

WHERE DO WE GO FROM HERE?

Internal evaluation tools at H-BRS to support teaching and developing degree program

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Evaluation is of crucial importance and should meet professional standards in its design. In practice, organizational peculiarities and available resources characterize the search for the “right” approach. When used as a quality development tool, internal or self-evaluation should primarily be useful. It should generate information to answer organizational questions and provide results as a basis for discussion in decision-making processes.

It is no longer enough to gather feedback regarding students` perceptions of their degree programs and refer to it as “evaluation”. Therefore, the H-BRS started a revision and reform process of its evaluation practices in 2010. During this process, it became particularly evident that the design of evaluation projects must become more flexible in order to take emerging changes in their subject matter into account and to consider additional or differently weighted aspects. Established procedures need to be (re)designed to generate useful information for various stakeholders and to support decision-making with data.

An essential factor for the acceptance and use of internal evaluation procedures is regarding them as an opportunity for self-reflection and not as an additional burden only undertaken due to legal requirements.

At Hochschule Bonn-Rhein-Sieg University of Applied Sciences, the evaluation procedures are structured by the evaluation policy in the sense of a generally applicable framework. However, the university emphasizes the principle of subsidiarity in the design of evaluation procedures and the development of quality measures for the different degree programs. Each department (i.e. faculty) has therefore elected an evaluation officer to coordinate the internal evaluation procedures with the support of an evaluation working group.

A central office for evaluation advises the university board and the departments on methodical aspects and supports the planning and execution of surveys.

Evaluation and the Development of Degree Programs

The internal quality development of the degree programs is continuously accompanied by evaluation procedures which generate useful knowledge for practice through systematic and transparent methods and thus support the departments in the further development of their degree programs.

In the internal evaluation procedures, the results of student surveys are only a part of the data and the information about the study programs which are regularly reviewed by the departments. The data provides information on the students' view of their degree program. Further relevant information is provided by university statistics, accreditation reports (a form of external evaluation), the results of discussions within the faculty through advisory boards, committees, and other possible sources. All data is only given value through analysis, interpretation, and communication.

Evaluation and University Development

With the increasing changes in the higher education system, which require strategic university development, evaluation methods provide important input. Higher education institutions in Germany have gained more freedom in the design of their profile, placing their primary focus, and developing the content-related and quantitative orientation of their degree programs – but this freedom entails responsibility.

In addition, a growing tendency to link output and financing instruments promotes greater interest in information that allows making informed decisions and reviewing their impact.

Graduate surveys are an important method of impact analysis for universities, for example. Whether graduates pursue employment relevant to the respective study program and apply the skills and knowledge they have learned in practice is essential information for assessing the impact of study programs at an organizational/institutional level. Stakeholders here could be the partner organizations of cooperation programs or specific sectors of industry or the environs of the university. Furthermore, the alumni's willingness to commit to their university and make contact as well as their interest in further education can be recorded (Janson 2014).

Surveys at the University

Since surveys generate a significant part of the information in addition to the analysis of secondary data, they are briefly introduced below. They are not only used to query student opinions or assessments, but also to collect information that is inaccessible via administrative data (such as the educational background of the students, reasons for the extension of the study period, starting salaries of the graduates).

Student Course Evaluation

The student course evaluation refers to individual courses or modules and serves primarily as an individual feedback and reflection instrument for lecturers and students.

The questionnaires are composed of a set of core questions across the university and questions specific to each department. Different questionnaires have been created for different teaching concepts (e.g., for lectures, seminars, tutorials, laboratory work, and practical projects).

Surveys During the Course of Studies

The aim of the surveys for study programs is to examine the general conditions and organization of the study programs with regard to the courses offered, the counseling and supervision situation, the equipment as well as the individual study situation, and the prerequisites of the students. The surveys are conducted among first-year students and students in approaching graduation.

Survey of Former Students

Hochschule Bonn-Rhein-Sieg University of Applied Sciences has been surveying all its former students since 2013. Both graduates and students who leave the university without a degree are surveyed about 1.5 years after leaving the university. The aim is to identify opportunities for improvement and to develop further the courses offered.

