methodology.



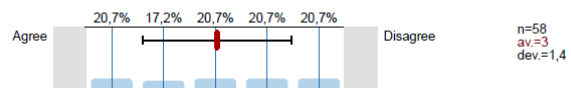
...helps me in overcoming research difficulties.



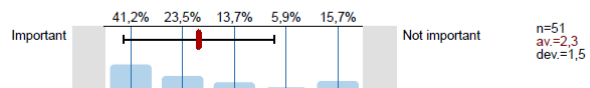
...helps me in overcoming research difficulties.



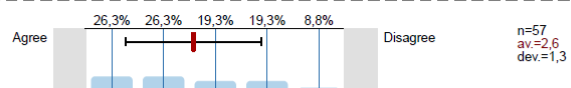
...helps me making plans for my near future (after dissertation).



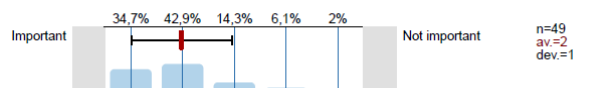
...helps me making plans for my near future (after dissertation).



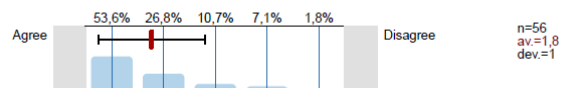
... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own.



... has the courage to intervene in my project when I encounter problems that are very difficult to solve on my own.



We discuss, and I am happy with, the assignment of co-authorship of my articles



We discuss, and I am happy with, the assignment of co-authorship of my articles

