

Central or decentral? Tailored solutions for course evaluation as a tool for quality development

Abstract

The article deals with assets and drawbacks of different models of course evaluation and describes the current practice at University of Duisburg-Essen (UDE) as an example for a large and highly heterogeneous institution. At UDE a conversion from a decentralised practice of computer-assisted teaching evaluation towards a centrally organised procedure has turned out to be most effective. The Centre for Higher Education and Quality Development (Zentrum für Hochschul- und Qualitätsentwicklung¹) of UDE has developed a flexible system of course evaluation, which is oriented on common standards and which simultaneously allows the provision of tailored solutions for individual faculties. The paper discusses the pro and contra of the two approaches.

Introduction

Procedures for evaluating teaching imply a heavy amount of work, which affects the university as a whole, but also each individual teacher. Besides general objections against evaluation, this is one reason why course evaluation is regarded as a objectionable duty, but not as a helpful instrument for encouraging communication and for developing teaching and learning.

Since summer 2005, a university-wide computer-assisted procedure for course evaluation has been implemented at University of Duisburg-Essen (UDE). The process is managed by the University's Centre for Higher Education and Quality Development. Experiences from a decentral procedure of course evaluation have led UDE to a switch towards a more centrally organised procedure.

Different principles of organising survey-based teaching evaluation

According to the university law of the German state of North Rhine-Westphalia, it is obligatory to evaluate the quality of teaching at universities. The law leaves it to the universities to decide how these evaluations are to be conducted.²

The evaluation procedure at UDE is stipulated by an evaluation statute, which defines the procedures, which data will be collected how often and how results are processed and published.³ According to this statute, evaluation should be executed periodically and systematically. Furthermore, the demands on course evaluation by accreditation agencies should be taken into account.

In order to fulfil the legal obligations, different approaches have been developed at different universities. One – not uncommon approach – defines course evaluation to a duty completely in the hand of the individual teacher: Individual teachers evaluate their courses on their own responsibility with tools and methods of their choice. Such

¹ In the following referred to as *centre*.

² Cf. University Law NRW (HG), 30.11.2004.

³ Cf. Evaluationsordnung für Lehre und Studium der Universität Duisburg-Essen, 07.04.2005.

an approach might receive high acceptance by teachers at first hand, but does not provide information for the systematic development of quality in teaching. In this approach, the instruments deployed often are not standardised and therefore often have methodological deficiencies, e.g. with regard to questionnaire construction and the formulation of questions. Furthermore, if each individual teacher develops his or her own questionnaire, aggregation of data on the level of faculties becomes almost impossible. Thus, useless data could be produced and because of the high amount of laboriousness on the part of the teachers (conception, production, and accomplishment of surveys, analysis and discussion of data) the procedure can easily lead to reduced motivation.⁴ For students, such a procedure means a confrontation with various different evaluation concepts and instruments. Then, the date the surveys are executed often is chosen awkwardly, so that there is no chance to discuss the results with students. Thus, an „evaluation fatigue“ is being provoked on the student's part. To conclude: A serious approach for an institution-wide strategy to quality development is impossible to implement with such heterogeneous methods and instruments.

On the other hand, in Germany there is a growing interest in the quality of education and several measures are taking place to focus teaching in higher education. Therefore, effective and efficient procedures are needed to address this demand. This process is complicated since the views and interests of the different stakeholders must all be taken into account: students and teachers as well as the faculties and the university as a whole. Therefore, it is of utmost importance that the procedure ensures acceptance with all these stakeholders.

In general, decentrally and centrally organised procedures of course evaluation can be differentiated. Decentral approaches are managed by individual teachers, whereas central approaches are typically organised and administrated by central service units. In the last few years, a number of software systems have been developed for computer-assisted evaluation. These systems support decentral as well as central approaches of course evaluation. Typically, it is possible to deliver paper-based as well as online surveys. The software solutions support users in all phases of the surveys: beginning with the production of questionnaires (development and printing of questionnaires or TAC's for the access to online surveys), data acquisition by scanning questionnaires up to data analysis and consolidation. Most systems allow for a hybrid approach that integrates both paper-based as well as digital questionnaires which can be merged into one data set. This guarantees a high degree of flexibility.

The typical procedure for paper-based surveys is first of all the production of questionnaires, which are printed out with a bar code for a certain course and teacher, copied and distributed to students. Afterwards the questionnaires are collected and have to be scanned with a computer-based scan station. The questionnaires can be allocated with the imprinted barcode and can be assigned to a specific course of a specific instructor. The data are processed and compiled into basic statistics with graphics immediately. Raw data can be exported for common statistic software for further processing.

When accomplishing online surveys, TAC's have to be either sent by email to students or have to be distributed among the students via handouts during the lecture. Students log into the evaluation software with the help of a TAC and answer the

⁴ Cf. Künzel, E. / Nickel, S. / Zechlin, L. (1999), p. 105.

questionnaires online on the internet. The results are immediately available within the software. After accomplishing the survey, teachers are informed that the data are available by e-mail and they get a report as a PDF-file containing their individual results. This, then, should serve as a basis for discussions with students. Furthermore, it is possible to set up an individual software account for the teacher where their individual surveys and their results are organised as an e-portfolio. These accounts can be provided with different access rights. In the case of UDE, a faculty's dean may view all accounts of the teachers that belong to the faculty and thus view the individual-related evaluation results.

Typically, decentral methods of course evaluation - which are still rather common in German university today – imply a high degree of self-responsibility for individual teachers. They are to initiate the surveys, they decide (if and) when the questionnaire will be given to the students, they design and produce the questionnaires and decide about the method for delivery (paper-based or online) and finally, they are responsible for the data acquisition (if applicable: scanning of questionnaires). Mostly, teachers are supported by a service unit that is responsible for creating accounts for the teachers and they possibly also provide standard questionnaires within the system. Inevitably, these questionnaires have to be rather universal, in order to be applicable to different types of courses and for different faculties. That is why software systems often provide options to let users customise standard questionnaires by, for example, adding new questions or modifying existing questions.