Graduates are polled annually as part of the German Graduates Studies Co-Operation Project (KOAB) (see below), which is coordinated by the Institute for Applied Statistics (ISTAT).

The survey of former students without a degree (drop-out survey) was developed in a joint project with three more universities of applied sciences in North Rhine-Westphalia (see below).

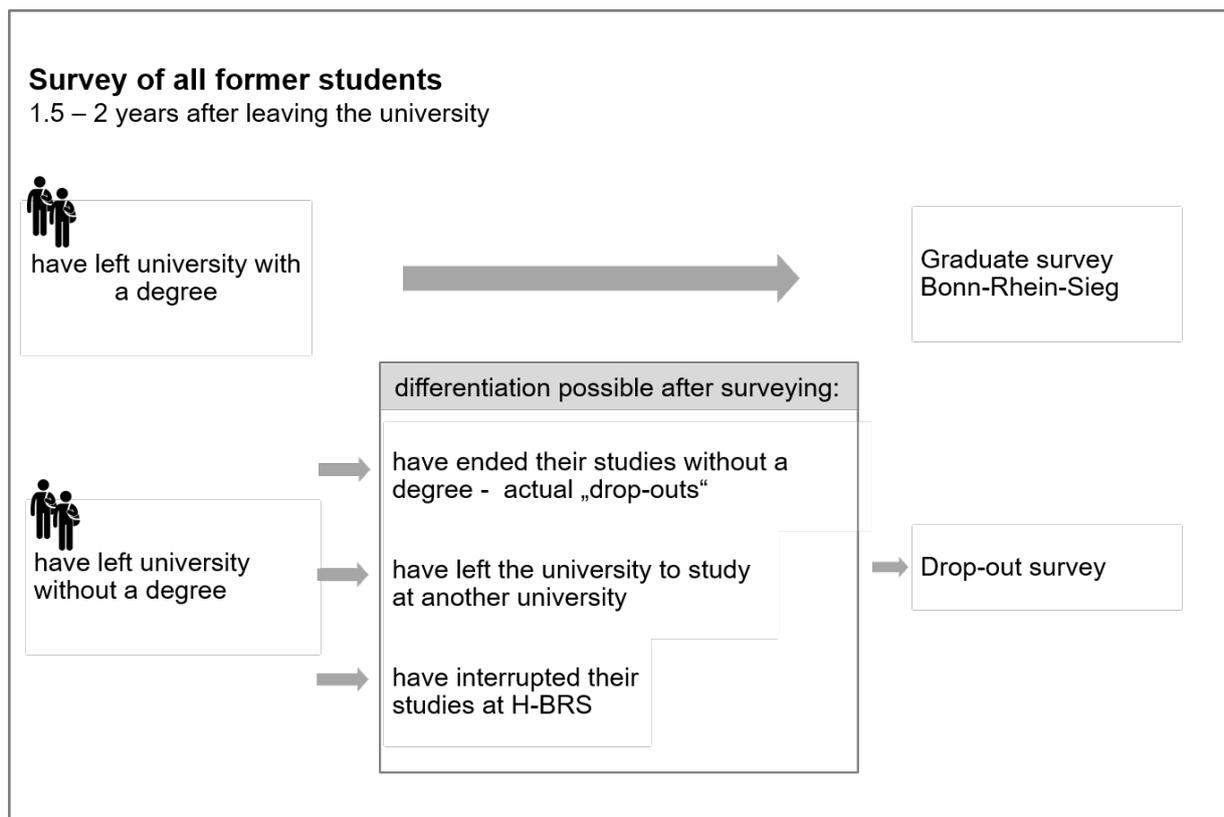


Figure 4 Conception of the surveys of all former students.

The graduate studies Bonn-Rhein Sieg started with the graduation year 2011, the first drop-out survey was conducted among students having left university without a degree in 2012 and 2013.

Graduate Studies Bonn-Rhein-Sieg

Hochschule Bonn-Rhein-Sieg University of Applied Sciences has been taking part in the graduate survey cooperation project KOAB since 2012. The KOAB is a nationwide scientific research project for graduate surveys of the ISTAT. About 70 German universities are involved in this project. For this, they survey all alumni approx. two years after graduation for a retrospective evaluation of their studies and career entry.

