PhD supervision charter Molecular Interaction Ecology at iDiv

29 May 2019

The goal of a PhD project

A PhD project is the road to becoming an <u>independent, scientific researcher</u>. The tangible product of a PhD project is the <u>PhD thesis</u>, which the PhD candidate defends before a faculty committee. If successful, the candidate will obtain a <u>PhD degree</u>. Ideally, the chapters of the PhD thesis are <u>scientific publications</u> by the time the thesis is submitted or soon after. With the skills and knowledge acquired, the thesis and publications, and an appropriate professional <u>network</u>, PhD candidates should be able to acquire a <u>suitable position</u> on the job market in *or* outside academia.

What does a PhD candidate need to attain these goals?

To achieve the goals defined above, the candidate must acquire <u>technical</u> and <u>personal skills</u>.

<u>Technical skills</u> are knowledge and experience based skills needed to carry out the PhD research project (e.g. particular lab techniques), to design experiments and analyze the data (statistics) and to present the results in orally or in writing (conferences, thesis). It also comprises knowledge on how to find, critically read and correctly cite relevant scientific literature, as well as good scientific practice (handling of data, results). For candidates aiming for a career in science, developing skills in writing grant proposals is essential. Technical skills are usually taught by experienced research group members and at (yDiv) graduate courses. The MIE research group and yDiv also offer activities, such as journal clubs and writing breakfasts/retreats, during which these skills can be implemented with more experienced scientists close by for support.

<u>Personal skills</u> that should be acquired during a PhD project can be specific to academic careers (critical academic thinking, generating own novel research ideas independently) or very generic, transferable skills (project management, supervision of students, self-reflection, conflict management) applying to any career path. The basics can be acquired in courses (e.g. time management), but personal skills typically develop by personal mentoring by the supervisors. This development thus strongly depends on the interaction between supervisor and student. Therefore, we must agree on how to communicate about the development of personal skills.

MIE Charter on communication between PhD student and supervisors

In order to achieve the main goal of a PhD trajectory, we agree that <u>open and clear communication</u> between PhD student and supervisors is extremely important. In particular, the <u>expectations</u> that live on each side should be expressed. <u>Responsibilities</u> should be clearly communicated. We will make every effort to make our communication <u>honest</u>, <u>respectful</u> and with consideration of <u>individual differences</u>. Supervisors should <u>lead by example</u>. We agree that everyone needs <u>free space and time</u> in order to reflect, develop independently and regenerate from work.

How are we going to implement the MIE supervision charter?

We use the following specific moments offered by our group and yDiv to discuss the progress of the PhD project and the candidate's technical & personal skills:

1. Monthly PhD supervision meetings with group leader present: feedback on project progress, personal and technical skill advancement
2. Half-year progress meetings in MIE meetings: assessment progress of PhD project and presentation/ scientific writing skills of the candidate. *A meeting with the supervisors will be planned right after the half-year meeting to discuss the PhD student's progress – both technical and personal – as well as views on future careers perspectives in and outside academia.*
3. PhD Advisory Committee (PAC) meetings[1]: assessment progress PhD project, personal skill advancement and feedback on supervision (confidential to yDiv coordinator). *PAC members & the yDiv coordinator will be invited to attend one of the half-year report meeting (if necessary over Skype) once per year. The PAC meeting will take place right after. The PhD student is responsible to inform the PAC members & the yDiv coordinator well ahead of time of time, date and location of this yearly meeting.*