Within central approaches for course evaluation the initiative typically is taken by a (central) service unit. The university management appoints a unit, which is responsible for the evaluation procedure, for managing the evaluation software and for providing information and supporting the users, i.e. the teachers. Thus, such central approaches are initialised, organised and supervised by, for example, a service unit or a staff position within the university or by an external agency.

Central approaches often serve as a tool for management purposes. That is why the conceptual design of the evaluation instruments often is geared to comparison – either between teachers of a faculty or between faculties among each other. Thus, normally only a single standard questionnaire is applied – maybe with a few variants specific to the type of course (e.g. lectures, seminars).

Universities in the German state of North Rhine-Westphalia have developed an approach for course evaluation that typically consists of a combination of central and decentral methods.⁵ This movement from rather decentral towards “semi-central” approaches are results from discussions and negotiations with stakeholders within the universities. This process can be seen on the background of the ongoing major changes universities are experiencing in Germany today which – in short – can be characterised by a tendency to relocate responsibilities from the individual professor to universities management.

Such a “semi-central” approach also accommodates for the different evaluation cultures within various faculties.

⁵ Unpublished survey among evaluation coordinators at the North Rhein Westphalia Universities of Aachen, Bielefeld, Dortmund, Duisburg-Essen, Münster, Paderborn and Wuppertal.

At some universities, even individual faculties have an idiosyncratic evaluation regime on how teaching evaluations are to be conducted.

A technical faculty, for example, would possibly tend to implement online surveys exclusively. Moreover, maybe they would be able to name a person for technical support for the members of the faculty and they probably have a large amount of students who would be willing to participate in online surveys. On the contrary, less technical oriented faculties as, for example, the humanities can only reach satisfying proportions of students participating in the evaluation if they provide paper-based questionnaires. In some cases, instruments must be adopted for faculties with a large variety of teaching subjects. For example, within the humanities, it has to be differentiated between studies in philology and language teaching courses with regard to evaluation instruments. Within such a “semi-central” procedure of course evaluation, a service unit develops questionnaires for a faculty in cooperation with faculty members and support the teachers in the following phases. In doing so, they also assure that the instruments follow certain standards in relation to composition and content. Such a “semi-central” method, therefore, provides a tailored solution for teaching evaluation.

Central, decentral and mixed procedures more or less differ regarding the distribution of work among the actors involved in the evaluation process, as the following chart shows:

Different procedures of course evaluation			
<i>steps</i>	<i>dezentral procedure</i>	<i>tailored prodcedures</i>	<i>central procedure</i>
<i>Selection of courses to be evaluated</i>	Teachers	Teachers/Faculty	Administration
<i>Construction of questions and questionnaires</i>	Teachers	Teachers/ Faculty	Administration
<i>Producation and organization of surveys</i>	Teachers	Evaluation coordinators/ Faculty	Evaluation coordinators/ Administration
<i>Distribution/Recollection of PIN/TAN or questionnaires</i>	Teachers	Teachers	Teachers
<i>Scanning of questionnaires</i>	Teachers	Evaluation coordinators	Evaluation coordinators
<i>Communication and Reflection of results</i>	Teachers	Teachers	Teachers



At UDE, during the last to years a „semi-central“ method of course evaluation has been established, which gives consideration to heterogeneous teaching and learning cultures. It offers an individual layout of the procedures on the one hand and guarantees the implementation of common standards of teaching evaluation on the other

hand. As a supporting service unit the Centre for Higher Education and Quality Development has begun its operative work in September 2005.

Course evaluation at University of Duisburg-Essen (UDE)

As a general guideline, it was demanded that all activities in the context of teaching evaluation at UDE should be sensibly embedded into a larger concept of quality development. Teaching evaluations should not be performed isolated, but should be perceived and integrated as a part of a larger quality development process that reaches beyond the individual teacher and a single course. Results from evaluation processes are to serve as a starting point for improving study programmes and the universities' products.

In the following, this process will be outlined and analysed on the basis of experiences at University of Duisburg-Essen. In this case, UDE can serve as an example for a large higher education institution in Germany with more than 35.000 students and rather heterogeneous teaching and evaluation cultures among the 12 faculties covering all fields from humanities, sciences to engineering and medicine.

The Centre for Higher Education and Quality Development

At University of Duisburg-Essen, the Centre for Higher Education and Quality Development supports faculties and teachers in the field of quality development. It is organised as a central unit independent from the university's management and administration and consists of four divisions *Didactics in Higher Education*, *Equal Opportunities / Gender Mainstreaming*, *E-Learning* and *Evaluation / Quality Development*. These four lines of activities, which had existed as projects and implemented without coordination before, have been integrated into this new centre. The centre's divisions can adapt their measures and products according to results of evaluations. The centre has to report directly to the university's management. Thus, the centre's involvement in the strategic planning of the university's quality policy is institutionalised. On the other hand, as an academic unit the centre is independent from the universities management and operates autonomously with faculties and other central units.

The division *Evaluation and Quality Development* consists of four staff members (2, 5 positions). It provides the following services for all academic and service units of UDE:

- planning, organisation and accomplishment of evaluations with different objectives
- developing tailored evaluation concepts and methods (including questionnaires)
- tailoring evaluation procedures for (re-)accreditation of study programmes
- planning, executing and analysing of interviews and group-discussions
- technical and conceptual support in the field of teaching evaluation
- information and support with the preparation of evaluation reports
- development of other measures for academic and non-academic units regarding quality development

The concept of quality development at UDE

With the support of the centre, UDE aims at establishing a system of quality development which affects the *whole* institution. UDE wants to implement to evaluate all academic and non-academic units including administration within a cycle of six years. Thus, a common three-step procedure is accomplished, containing internal evaluation, peer-review and follow-up. Simultaneously, a defined amount of university courses are evaluated continuously. The results of the teaching evaluations also are incorporated into the evaluation of a faculty.

