FUR feedback and future plans regarding the self-evaluation and opinion of the FUN committee

The FUR committee evaluated the external review and agrees with the general assessment and the opinion of the FUN committee. As the report states, we are on a positive trajectory, but some things need to be improved. However, the external review provides feedback exceeding the FUR committee's responsibilities and addressing the field of MicroData Analytics (MDA). While all things are connected somehow, the answers of the FUR committee here are focusing on the specific changes to the Ph.D. program and FURs responsibilities, even though larger implications are taken into account. Further, the FUR committee has not had the chance to decide on any of the suggested measures; thus, we will list options and directions in which actions will be taken. We will carefully evaluate each point and hopefully devise more explicit actions and regulations.

The specific goals FUN identified are listed and explicitly addressed point by point, starting with the most straightforward item.

- Clarify and sharpen the wording in the general study plan for how the process of quality assurance of the thesis before the public defense should take place.

The FUR committee would like to clarify that it is the student who defends who is directly/solely responsible for the thesis's quality. Any outside assistance or shared responsibility would constitute a conflict of interest. However, FUR needs to ensure that the formative and educational environment enables students to deliver an appropriate thesis. We thus identified four objectives we need to improve – in no specific order:

Academic writing
We can either provide workshops, classes, or seminars to improve the academic writing skill of students.

Supervision/Mentoring
Currently, academic progress is facilitated by mentors and the annual update of the personal study guide. To improve this process, we would like to add an extra yearly meeting with mentors, students, and two members of the FUR committee with the explicit goal to discuss the quality and progress of the thesis. This also serves to improve the psychosocial environment, as it creates more transparency and gives additional opinions to students and mentors. This measure seeks to prevent that the FUR committee is not informed about the mentor/mentee situation and to have the option to intervene early, if necessary.

Quality control/assessment

Before application to defend, now students have to present their thesis or a substantial draft to the FUR committee, upon two members will review the thesis. While we practice this already, this should become an official part of the study plan.

Supervisor time

Currently, each student has 128 hours of guaranteed mentoring time per year. We think this is insufficient and thus seek to expand this mentoring time.

- Clarifies how the overall framework for the MDA process should be reflected in doctoral education in general and in thesis and licentiate work specifically.

- Clarifies how the challenges surrounding the above, including strategic career choices, can and should be communicated with doctoral students during doctoral education.

We will address these two points jointly.
The basis of the MDA process is the "data analytics pipeline," which consists of four steps; each step is currently represented as one of the four mandatory classes. This "pipeline" is an instrumental part, and once mastered, students can proceed with their doctoral studies. Here, the educational path splits into an academic and an applied one. The academic path sets students up to become educators or researchers within a university or similar environment. Their research will primarily revolve around the science of microdata analytics, method development, and maybe interdisciplinary endeavors involving data analytics. This other option is to "leave academia" with a Ph.D. title and apply data analytics methods. This application predominantly happens within a different scientific domain and is thus inter- or transdisciplinary. What is unclear in the study guide and within the environment is how this contextualization or domain knowledge is taught or acquired. In practice, it depends on the students' interests, opportunities provided by the mentors, networking, or coincidence. While such a process is evident for established disciplines, here, this needs to be addressed.

Secondly, MDA needs to brand itself better, such that the above considerations become as obvious as they are in other disciplines – nobody discusses these matters in the context of statistics, for example. Statistics is either applied to data from other disciplines, or new methods are developed.

We want to promote changes in the following directions:

Possible additional interdisciplinary course

We will discuss either adding an additional mandatory course dealing with applications of data analytics in other disciplines or interdisciplinary work in general. Another option would be to require credits to be collected in courses specific to the application domain of the student's thesis, for those theses which are not only about microdata analytics.

Study Guide

The study guide needs to be changed such that it explains the different career-options and illustrates how the basic data analytics pipeline relates to these career paths.

Updating the form for the "Individual Study Plan"

To ensure that students are aware of the different career paths and improve education with scientific domains extern to MDA, adding a section to the ISP where students need to reflect on this matter seems prudent. For example, "Plan to ensure interdisciplinary domain knowledge" is possible. This goes hand in hand with mentoring and the extended mentor group (see above).

Expanding knowledge about MDA

To help students find their way within our field and to improve our networking and the student's ability to network, it is imperative to communicate to the public and the research community what MDA is. This point also addresses the external referees' comments about publicizing and branding the MDA externally. Specifically, we would like to host a summer school, workshop, or special session at other data analytics conferences. However, this goes beyond FURs responsibilities but is a highly supported endeavor. Also, we prefer to do this in person instead of virtual, which is currently impeded by the corona situation.