General agreements on the approach

- In supervision meetings, both PhD student and supervisor give, accept and change their honest opinion. The communication is based on trust and respect.
- The PhD student respects that the supervisor has more experience, but does not expect that the supervisors know everything. The supervisor acknowledges that the PhD student is the expert on the practical, experimental details of her or his project. Both student and supervisor take responsibility in finding the right information.
- PhD student and supervisor will define specific tasks and responsibilities for parts of the PhD project together. They set clear deadlines for completion of the tasks, while respecting each other's private time. When expectations or deadlines are not met, the reasons will be communicated timely.
- The intention of both supervisor and PhD student is to complete a PhD thesis within the time that the PhD student is funded (3 or 4 years).
- PhD student and supervisor will openly discuss their views on future career options – in and outside academia- for the PhD student. The supervisors will allow the PhD student to gain experience outside academia, e.g. by doing internships in companies.
- When feedback is given, both strengths and weaknesses are addressed. Give praise were due. Failures are accepted as a way to learn.
- In order to optimize the communication, supervisors should receive training and mentoring to become better supervisors of PhD students by FSU Jena or yDiv.
- Conflicts will be primarily solved in the student-supervisors team (including the group leader). Else the yDiv coordinator or the iDiv counsellors will be asked to mediate.

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[1] PAC are for yDiv students. ITN programs (e.g. MiRA and TreeDi) may have another structure for monitoring PhD student progress which may be followed by the respective students and supervisors. Half-year reports in MIE meeting will remain independent of this.

- Supervisors will introduce their students to their professional networks where needed and appropriate. For example, when the PhD student needs specific knowledge or techniques not present in the group, when at conferences, and by forwarding open positions with colleagues.

Specifications to the iDiv charter

Specific expectations on the PhD thesis writing process

In principle, the responsibility for writing the PhD thesis lies with the student. In practice, this is difficult, because the research chapters are commonly multi-authored manuscripts/publications. This is why students have to specify how much they contributed to each chapter (see PhD regulations FSU Jena) and why it is sometimes extremely difficult to judge what is the student's own contribution.

For this reason, Nicole van Dam and other supervisors in MIE expect that the initiative and responsibility for writing the thesis' introduction and discussion chapters rest for 100% with the student. As supervisors, they will coach the writing process by giving feedback only. This will be done in two steps: 1) the student produces an outline (bullet list on section level or a bit deeper). The supervisors and the student discuss whether all relevant points are addressed and decide on the overall text structure of introduction or discussion; 2) the student provides a first full version, on which the supervisors will provide general comments concerning structure and content. Potential language issues will be specified, however text/grammatical corrections are the responsibility of the student (consider using software solutions!). English writing skills will be trained (courses) and given feedback on during the PhD project. At the time of the final thesis writing process, when the introduction and discussion are written, the student should be skilled enough to write scientific texts in proper English her/himself.

Specific expectations on the administrational process

The PhD student takes the lead in submitting the necessary paperwork to the FSU Jena with regards to signing up for the doctoral program, the form to be accepted as a doctoral student (signed by the supervisor), the forms to sign up to yDiv, et cetera. The links where to find forms and regulations for the FSU Jena can be found at the yDiv website and the website of the FSU Jena. Together, PhD student and supervisors identify suitable candidates for PAC and thesis committee members. The PhD student invites PAC members and collects their signatures. The PhD student is also responsible to send around the half-year report one week before (to MIE and PAC team) and inform PAC team members, including the yDiv coordinator, about these meetings (date, time, location) in a timely fashion.

Specification on half-year report

The PDF of the half-year report is sent around to all MIE members for reading and preparing the presentation in the MIE meeting. As a rule, the PhD student sends the PDF <u>one week</u> before the presentation will take place. The purpose of the report is to evaluate your progress and for MIE members to advice you. Texts, figures, and other content must not be final or perfect. It will not be judged or scored by anyone. If done well, it serves as the basis for the text of your PhD thesis. Half-year reports are <u>confidential</u> and will not be sent around to others without explicit permission of the PhD candidate.
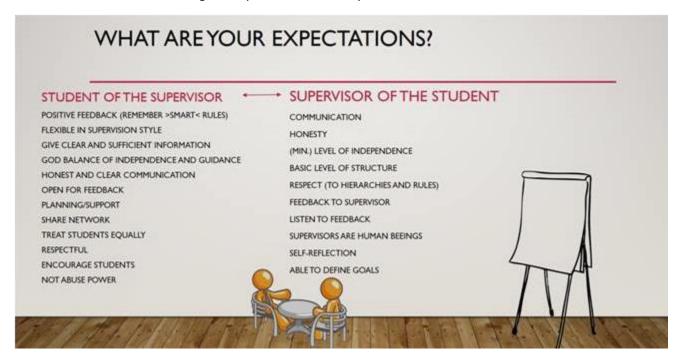
Appendix