At UDE a system of course evaluation had to be developed, which meets the requirements of a large university located on two campuses.⁶ At the same time as much as possible flexibility concerning the evaluation instruments and the organisation of student surveys had to be guaranteed because of the heterogeneous structure of faculties. The university implemented a survey-based approach. This approach acts on the assumption that the implementation of surveys can help to improve university courses in four ways:

- **Sensitisation:** By implementing surveys about the quality of teaching this topic gains attention and interest among teachers. Also, the discussion about quality in teaching can serve as a door-opener for institutional evaluation.
- **Feedback:** Teachers receive information about their teaching behaviour. Especially with large and rather anonymous courses, the feedback from standardised questionnaires is a good opportunity to improve the communication between instructors and students.
- **Discourse:** The discussion of the results with students enhances the university wide discourse about study programmes and teaching quality. In the long run, the awareness for quality on students' side will be improved. Moreover, the readiness to participate in surveys among students also can be enhanced.
- **Support:** The results of teaching evaluations show requirements for support and training in the field of didactics in higher education and help to improve adapt these courses for teachers. With these training courses teachers can acquire skills which help them to improve their teaching.⁷

Course evaluation by student surveys in the first place should provoke teachers' reflection about their own teaching habits. But also a process of continuous self-reflection on the level of faculties should be initiated; self-reflection and communication about quality on its own already constitutes a step towards the development of a quality culture.⁸ That is why in the first place the evaluation instruments were designed for the purpose of giving feedback, which would first of all inform teachers about students' assessment of their teaching. The results of these evaluations should not be presented to the university's management or administration and should not be used for the competitive allocation of resources. They should rather serve as a means for identifying strengths, weaknesses and potentials for improvement on the faculty level. Therefore, our policy for handling data provides four levels of access:

⁶ UDE was founded in 2003 via a merger between University of Duisburg and University of Essen. The distance between both campuses is about 20 kilometres.

⁷ Cf. Rindermann (2001), pp. 225 – 269.

⁸ Cf. Drees (2005), unpublished.

- **Teachers:** Teachers receive their results in order to discuss them with fellow faculty members and with students.
- **Faculty management:** The faculty management is given access to individual results of all faculty members, in order to discuss possible individual and organisational measures to improve quality in teaching.
- **University management:** University management receives aggregated results of teaching evaluation on faculty level. Additionally, administration is informed about the grade of participation (percentage of evaluated courses) of the faculties' course evaluation each semester.
- **Evaluation coordinators:** The centre saves and processes evaluation results in compliance with regulations for data integrity. Aggregated data serve as a basis for metaevaluation.

Experience demonstrates that the assessment of one's own achievements is a sensitive topic. Especially at higher education institutions, the evaluation of teaching is sometimes regarded as an arbitrary action, as additional work and as to be opposing the paradigm of freedom in teaching and research. The centre is convinced that continuous communication and the establishment of transparency can only achieve sustained trust in the sensibly planned procedures and in the efficiency of course evaluation. Thus, personal contact of the centres associates to people involved in evaluation procedures has received a particular significance at the university. An intense and continuous communication should be established with the following target groups:

- **Faculties and institutes:** The purpose is to establish a cooperation concerning the development of evaluation instruments, the distribution of accountability among the faculty or institution and the efficient execution of surveys.
- **Teachers:** The purpose is the encouragement of trustfulness in instruments, procedures and the centres' team by information and cooperation.
- **Students:** For students, the encouragement of trustfulness is aspired as well as – in the long run – the enhancement of students' participation in surveys.

Implementation

Starting decentrally

Since summer semester 2005, teaching evaluation organised by the centre is successively implemented on a basis of an evaluation regime that has been approved by the universities' committees. In following state regulations, it makes teaching evaluation obligatory but it does not force teachers to obey to a certain method or questionnaire.

In summer semester 2005, first a decentral procedure for teaching evaluation was implemented. In doing so, the centre was cooperating with teachers of the study programmes *Construction Sciences* and *Applied Communication and Media Sciences*.⁹ Additionally, teachers from all other faculties were able to make use of the service

⁹ The study programme KOMMEDIA (Applied Communication and Media Sciences) is interdisciplinary, that is, particular courses are assigned to certain faculties. Considering this, the procedure of teaching evaluation in the summer semester 2005 should make visible, how these structures could be dealt with within the software system and how results could be aggregated on the level of (interdisciplinary) study programmes.

provided by the centre. There were several reasons for implementing a decentral approach at first hand: For the academic departments it was of utmost importance to have a highly flexible procedure. Thus, the basic questionnaires developed by the centre addressed this notion and were modifiable and extendable by each teacher. For adapting the questionnaires or executing additional surveys teachers should be trained to work with the evaluation software on their own.

After a phase of extensive support and training by the centre, it was planned that the support of the centre should be reduced to a minimum. Moreover, it was expected that the acceptance of the procedure could be enhanced when teachers could manage surveys all by themselves; and have data from paper-based surveys under control all the time (It was even held to be important that teachers themselves would have to scan questionnaires at a scan station by themselves.)

UDE had purchased and tested a software system which supported paper-based and online surveys. All participating teachers received a password protected user account, which enabled them to generate and administer surveys. In doing so, teachers were obliged to use the extendable standard questionnaires, which were provided by the centre. Three basic questionnaires were developed which were applicable university-wide for lectures, seminars and practical exercise courses. Additionally, the questionnaires were developed to fulfil legal regulations, recommendations of ENQA (European Association for Quality Assurance in Higher Education), requirements of accreditation agencies and common standards in the field of empirical social research.

With the help of these standardised questionnaires students' perceptions about strengths and weaknesses of a course should be acquired in order to give teachers feedback concerning the didactical concept (composition, main focuses, difficulty, teaching methods, teaching material, usage of media etc.) and general conditions for learning. Questionnaires were conceptualised as feedback instruments, not as a means to "measure" teaching quality and to compare teachers' performance.¹⁰ Instead, the surveys should encourage discourse about teaching quality between students and teachers.

Aggregated on the level of faculties, results from the teaching evaluations can be used on the molar level of institutional evaluation. Here, the results from student evaluations can be a starting-point for determining the potential for development in the area of teaching, when they are supplemented by additional perspectives (such as perceptions of the faculty's academic staff) and aspects (such as organisational and financial conditions, performance indicators in research). Thus, teaching evaluations are an integral part of the university-wide concept of quality development.