Future collaborations

Other universities, such as ones from China, actively seek out collaborations in the form of student exchange or simply sponsoring students to complete their Ph.D. in our department. Similarly, SLU proposed to have joint Ph.D. students, and we have other opportunities to pursue Erasmus collaborations. While the FUR committee supports this and pursues steps in this direction, such collaborations require further legal matters to be resolved, which is outside of FURs responsibilities. However, we will pursue additional steps in this direction.

- Report back on how the work to ensure a good psychosocial working environment for doctoral students — especially on issues of cooperation, working climate and communication — has been handled since the work environment inquiry was carried out in 2019 and what is being made forward in this area.

The FUR committee is very interested in improving the psychosocial work environment. However, we have to note that the health of the psychosocial work environment beyond the Ph.D. students and their affairs is outside of our responsibilities. Thus we cannot take any actions or decisions in these directions. Secondly, it is not clear to the FUR committee what the exact implications of the internal investigation are. We also believe this to be a matter of the entire environment. Again, we will speak for ourselves as a part of that environment, hoping to improve the situation, but not beyond our focus group.

Whistleblowing

There is a somewhat natural progress of escalating problems from the nearest colleagues to the ones ultimately responsible or even beyond the department. In a healthy work environment, and that is what we thrive for, problems are mitigated at the lowest level. Direct and immediate conflict resolution is the keyword here. However, there also needs to be an official process and person to contact, who is providing feedback to the FUR committee. Otherwise, problems will only be recorded but not resolved. At the same time, students or mentors might find themselves in a conflict of interest with those they should consult with or report to. For example, the FUR director might be the point of contact but might also be the mentor a student might have an issue with. Thus, we will establish and communicate in the study guide a proper procedure. Further, we will identify the students' external contacts, such as the Ombudsman, student union, HR representative, etc.

Ethics and conflict resolution seminar

We will host additional ethics and conflict resolution seminars to help students navigate their current and future work environment.

Mentoring (and possible conflicts)

As mentioned before, some conflicts stem from a difference in expectations of mentors and students. Thus, we think it to be reasonable to expand the mentoring group (see **Mentoring** above).

A stronger community leading to more transparency

It is the belief of the FUR committee that an active exchange between Ph.D. students, faculty, and the work environment plays a crucial part in improving the psychosocial conditions. The exchange between students will allow them to compare workload, expectations, advice, and mentors. While it is challenging to implement this during CORONA times, we identified the room situation as a primary factor. We agree that sometimes a single office, particularly when students have to write and need to be free from distraction, is desirable. However, we also think that group offices enable the aforementioned items. Thus, we want to have students more in group offices and closer to their mentors. In the current layout, this is difficult, and we do what we can, but this item needs to be addressed predominantly in the new building.

This concludes the steps the FUR committee seeks to implement as a direct response to the self-evaluation, external review, and FUNs opinion letter.

We need to address another point regarding competency and responsibility—specifically, the point about the consultation of the environment and the academy management. We assume the suggestion to be made in good spirit, similar to "get the advice and opinion of others to make better decisions." We were happy to do so and think this is a good idea to get input from our environment and also take inspiration from their experiences. We have consulted on

various occasions with various members of the research environment, and are confident that their input has been heard.

However, at the same time, we think that this situation of environment vs. leadership that is specifically one of the issues revealed in the internal investigation. Without pinpointing to any specific objective from that report – the "us vs. them" mentality comes to mind. We currently have the situation of separating competence and responsibility. Let us make an example: Imagine two mentors A and B who are NOT part of the FUR committee. They might have different opinions and convictions, for example if the thesis is fine to be a collection of papers with an intro and a summary (Kappa) or if it should be more akin to a monography telling a more comprehensive and deeper story than a collection of papers is capable of doing. More importantly, both mentors, because they know their students better, might even be right about knowing what is "best" for the student. While consulting them broadens the knowledge of the FUR committee but does not resolve anything. Whatever is decided is the responsibility of the FUR committee, while Professors A and B have exactly no power to affect that decision other than some form of "social engineering". Similarly, there are situations in which FUR has no power regarding decisions of the academic management, even though FUR might be more competent in some cases. Inversely, the line management might be more competent about larger contexts the FUR committee focusing on the educational aspects might not be competent about. We think that the tradition of talking and hoping only works under ideal conditions, and it was possibly a contributor to the conflicts in the past. Thus, we find it important to point out this issue, saying that we do neither have the competence nor the responsibility to speak for the environment or the leadership – and neither do they for us.

As we are in a reorganization phase, where we have the opportunity to remedy these issues, we find it more important to raise these points – while maybe inconvenient or pedantic, we all want to be in an environment where not only everyone is heard, but where also everyone can take an active role and ownership in the decisions pertaining to all of us.

In behalf of FUR

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(Arend Hintze)