Background and history

This document summarizes the discussions held in the MIE meeting on 6 November 2018 and 21 May 2019. All MIE members present at the time contributed to the document above. In particular, we made use of the experience and materials shared by Henriette Uthe and Alexander Weinhold, who followed a course at the FSU course on "How to be a good supervisor". Furthermore, we also considered the yDiv supervision form (also in folder) and invited Nicole Sachmerda-Schulz, coordinator of yDiv, to participate in our discussions. It was finalized in the meeting of 29 May 2019.

Henriette Uthe made notes at the meeting, which are attached below.

The MIE PhD charter follows the principles of the iDiv charter. It is inspired by the Maestre 2019 publication on healthier labs. Like any other charters, this is a living document and it should be updated as needed.

Course materials "How to be a good supervisor" Shared by Henriette in November 2018

Minutes -Supervision Charter meeting MIE

–made by Henriette Uthe on 6 Nov 2018

- What is the Product? What the goal?
    - PhD Thesis
    - Publication(s)
    - Networking (Conferences, references)
    - Skills /Knowledge (scientific, personal)
    - Lab skills, reading literature
    - Personal development (e.g. confidence, time management, stress, priorities)
    - Generating own scientific ideas
    - Academic thinking
    - Project management
    - Supervision Skills (of student assistants, techn. assistants)
    - Team work
    - Writing skills
    - Communication in English
    - Mentoring
    - Conflict management
    - Project/Budget/Proposal management

Trajectory

Guidance to independence

Involvement in academic processes (grant writing, writing of publications

Acceptance, that your supervisor is more experienced, but not all-knowing

yDiv Training courses

- Master-Apprentice Relation ?
- PhD students = Consumers ? -- NO!
- Training:
    - Lab skills   PhD, students, assistants
    - Presentation   yDiv training course, journal clubs, meetings
    - Writing   yDiv Training, PI
    - Good scientific practice
    - statistics
    - critical thinking   discussions, promote students to be updated about literature
    - discussion   initiation by the PI´s
    - Time and Stress management
- Communication:
    - Open communication both ways
    - Both parties have to accept, that they both can be wrong and have to change their opinions time to time
    - Explain your descissions

- Make clear appointments and deadlines (both directions)
  - Explain why you missed deadlines
- Learn how to fail (experiments, grants, papers)
- Sharing experience (between PI´s and between PhD students)

Tools to achieve

- "open" group meetings to share success and failures
- Supervision meeting (SWOT Strength, Weaknesses, Opportunities, Threats Analysis)
- PAC Meeting
- Progress Report
- Yearly evaluation (more personal level)
- Honest feedback – from the PAC team and the supervisor – is that really possible? Pay attention to the personal and cultural circumstances!
- Honest career discussions
  - encourage student to be honest to himself/herself
- Thesis introduction and discussion should be continuously written (3 steps process)
- Is there a way to give feedback to the supervisor about the supervision?
- Lead by example (live what you say)
- Respect private life of each other
- Respect and value all lab members and the lab itself
- Respect the rules (be open to explain why this rules exit)
- Trust each other
- Take responsibility
- Clarify rules of the lab and group

Open Issues:

Training for Supervisors

Meeting of Supervisors in Leipzig (where is the limit what problems can be solved within the meeting ?)

ydiv board – initiate a meeting in iDiv

intercultural training