¹⁰ In the first place, experts refer to the complexity of teaching and learning: different interdependent factors hinder the determination of the quality of teaching and learning with standardised questionnaires. (cf. Webler (2005) / Kromrey (2000)). In the second place, the relativity of the construct of „teaching quality“ is to be emphasised. The quality of teaching cannot be measured along the lines of questionnaire data and can only be described in relation to a particular target-group and condition. (cf. Kromrey (1994), (2001a) and (2001b) / Hennen (2002) / Laske / Scheytt (1999)).

Excursus: Guidelines of course evaluation

On the *methodical level* the procedure of course evaluation at UDE is based on the following guidelines.¹¹

- At least two courses of every instructor should be assessed by students once a year.
- The surveys should be accomplished after two thirds of the semester, in order to guarantee the possibility to discuss the results with students and to implement improvements during the evaluated course.
- Teachers should inform students adequately about the intention and the procedure of course evaluation, in order to involve the students appropriately in the process of quality development.
- In case of paper-based surveys teachers should allow enough time for the completion of the questionnaires during one session of the course.
- The questionnaires should contain at least one free text-field, in order to allow students to give differentiated feedback.
- Storage and processing of evaluation results should happen under observation of the law for data protection.
- Central storage of results should be guaranteed in order to allow the provision of data for institutional evaluations and the observation of results in the course of time.
- Data storage should happen in common formats, which allow further processing by well-known software (e.g. SPSS, Microsoft Excel, etc.).
- Faculty administration should have access to individual-related data, in order to guarantee a minimum of control and to emphasise the developmental character of the evaluation process, namely by provoking development when recommending training in didactics for certain faculty staff members.

On the *content level* all three basic questionnaires for teaching evaluation at the UDE contain – each taking the characteristics of the course conception into account – questions concerning the following dimensions and therefore are oriented on common standards in the field of teaching evaluation:¹²

- thematic and chronological conception of the course
- format and presentation of learning content
- motivation of students, class climate
- implementation of media
- support by teachers
- classroom conditions (ventilation, acoustic etc.)
- provision of material (e.g. microscopes etc.)
- extension and difficulty of the course
- amount of time spent for preparation and reinforcement of learning content
- frequency of participation in the course
- demographic characteristics: sex, subject of study, aspired final degree, number of semesters

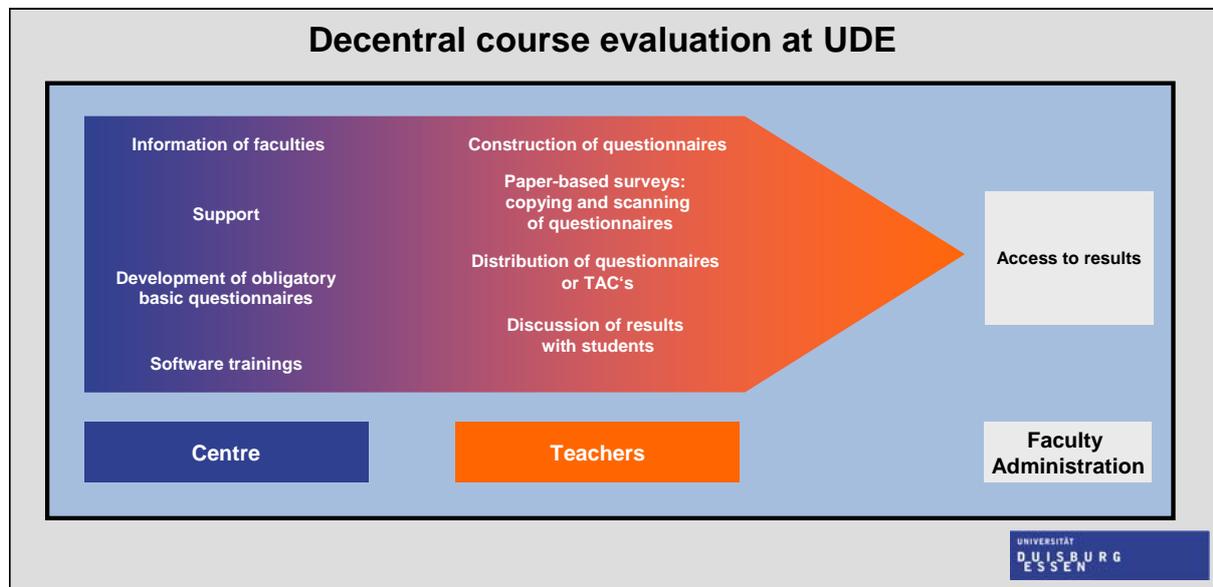
¹¹ Cf. particularly Rindermann (2001) and Kromrey (1994, 2000, 2001a/b).

¹² Cf. particularly Rindermann / Amelang (1994), Schnell / Kopp (2000), Koch (2004).

These questionnaires, which were usable university-wide, provided valuable results, which show general tendencies of teaching quality.

Organisation of the decentral approach at UDE

The following procedure has been accomplished with the implementation of course evaluation in summer 2005:



The decentralised approach allows teachers to work autonomously with the evaluation software. They were able to adapt questionnaires and to organise their surveys on their own. With this approach, a high amount of support by the evaluation coordinators proved to be inevitable. Thus, the centre established an extensive support system during summer 2005 including face-to-face training, telephone support and a support website.

Lessons learned

All in all, only 44 surveys among the students of the programmes *Construction Sciences* and *Applied Communication and Media Sciences* could produce valid data in summer 2005. Besides general objections towards evaluation *per se* and diffuse fears, mainly two factors prevented teachers from participating in the procedure: (1) the standard questionnaires provided by the centre were perceived as not appropriate and (2) due to the decentral responsibility the procedure demanded a high amount of time to manage course evaluations.

When the Centre introduced the procedure to staff members major objections were observed. The most salient critique was made concerning the conception of the obligatory standard questionnaires. The teachers criticism was that the obligatory part of the questionnaires did not go far enough towards reflecting the study programmes' particular teaching and learning culture. Indeed it was admitted that questionnaires became unreasonably long if further questions were added. Essentially, it was not possible to delete questions from the basic part of the questionnaire.