The results of the initial survey are supplemented with a second survey after three more years (follow-up survey). The focus of the follow-up survey is on the subsequent career progression and possible additional studies.

The detailed analysis of the effects of study conditions on the further course of life and the professional success of graduates can be a valuable contribution to the quality development of the university. For this purpose, objective and subjective data is collected, for instance on individual study paths, the transition from study to work, and professional achievements and promotions. Knowledge acquired during the degree program, the skills acquired to match the requirements in the occupation, and the level of professional success are not only measured, but the correlation of these factors is analyzed. In addition, graduates are better at assessing the content and structure of their studies, the organization of their studies, and the supporting processes than students. Thus, graduate surveys provide valuable information for the curricular development of the courses in the degree programs.

Since the questionnaire remains nearly unchanged year after year, comparisons of the different graduation years (longitudinal analyses) are also possible. The detailed evaluation produces a wide variety of reports, which also provide comparative data for our university at a national level due to the nationwide design of the overall project. The university can also compare different groups of people and their statements on their course of study and career developments (for example, compared by university entrance qualification, gender, international background, subject group, departments, or courses of study within the departments).

The Hochschule Bonn-Rhein-Sieg University of Applied Sciences has so far participated in six graduate surveys in the KOAB and achieved response rates of between 35 and 55 %.

By conducting the surveys in 2013 and 2016, the university has additionally taken part in two research projects about studying and working in North Rhine-Westphalia. The Ministry of Innovation, Science and Research of North Rhine-Westphalia funded this state-wide study to gain information about study conditions and the professional success of the graduates and to help universities compare their results with their relevant comparison group.

The final reports “Studium und Beruf in Nordrhein-Westfalen” were published in 2014 and 2017. Some interesting results related to universities of applied sciences are (Alesi, Neumeyer 2017):

- In retrospect, graduates from universities of applied sciences of every subject group are more satisfied with their studies than graduates of universities.
- Graduates that rated the practical orientation in their studies as sufficient were slightly more satisfied with their studies. This effect was stronger for universities of applied sciences than for universities.
- The transition into the labor market takes the same time for bachelor graduates from universities and those from universities of applied sciences. Bachelor graduates from universities of applied sciences earn slightly more than bachelor graduates from universities and are more often fully employed with a permanent contract.

Drop-Out Survey

For the first time in the Winter term of 2013, H-BRS surveyed former students who withdrew from the university before graduating. The focus was on reasons why students dropped out or transferred to other universities. This survey aims to find out which factors promote a drop-out or a change of university and which measures the university can take to ensure that as many students as possible graduate.

Therefore, the following aspects are examined in more detail:

- Individual study requirements: study entrance qualifications, motives for choosing a course of study, information before starting a course of study
- Conditions of study: the content of the course, the organizational aspects of the degree programs and examinations, support and supervision, quality of teaching, as well as the atmosphere
- Personal living conditions and challenges: compatibility of studies with family obligations and employment, the burden of chronic illness / disability, and other personal challenges

Practical Application Examples and Additional Approaches

Planning Master’s Degree Programs

When it became apparent that the demand for places in master’s degree programs would need to increase, the university had to decide which programs to invest into. To support the decision-making process, the central office for evaluation provided reports that compiled information from education policy, data from official and internal university statistics, empirical educational research, and the university's first-semester and graduate studies on:

- Bachelor-master transition rates
- Motivation to take up a master’s program
- Transitional behavior, especially for graduates with bachelor’s degree at universities of applied sciences

- The situation at the Hochschule Bonn-Rhein-Sieg University of Applied Sciences

Pro-MINT-us

Pro-MINT-us is a university-wide project to support students in their entry-phase, especially in STEM-degree programs. It focuses on increasing the student-teacher ratio in the first year of study and on reducing the drop-out rate during that phase.

