

Assuring Quality in Science – Interview with Uwe Schmidt

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Maintaining a certain level of quality in research and lectures and measuring this level has become increasingly important in recent years. Due to the diversity of scientific research fields, a general approach is difficult. At the University of Mainz, the *Zentrum für Qualitätssicherung und -entwicklung* (ZQ, Center for Quality Assurance and Development), takes most important organization of this kind. We talked to Dr. Uwe Schmidt, head of the ZQ, about the role of evaluation and quality management in natural sciences and the humanities, the Bologna Process, and the principles of scientometrics.



JUnQ: From your perspective as head of the Center for Quality Assurance and Development (ZQ), by which means does the ZQ assure quality at the university?

Schmidt: There are different areas in the field of quality assurance. First, we are the first university in Germany that is system-accredited, i.e. we have the ability to accredit our study program internally. Every five to seven years we ensure that the programs fulfill certain standards and, in close cooperation with the lecturers, assess whether further improvement is necessary. Additionally, we conduct surveys among graduate and undergraduate students. The second field is more related to organizational and managerial questions. Here we develop strategies to optimize management processes.

In the third area we look into matters of quality assurance in research. Typically, this is accomplished by peer review process and a few other indicators, like third-party funding and the number of publications.

JUnQ: Could you say a few words about the system accreditation.

Schmidt: Since the introduction of the bachelor/master degrees every study program has to be accredited. For this purpose there is a national Accreditation Council, which approves certain Accreditation Agencies, which in turn, accredit the study programs. Therefore, in 2006, we developed a model allowing Accreditation Agencies to accredit the whole university and its internal accreditation of individual study programs, which is done within the university. In 2011 we became the first university that was system accredited in Germany, providing us with the possibility, not

only to accredit study programs, but also to raise a discussion about the crucial criteria.

JUnQ: Since when does the ZQ exist and why was it founded?

Schmidt: The ZQ exists, with predecessors, since 1992 under the name "Project for the Promotion of Study and Teaching". Within this project we accompanied over 200 innovative teaching projects. Since the mid-90's we focus on the internal and external evaluation of institutes, departments and whole universities, whereby an internal evaluation is followed by an evaluation of external referees. The ZQ itself was founded in 1999. In contrast to other universities, the ZQ is a scientific institution, residing between the departments and the directorate of the university, which is quite an unusual constellation in Germany.

JUnQ: Most students only know the questionnaires at the end of the semester concerning the lecture courses. What are the differences between the evaluation of lectures and the evaluation of research?

Schmidt: The evaluation of research arises out of particular occasions, e.g. to choose specific referees or refereeing methods. In contrast to the evaluation of lecture courses, these measures are non-permanent.

JUnQ: Regarding the questionnaires, what are the actions resulting from this type of evaluation?

Schmidt: The evaluation of the lecture courses takes place regularly every three semesters. After having analyzed the

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data, we offer various consulting services, such as individual coaching for the lecturers. Direct feedback alone, as it is known from research, does not necessarily lead to a quality improvement; it is important to interpose an advisory process. Obviously no lecturer is aiming to give poor lecture courses. They just have not learned the proper way to do that. Therefore we need these individual coaching offers.

JUnQ: Which criteria are used for evaluating the quality of research?

Schmidt: In the area of lectures, as well as in research, we refer to the so-called AGIL-scheme from Talcott-Parsons. It states that you need to consider different dimensions and harmonize them. For example, not only do you need resources to have good lecture courses, but you also need good didactics and vice versa. For research this states that not only the high output is important, but also its quality. The four dimensions in this scheme are, of course simplified, the resource dimension, the dimension of results, the dimension of integration and the dimension of scientific culture. Based on this scheme we developed a model, where you can only achieve 25 points for each dimension, leading to a balance, e.g. between publications and scientific culture. The idea is to relativize the momentum of these research indicators. Furthermore, the model allows us to differentiate not only subject-specific, but also age-specifically. A senior researcher would gain a lot more credit points in this system, due to his work in various boards and committees, but might not need to acquire that much third-party funding.

JUnQ: Which measures are taken when criteria are not fulfilled?

Schmidt: As stated before, we offer individual and group coaching lessons. Furthermore, the results are not only presented to the respective lecturer, but also to the dean of the department, who might initiate a collegial discussion. The internal discussion between colleagues is the most promising approach, since it is more effective, than external interventions.

JUnQ: Do you also work on external projects?

Schmidt: We are mostly funded by external projects, as we evaluate several nation-wide projects. To name just one example: we currently evaluate a national project from the Federal Ministry of Education and Research, funding more than 170 universities, which is supposed to ascertain the quality in teaching. Our advantage arising from these external projects is that we gain a lot external knowledge, even from non-university projects. This helps us to gain a broader focus and improve our work.

JUnQ: Besides the assurance of quality, you are also dealing with evolution of quality. What does this mean exactly?

Schmidt: The development of quality is the transition from measuring quality towards distinct measures and procedures, e.g. the previously mentioned coaching offers. Normally we try to pool the evaluation and the development of quality, especially if we are working with whole departments. We try to integrate these measures for quality evaluation into the process, including discussions and consulting offers, as many persons know their problems but do not want to openly communicate them.

JUnQ: Do you see differences in the quality assurance in scientific research, with respect to the different departments?

Schmidt: Definitely. - Especially when looking at criteria and research processes. When looking at interdisciplinarity and network structures, traditions differ immensely between natural sciences and the humanities. In natural sciences the concept of the post-doc supervising PhD students is well known. In humanities, however, this concept is just on the onset of being established. But to be fair, the humanities also lacked the resources to do so. Furthermore, theoretical research in the humanities does not necessarily need that much external funding and one has to think about how to evaluate this work.

But also with respect to only one research field, there can be quite large discrepancies. For example when comparing literary studies and linguistics - two fields that overlap in many instances. In contrast to literature studies, linguistics is often more empirically oriented, makes use of peer reviewed journals and impact factors. Therefore, you have very different reference systems.

JUnQ: On a more critical note: It seems that a lot of money is spent on the evaluation of research, instead of funding the actual research. What is your opinion on that?

Schmidt: I think that we have to guarantee that these evaluation systems are not evolving in a way where they are completely decoupled from their initial purpose, namely, to support research and lecturing. Then again, since more and more work tasks and functions are outsourced from the ministries to the universities, and due to the rising complexity and size of the universities, more resources are needed to maintain and evolve quality. A very good example is the Bologna process. In this process many resources were needed; not only for the assurance of quality, but for the organization of study programs. Since exams take place more frequently - contrasting to the previous system - the bureaucratic effort has risen tremendously, due to fact that all conditions have to be legally suitable. Furthermore, the documentation of the students' achievements has changed as a result. These are typical side effects of improved automatic administration of the universities at an organisational level, which has been massively underestimated.

Another recent example for a needed increase in monetary overhead is the external funding. Very successful universities, i.e. universities that get a lot of external funding, are

having structural deficits because the administration of external funding becomes quite expensive.

Overall I would say that in general the funds for quality assurance are not very high, especially with regard to evaluation of EU projects. In this case, normally one to two percent of the total amount are spent on quality assurance and evaluation, which is a lot more than our budget. Particularly in Mainz, most of the ZQ employees are externally funded

and not directly employed by the university. Nevertheless, we always have to take care that quality assurance brings additional benefit and further improvement to teaching and research, and does not become a habit without generating new insights.

– Kristina Klinker, Robert Lindner