Severe criticism was provoked by the high demands on the teachers' side. Only a small group of teachers attended the software trainings which overall were not perceived as satisfying. As for the teachers, the software was regarded as being too complex and the addition of questions was perceived as being too time absorbing. Not only because teachers failed to manage the system but also because of technical instabilities of the software, some surveys were unable to produce results. Especially the scanning of the questionnaires autonomously executed by the teachers produced many problems, in particular because of wrongly printed or copied questionnaires that were not able to be recognised by the software.¹³

Another barrier resulted from problems related to the decentral provision of scanning stations on the campus. Particularly, it was not possible to track individual steps of teachers' interactions with the software. This produced a huge demand for supporting teachers and caused a disproportional amount of work on the centre's side.

Furthermore, the attendance of students to participate in online surveys was marginal. And finally, it became obvious that the aggregation of results on the level of study programmes was not possible with the purchased software. The structure of the software only allowed for the correlation of results within certain faculties.

Switching to a central approach

Because of experiences from summer 2005, the evaluation procedure was modified starting in winter semester 2005/2006. Particularly, because negative experiences with the teaching evaluation could easily emanate onto the larger process of institutional evaluation. The process was to be optimised by changing the centre's role in organizing the process and by intensifying the communication with faculties, staff and students. Also, the questionnaires were now to be tailored to faculty needs and conditions in cooperation with faculty members.

The centre then started an intensive university-wide information campaign in winter semester 2005/2006. The centre's staff introduced the overall concept to committees of nearly all faculties. In doing so, both the basic concept of institutional evaluation procedures and the concept of course evaluation were presented and discussed. In close cooperation with faculties that already participated or those willing to participate in summer 2006, the existing standard questionnaires were adapted successively to faculty needs. In particular cases, the heterogeneous internal structure of a faculty had to be taken into account by adapting the questionnaires to certain subjects. For this, a high amount of communication between staff members of the centre and faculty members was necessary. This interaction again improved the commitment of faculty members and thus, a higher degree of identification and acceptance of the teaching evaluation procedure was eventually achieved. In some cases, questionnaires, which had been used by the faculty before, were implemented into the software system unchanged. In doing so, the centre was able to win partners, who were not interested to participate before, during winter semester 2005/2006 and summer semester 2006. Many teachers and faculties with a critical or negative perception of the course evaluation procedure could be convinced after they experienced the cen-

¹³ Electronically processible paper questionnaires normally are identified with the help of an imprinted individual barcode. In order to guarantee the identification via this barcode, the instructions for printing and copying of the questionnaires have to be followed strictly. If copied questionnaires differ in size from the originals, the software programme is not able to identify the questionnaires.

tre's service in practice, especially the practice of cooperative development of questionnaires, the broad range of services provided by the centre for producing paper questionnaires and TAC's, the scanning of questionnaires, the production of reports as well as the administration of user accounts for students.

In turn, starting in winter 2005/2006 the questionnaires – now tailored to faculty specific needs – were no longer adaptable by teachers themselves. In this context, teachers now were suspicious that these questionnaires possibly might have been conceptualised for comparing individual results and the questionnaires now were criticised for being inflexible. Therefore, the centre's philosophy of using questionnaires as a means for providing feedback had to be communicated intensely. By the end of summer 2006, nine of thirteen faculties participated in the procedure.

The following arguments supported the faculty's decisions to adopt to the central service:

- professional support fulfilling state obligations concerning course evaluation
- reduced work for individual teachers
- no software training for teachers needed
- high degree of identification with and acceptance of questionnaires on teachers' as well as on students' side
- tailored questionnaires and surveys
- reliable processing of paper questionnaires by providing templates by the centre (no incorrect printing)
- continuous and guaranteed support by the centre (by FTF, email, telephone)
- synergy effects, e.g. regarding (re-)accreditation, institutional evaluation, agreements between faculties and university management

Nonetheless, the challenge regarding flexibility remains. Now, teachers cannot use course specific questionnaires for surveys when cooperating with the centre. That is why each questionnaire contains at least one open question, where students can express their expectations, concerns and wishes. Usually, these expressions can best serve as starting points for more detailed discussions with students.

Generally, the question of course specific questionnaires depends on an analysis of costs and benefits. According to our experience, only very few teachers are interested in using a special questionnaire tailored to their course, especially when they have to develop such a questionnaire on their own. The majority of teachers are grateful for each possible reduction of laboriousness connected to course evaluation. At a large university the production of course specific questionnaires by an evaluation team is not possible either. Our experiences clearly demonstrate that a decentral procedure in the bounds of which teachers can specify and implement their own questionnaires within a software system, implies a lot of obstacles.

As a result, by converting from a decentralised to a central evaluation practice, the number of surveys accomplished by the centre has increased from semester to semester. In winter 2005/2006 135 teachers from five faculties used the software for evaluating 174 courses. In summer 2006 already 219 teachers from nine faculties evaluated 357 courses. These numbers as well as the highly positive feedback from teachers clearly validate the decision to convert from a decentralised approach to a tailored but central solution of course evaluation at our university.

With this procedure, the workload on the teachers' side can be reduced dramatically. But also the need for support can be reduced to a realistic level. In summer 2005 the continuous support for handling the software turned out to be very time-consuming. After implementing the semi-central procedure, the workload of centre staff members now concentrates on two "prime times". The first phase consists of informing teachers at the beginning of each semester. The second phase takes place at the end of the semester, when the production and the scanning of questionnaires as well as the preparation of reports is taking place.

Summary

In the beginning, a decentral approach to evaluation, which provided the chance to modify a standard questionnaire to individual needs by each teacher, had been advocated by most of the teachers at University of Duisburg-Essen. With this procedure, teachers organise student survey on their own and standard questionnaires can be adapted to course specific needs. The integration of an obligatory set of questions ensures that the questionnaire conforms to common standards of teaching evaluation.

