

MINUTES

MEETING

Development Dialogue Computer Sciences

DATE

November 7th, 2019

PRESENT

Delegation from UVA and VU (further noted as 'delegation'
Visiting accreditation committee (further noted as 'committee')

Subject: Minutes Development Dialogue Computer Sciences

During this meeting, the delegation would like to discuss two topics: the cooperation between UVA and VU concerning the Joint Degrees MSc Computational Sciences/ MSc Computer Science, and how to deal with the growing number of students combined with staff shortage.

The delegation asks advice on how to arrange further cooperation between the Computer Sciences departments of both universities.

During the various interviews, the committee conducted at UVA and VU, the committee got the impression that students really like the benefit of the cooperation between the two universities. However, this cooperation requires much operational value and overhead to make it work. Since the original plan to move to one location has been called off, the programmes are stuck with the bilocation, which greatly contributes to the operational issues. Students however admitted that they consider the travel time as a lesser evil compared to the wide variety of courses and (research) subjects the collaboration between UVA and VU offers. In addition, the committee feels there is a big imbalance in the Joint Degrees, where the MSc Computational Science is mostly taught by the UVA and the MSc Computer Science mostly by the VU. If the cooperation is to be continued, both the committee and the delegation feel there is a need to build a cooperation that is more in balance. The committee states that there seems to be a cultural issue as well. Students seem to strongly identify with either UVA or VU, and do not seem to perceive the programmes as true Joint Degrees.

The committee also perceives an imbalance in the inflow in the joint master's programme with regard to the two separate bachelor's programmes. Although part of the UvA bachelor CS graduates enrolls in the UvA/VU master's programme Computer Science, this number is significantly lower than the number of VU bachelor CS graduates that continue in the same master's programme. Moreover, this percentage also appears to be considerably lower than the national average of continuation from bachelor's to master's programmes. This leads the committee to believe that UvA bachelor's graduates do not perceive the joint degree master's programme as a continuation of their bachelor's programme, and that therefore the UvA gets the wrong end of the deal as the joint programme leads to a loss of students at UvA. This however is not entirely the case, state the delegates. The VU has one master Computer Science containing several tracks, the UVA has a number of stand-alone masterprogrammes oriented towards computer science, which can essentially be seen as specializations of computer science. They do not have the title Computer Science, however. Therefore, most bachelor graduates at UVA stay at UVA in the various masters oriented towards computer sciences. The delegation does allow that a large number of UVA graduates does enroll in the VU MSC Computer Science, JD.

UVA delegation states that one possible reason for this trend is the name change for their master Computer Science to Grid Computing in the past.

The committee asks the delegation to consider what the intended advantages are and with that in mind, revise a plan how to get there. The delegates are firm in that they do not want to lose their collaboration. The committee states that the problems in the collaboration seem to be mostly about the bilocation and about a balance between lecturers from both UVA and VU. The strong identification of the students with either UVA or VU is also an issue.

The committee advises to consider co-teaching between UVA and VU, especially since the student numbers keep increasing. At the very least, make sure that there is more of a balance in courses taught in either university. Otherwise, either party will never perceive a true collaboration. If travelling is a burden, why not use technology to overcome the distance? This might help student to get ready for the real world. The best option in the opinion of the committee would still be to physically go to classes. However, if this is a hassle, than try to use models where to consider co teaching and using learning technologies.

In addition, the committee observes a discrepancy between the delegations statements and the reality. UVA and VU state they see each other as complementary and not competitive. However, the committee sees competition. For example, when during information days students go to UVA, UVA does not tell them to also go see the VU (and vice versa). Improve this by scheduling information sessions on the same day, first see the students at one university and an hour later at the other one or make it a joint event. Let speakers from both universities present the programmes. This would also decrease the cultural bias students have for either UVA or VU, if they see regular cooperation between both parties. If the delegation truly wants more cooperation, this would be an example.

The committee states that the UVA and VU are now at a crossroad with four options:

- Use technology and all aforementioned option to make the Joint Degrees work truly as Joint Degrees, with more cooperation and more balance.
- Disentangle the two programmes and keep two single degrees. However, keep the good collaboration, for example make use of each other's courses. This seems to be the greatest benefit perceived by students.
- Leave the programmes the way they are.
- Finally, the committee suggests the delegation do an exercise where UVA and VU staff members are put together to sketch a new layout. They strongly suggest to include students in this exercise.