In 2011, the German government initiated a nationwide funding program to improve university education and to reduce the abandonment of university studies at the undergraduate level. The H-BRS project Pro-MINT-us, funded with approx. 10 million euros is based on empirical findings. For all bachelor's degree programs, all first-year surveys and exams of one year were analyzed to find out which subjects are the most difficult for students and what competencies they are lacking to successfully complete the initial phase of their studies.

Evaluation data was not only used to plan the project, but served as a means to foster discussion about the situation of the study programs. "As these discussions were based on empirical data rather than on opinion, it was possible to achieve an open discussion about measures (...)" which have now been successfully implemented (Winzker, Grein et al 2012).

Peer Coaching

Since 2014, the Hochschule Bonn-Rhein-Sieg University of Applied Sciences has been offering peer coaching to all their teaching staff.

As a further component in the context of quality development for teaching and studying, this concept is intended to promote an open teaching culture with discussion and exchange of ideas on excellent teaching. In addition to the student course evaluation, it represents a complementary perspective and is thus an essential element for professional development and self-evaluation in teaching.

The open concept offers peer coaching tandems or groups of up to five teachers a framework for a structured reflection of their own teaching style and conversations about teaching with their colleagues. They attend each other's courses and provide feedback, share knowledge, experiences and ideas, challenge one another, and point out different possible solutions and ideas.

Critical decisions for the success of the project were

1. to offer it on a voluntary basis and
2. to make it accessible to all groups of teachers: professors, lecturers, and academic staff with teaching responsibilities.

This creates a collegial culture of exchange and transparency and promotes cross-organizational communication and cooperation, laying the foundation for interdisciplinary teaching (Grein, Rothe 2017).

The university offers support through external coaches with professional coaching qualifications and higher education pedagogical training experience and also provides printed material. It is possible to involve external coaches in observation and peer counseling.

Furthermore, individual coaching can be arranged with external providers after the peer coaching program has been completed.

The participants provide useful feedback to further develop the peer coaching program. Their experiences also help to supply lecturers with suitable courses through the university didactic further education program.

The university also offers a similar format for teaching assistants to get feedback and insight into didactical approaches to teaching their tutorials.

Evaluation of Learning Outcomes

A new evaluation of learning outcomes has been introduced to supply the right tools for evaluating learning outcomes based on a student-centered approach to teaching. This format is a variation of an innovative evaluation instrument already successfully approved for medical education (Raupach, Schiekirka et al 2011) with a questionnaire specifically designed for each course.

While the regularly implemented student course evaluation focuses mainly on atmosphere, workload, and satisfaction with the lecturer's performance and the provided materials, this learning outcome approach helps lecturers estimate the learning outcomes at three different levels: factual knowledge, skills, and professionalism. For each course, the learning goals are elaborated and a learning goal-oriented questionnaire is created. The questionnaire serves as a self-assessment tool for the students to determine the extent to which different learning objectives have been achieved.

At the end of the course, participants are asked to assess their knowledge or skills in a specific field once in retrospect – related to the beginning of the course – and once at the time of the evaluation. The increase – or decrease – in competence is calculated using a mathematical formula and displayed graphically for each learning objective.

This is an applicable way to sufficiently “generate an adequate appraisal of learning outcome” – a “collection of true pretest ratings is not required” (Schiekirka, Anders et al 2014).

Further Development

An essential step for evaluation accompanying course development will be to consider not only the framework conditions for teaching but also didactic concepts and their effects on the competence acquisition of students.

The change from content to competence orientation is an ongoing process that has led and will continue to lead to various didactic, organizational, and cultural changes in higher education teaching. Meaningful instruments need to be developed to bring evaluation and program development closer together. A standardized questionnaire for student course evaluation that is coordinated department-wide is unsuitable here and its development too slow due to the structured control loops for adaptation. Teachers should be able to try out innovative teaching projects and to evaluate and adapt them in an uncomplicated manner.

Here, the university would like to develop further exemplary solutions in smaller projects. This is how the projects Peer Coaching and Learning Outcome Evaluation emerged.

They can in return be communicated and multiplied as examples of good practice in department workshops, teaching conferences, or through internal and external publications.

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