Experiences at UDE show that teachers rarely took the chance to adapt the questionnaires themselves. One reason was the increasing workload on teachers' side. Altogether, the shift of responsibility onto teachers actually increased negative reactions towards course evaluation. The expectation that support from the centre could be reduced after a starting phase could not be fulfilled. It has rather become obvious that highly intense support has to be provided continuously with this approach. Software training courses organised by the centre have not been attended by a satisfactory amount of teachers. Teachers rather have tried to work with the software without training and have been confronted with the complexity of the programme but then. With regard to this, it has to be mentioned that evaluation software is only used if required – normally once a semester – which impeded familiarisation with the software. Also, a high degree of fluctuation between academic staff at a large university has to be taken into account. New teachers have to be informed and trained in using the software. A decentralised approach might be appropriate and efficient at a smaller university.

For several reasons, a switch to a more central procedure proved to be necessary and successful. Now, standard questionnaires are successively adapted to faculty-specific demands and the provision of questionnaire-templates for the duplication by teachers is guaranteed by the centre (no incorrect printing). This approach to course evaluation has turned out to be appropriate.

Most of the German higher education institutions are implementing a more centralised approach to teaching evaluation, which means a reduced amount of work for individual teachers and allows for a systemic course evaluation at large universities. A centralised method of course evaluation is criticised especially because of the lack of flexibility. Teachers and faculties often animadvert that the evaluation instruments are not tailored to their specific teaching and learning culture. Moreover, resentments against a central approach are provoked, because often this approach serves for comparison of performance among faculties and sometimes influences the allocation of resources.

Experiences at UDE additionally show that the software system is also an important determinant for the success of the implementation of teaching evaluation. Generally, all approaches need professional technical support. The requirements for hard- and software are similar, independent from the approach chosen. The following requirements for evaluation hard- and software could be deduced from our experiences:

As for the hardware, a central server for the data storage is needed for the evaluation software. Moreover, scanners and additional PCs with network connection are necessary and serve as scanning stations. Last but not least, shredders can help to follow the regulations concerning data security. When selecting a software system for course evaluation, universities should vote for an approved system, which can take the individual requirements of particular institutions into account. Thus, the system has to be adaptable, in order to allow for an adaptation of changing needs to course evaluation. Moreover, it is helpful if the software company keeps close contact to higher education institutions, so that the company can be informed about recent innovations in the field of teaching evaluation. Of course, the software system should work reliably; a high percentage of scanned questionnaires should be processed correctly. The data should be transferred encrypted by save connections in order to keep out hackers.

Within a decentralised procedure a number of scanning stations and shredders are necessary, in order to enable teachers to reach these stations quickly. This keeps the workload on the part of the teachers' small, which is inevitable for the acceptance of the procedure. The stations have to be distributed on the university's campus(es) and have to be located in rooms, which are accessible at all times, but which are constantly observed, in order to avoid unauthorised access. When running a decentralised procedure, the high demand for maintenance of the hardware has to be taken into consideration. Also, the computer infrastructure needs a close cooperation with the university's IT-service centre and the software company to ensure network compatibility and an unhindered transfer of data between scanning stations and the server. The software has to be easily handled and has to give feedback regarding technical problems immediately to teachers and system administrators. This is important especially with regard to abortive or defective scanning processes. If teachers do not receive feedback about a failure to process the questionnaires they might be lead to believe the scanning procedure had been successful and the survey will not produce any results. This can lead to high degrees of dissatisfaction among teachers and students and diminish the willingness to participate in further evaluations. Last but not least, the software systems should anticipate faulty operations by users in so far, as they are able to process questionnaires slightly different in size from the original (e.g. 5 %).

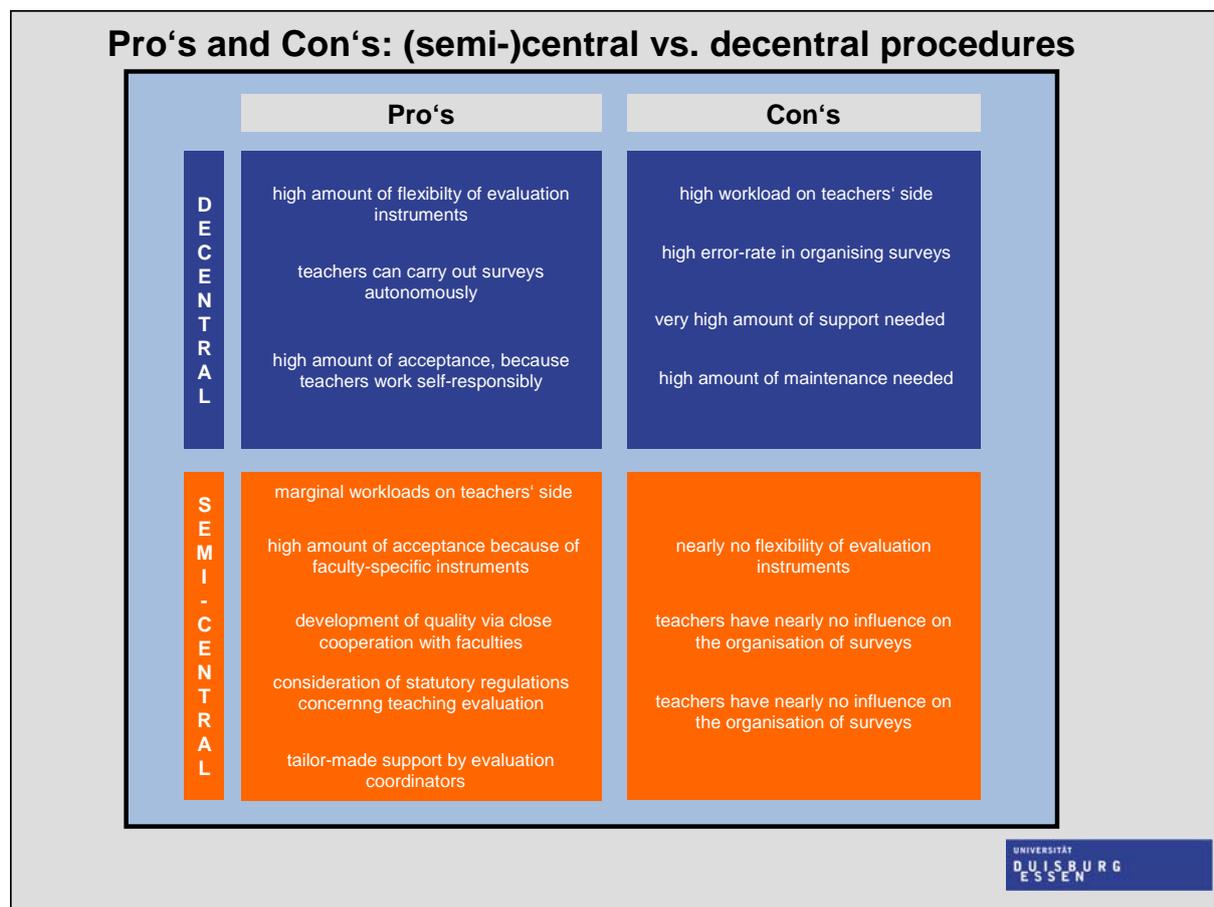
The preceding passages show that particularly paper-based surveys have produced problems at our university. Of course, these problems can be avoided by accomplishing online surveys exclusively. Here, scanning stations and document shredders can be set aside completely. However, the very low numbers of participants in our online surveys have to be considered as well as methodical problems which might influence the results. That is why the centre clearly recommends paper-based surveys.