Does the committee have suggestions for dealing with the growing number of students and the shortage of staff?

The committee states that all Computer Science programmes this committee visited have complained about a staff shortage. The UVA delegation explains that they are already looking into other constructions, for example, where they can offer a one-day position in industry and the remainder of the position at the university. Since universities are quite constrained in what they can offer candidates, this is a way to offer something more in the range of salary. The VU delegation advises that it would be worth to look at medical schools and law schools, since they are used to this construction and might be able to share some valuable experiences in this area. The VU has set aside addition funding for junior lecturers, which considerably lighten the workload in various departments. The committee has seen other universities extent the PhD-period with a year. During the PhD, 25%-30% is spend on lecturing each year. In addition, the PhD candidates are offered the possibility to obtain their BKO during this period. This is only possible if the university is in control, not with EU funded PhD's. For the EU founded PhD's, the four years of EU funding could be used with the addition of 1 year funding by the university. This construction offers prospect for PhD candidates, since they can obtain their teaching qualification in that additional year.

The delegation also states that it is difficult to be a University in Amsterdam competing for staff. It is a tricky balance to be both competitive as university and be attractive. In Amsterdam, there is the housing crises for example. The VU started a cooperation with Twente University, partly to show students that an hour/an hour

and a half of commuting time is not so bad. However, expats do not have a problem with commuting itself, but they want to live in the city.

The real problem is the fact that there are just not enough people available. In addition, the university loses people to industry, especially in computer science/AI. Those people are of course not lost to society and the universities can keep them in their network, however, the university cannot replace them with experienced people quickly enough. The committee mentions that remote teaching (teachers from other countries via video connection and the cloud) might be a possibility to look into. One of the committee members has extensive experience with this: remote teaching combined with an online course. He teaches a class, with a second class at a partner university overseas which are connected via video connection as a virtual classroom. The committee member states that students (in a small class) say that it is really like the real world, since many (big) companies work like this. There is a lot of interaction in the classroom (both the actual classroom and the virtual classroom), where students are leading the discussion themselves. This leads the committee to advice that the teaching itself might be in need of innovation, to accommodate the larger groups of students.

Additional topics

With time left to spare, there are two more topics the delegation would like to discuss.

How to scale up graduation theses supervision with increasing student numbers?

The committee has seen some examples where the bachelorproject is shared among a larger number of students (around 10). In this particular example, the thesis was much more industrial based, the textual part was considered less important than contribution and collaboration. In addition, there was a heavy reliance on scrum methods, which many universities seem to rely on. The committee agrees that 10 students working on one project is a lot, however this was done on purpose to build complexity and to focus on the different roles and skills required.

At the University of Utrecht (UU), they have a different construction. The UU has a project organization that finds companies that are interested in participating in a bachelor's project as a customer. They define a project which students can work on and pay for this service. This money is used to rent office space and fund the project, which is run like a regular small company/ students work on this for six months to up to a year. There are many companies who are interested in a specific topic, but do not have the time and/or resources to invest in it themselves. The delegation finds this an interesting approach, but is concerned about liability. The committee agrees with this, and explains that there are strict contracts in place between the UU, the students and the third party. In addition, managing the expectations is key, as are guidelines as to what students are expected to deliver to the customer. This is necessary, since the result needs to display the bachelor level. This construction makes it much more difficult to demonstrate that the project has met the exit qualifications, especially since the research part is more difficult to display in practical projects.

Another option the committee sees as a possibility is peer review. This however requires the students to take great responsibilities. The delegation feels this would be more useful as a feedback instrument, however without presuming students to be do this on their own without additional instruction, guidance and/or training.

How to positively influence the gender disbalance in the (bachelor) programme?

The delegation asks if the committee knows of any initiatives that may be learned from. Especially at the UVA, there is a big gender disbalance in the bachelor. The committee advices to look into switching the main language of the programme to English. The bachelorprogramme at the VU has a much better gender balance, which seems due to more female international students. Changing the programme to a more internationally oriented programme might be an option to enroll more female students. This, however, does not seem to change the underlying problem that Dutch girls do not enroll in the programme. The committee believes showing female role models (at bachelor days, in information magazines and on the website) would be an asset. In addition, discussion centers on the topics that would interest more females into the beta sciences. For example, display not only the technical possibilities, but moreover the applicability to society and the possibilities to help society.