When running a semi-centralised procedure of course evaluation, typically one or two scanning stations are sufficient, because the evaluation team scans the question-

naires. Here, it has to be considered that the device has to be high-performance, because it has to process a very high amount of questionnaires within a rather short period of time of approximately two weeks.

Generally, it can be regarded as an advantage, if teachers have no direct contact to the evaluation software. Software training courses are not needed and the danger of abortive surveys caused by faulty operation can be avoided.

Present experiences show that evaluation procedures have to be accommodated to the individual structure of a particular university and faculty. As a result, the university has voted for a centrally organised course evaluation, which allows for the development of faculty-specific solutions. The following graph summarizes arguments for the particular approaches.



The following specifications can be deduced for a large university and a heterogenic faculty: The foremost essential aspect for a successful implementation of a university-wide course evaluation approach is a minimal amount of work for teachers and highly optimised questionnaires with regard to method and content. Sources of error produced by users have to be minimised by anticipatory planning. The assessment tools must be accommodated to the faculty-specific culture of teaching and learning and have to supply methodically valid data. Transparency and thus identification with these assessment tools can only be achieved by closely cooperating with the faculties when developing these tools. In addition, information and support for teachers must be guaranteed continuously. Requests have to be dealt with rapidly and services have to be delivered fast. Our experiences have made clear that the selection of the software system also plays an important role concerning the success of the

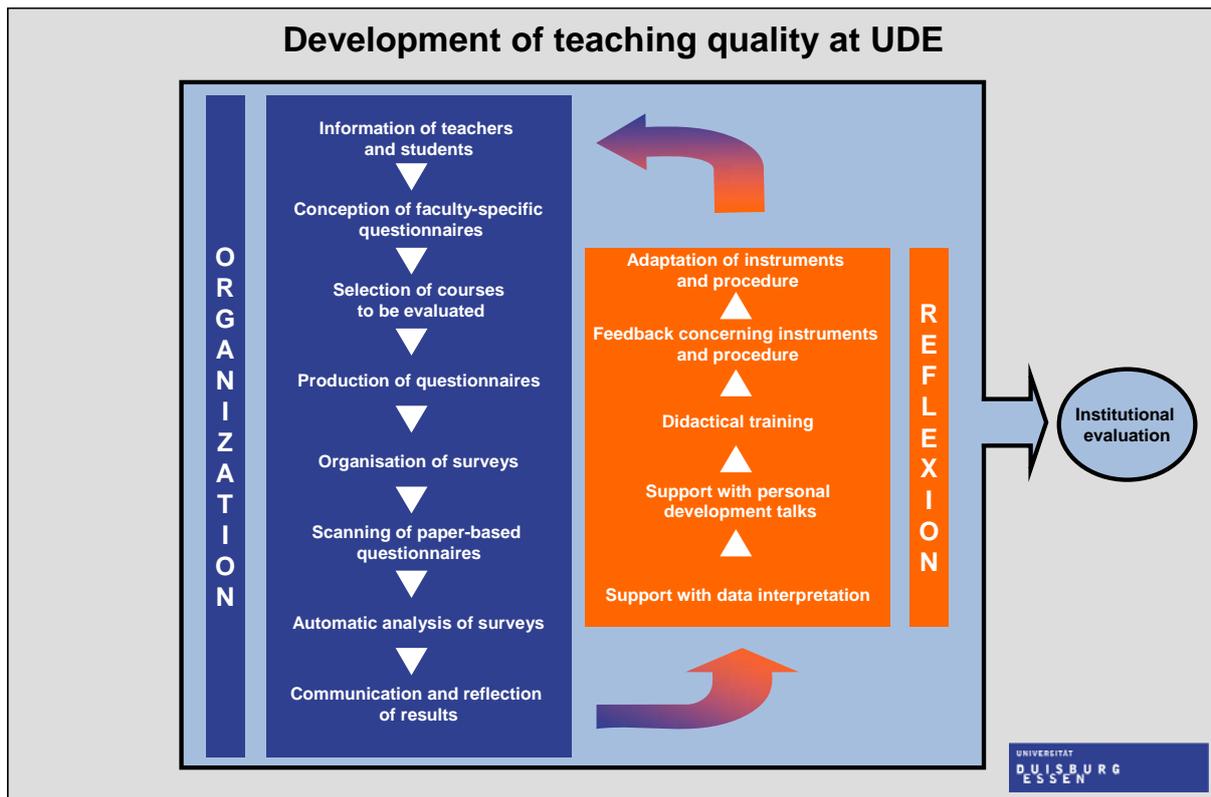
course evaluation. The deployed software has to be reliable and as flexible as to allow further development corresponding to the changing needs of a university¹⁴. Generally, data from the evaluation of courses must be recorded not only to enable faculties and the university to document their actions but also to be reasonably integrated into a comprehensive system of quality development.

Outlook

For the upcoming winter semester 2006/2007 the centre will supplement the surveys with other instruments for evaluating teaching and will extend the evaluation procedure. First of all, a further reduction of the workload for teachers and faculties is being aspired. Thus, in the winter semester a procedure using a flyleaf with paper-based surveys will be introduced. Here, faculties get non-personalised master questionnaires, which they can duplicate and distribute among the faculty staff. After the accomplishment of the surveys, the questionnaires are assigned to individual teachers by the use of a personalised flyleaf. This procedure helps faculties to save costs, because questionnaires can be duplicated by the university's internal printing shop and remaining questionnaires from one survey can be reused later. In the future, teachers still can apply for an individual account for configuring individual questionnaires, but they will not receive support from the evaluation team.

In the upcoming semester the procedure of course evaluation will be aiming at the development aspect of teaching quality more strongly. Thus, the cooperation of the centre's division will be systematised and strengthened. In the first place, the division for Didactics should be provided with aggregate and anonymous results from teaching evaluations. On this basis, trainings can be developed and tailored to the actual needs of teachers. In the second place, both divisions will conjointly organise workshops dealing with the interpretation of results from teaching evaluations. Within these workshops teachers and faculty managers can learn how to interpret results and how to discuss the results with students. Additionally, also counselling for faculty management concerning the interpretation of the data should be offered in the long run.

¹⁴ For example the implemented software system must be able to meet the needs of module evaluation, which is an upcoming issue depending on the progress of the bologna process.



In the future, further refinements of the faculty-specific questionnaires will be necessary. Also the concept of combining teaching evaluation with measures for teacher training must be elaborated and institutionalised. With this, a circular system of quality development for teaching could be established and embedded into the universities' quality management.

References

Evaluationsordnung für Lehre und Studium der Universität Duisburg-Essen, coming into force at 07.04.2005.

http://www.uni-due.de/imperia/md/content/zentralverwaltung/verkuendungsblatt_2005/vbl_2005_22.pdf (08.09.2006)

Drees, Stefan (2005): Organisationsprinzipien computergestützter Lehrevaluation: Die Lehrevaluation als neues Steuerungsinstrument. In: auf der Horst, Christoph / Ehlert, Holger [Eds.]: Eine neue Qualitätskultur in der Lehre - Programme und Perspektiven nach Bologna. Düsseldorf. (Not yet published.)

Hennen, Manfred (2002): Die Zukunft der Evaluation. In: Hennen, Manfred [Ed.]: Evaluation – Erfahrungen und Perspektiven. Mainzer Beiträge zur Hochschulentwicklung. Vol. 4. Mainz, pp. 82-145.

Hochschulgesetz NRW (HG) in der Fassung vom 30.11.2004.

http://www.innovation.nrw.de/Hochschulen_in_NRW/Recht/HG.html (08.09.2006)

Koch, Erik (2004): Gute Hochschullehre. Theoriebezogene Herleitung und empirische Erfassung relevanter Lehraspekte. Schriften zur pädagogischen Psychologie. Vol. 11. Hamburg.

Kromrey, Helmut (1994): Evaluation der Lehre durch Umfrageforschung? Methodische Fallstricke bei der Messung von Lehrqualität durch die Befragung von Vorlesungsteilnehmern. In: Mohler, Peter Ph. [Ed.]: Universität und Lehre. Ihre Evaluation als Herausforderung an die Empirische Sozialforschung. Münster / New York, pp. 91-114.

Kromrey, Helmut (2000): Qualität und Evaluation im System Hochschule. In: Stockmann, R. [Ed.]: Evaluationsforschung. Grundlagen und ausgewählte Forschungsfelder. Opladen, pp. 233-258.

Kromrey, Helmut (2001a): Evaluation – ein vielschichtiges Konzept. Begriff und Methodik von Evaluierung und Evaluationsforschung. Empfehlungen für die Praxis. In: Sozialwissenschaften und Berufspraxis. Vol. 24, 2, pp. 105-131.

Kromrey, Helmut (2001b): Studierendenbefragungen als Evaluation der Lehre? Anforderungen an Methodik und Design. In: Spiel, Christiane [Ed.]: Evaluation universitärer Lehre – zwischen Qualitätsmanagement und Selbstzweck. Münster / New York / München / Berlin, pp. 21-59.

Künzel, Ellen / Nickel, Sigrun / Zechlin, Lothar (1999): Organisationsentwicklung an Hochschulen. Was geschieht mit den Evaluationsergebnissen? In: Hochschulrektorenkonferenz [Ed.]: „Viel Lärm um nichts?“ Evaluation von Studium und Lehre und ihre Folgen. Beiträge zur Hochschulpolitik. Vol. 4. Bonn, pp. 105-119.

Laske, Stephan / Meister Scheytt, Claudia (1999): Qualities of Quality in Universities. In: TQM for Higher Education Institutions II. Higher Education Institutions and the Issue of Total Quality. Conference Proceedings. Verona 30-31 August 1999.

<http://www.blweb.it/esoe/tqmhe2/10.PDF> (08.09.06)

Rindermann, Heiner / Amelang, Manfred (1994): Das Heidelberger Inventar zur Lehrveranstaltungsevaluation (HILVE). Heidelberg

Rindermann, Heiner (2001): Lehrevaluation. Landau.

Schnell, Rainer / Kopp, Johannes (2000): Theoretische und methodische Diskussion der Lehrevaluationsforschung und deren praktische Bedeutung. Projektbericht des Projekts 'Fa-

kultätsinterne Evaluation der Lehre: Die Weiterentwicklung des bisherigen Evaluationskonzepts', Universität Konstanz.

<http://www.ub.uni-konstanz.de/kops/volltexte/2001/605/> (08.09.06)

Webler, Wolff-Dieter (2005): Zur Bewertung von Lernveranstaltungen. Konzeptionelle Begründung des Bielefelder Modells der Evaluation von Lehrveranstaltungen. In: Hochschulwesen. Vol 2, pp. 63-70.