The challenge of implementing institutional quality management systems in German higher education institutions: A case study series

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Background: QA paradigm shift in Germany

German higher education institutions (HEIs) are about to perform a fundamental paradigm shift in their quality assurance (QA). Mainly initiated by the Bologna process a tide of QA instruments and procedures concerning teaching and learning were introduced during the last years with the consequence that HEIs meanwhile ascertain an overload of work within their organisation. Therefore universities and Fachhochschulen\(^1\) are now developing holistic quality management systems (QM systems). These approaches try to prove and improve more systematically the quality of teaching and learning as well as the quality of research, administration and leadership. This aim should be realised by establishing a continuously running learning cycle which comprises the entire institution and is closely linked to strategic planning and controlling so that in the end, QA instruments and procedures are more integrated into the internal governance of HEIs. Even though there is currently no consensus in the German HE sector about the question what an adequate QM-system exactly is, the discussion on this topic has been evolving dynamically. There are two main reasons for that:

- Many universities criticize a new quality bureaucracy. Against this background, the need is increasingly acknowledged to bring the often very complex and unconnected QA activities more strongly into a purposeful connection. Linking them to strategy should help to focus the QA instruments often used separately and in parallel, and bring about more efficiency and effectiveness. The expectation is to build comprehensive QM systems in universities and Fachhochschulen, which both professors and students find useful.

- At present there are altogether 8835 study programmes in German universities and Fachhochschulen, at which 1380 study programmes are accredited (Akkreditierungsrat 2007 und HRK 2007). The accreditation of study programmes is felt as too expensive and too strenuous. There are six accreditation agencies in Germany that work on a commercial basis and charge between 10,000 and 15,000€ for the accreditation of one study programme (Carstensen/Nickel 2005). Moreover, universities deplore a loss of autonomy due to the increasing influence of the accreditation agencies on their internal processes: "As welcome as it is that the ministries reduces the regulations on QA in the higher education sector, as incomprehensible it is that the competences are shifted not primarily to HEIs themselves, but to accreditation agencies" (Landesrektorenkonferenz NRW 2006: 1)\(^2\). As a reaction on this various criticism, the standing conference of the LÄnder ministers responsible for education (Kultusministerkonferenz) decided in June 2007

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\(^1\) Fachhochschulen is a term for non-university HEIs in Germany, Austria, Switzerland focusing vocational training and applied sciences. In international context the German Fachhochschulen call themselves "universities of applied sciences".

\(^2\) All citations are translated by Sigrun Nickel.
to permit the accreditation of QM systems for teaching and learning starting besides the programme accreditation, starting in 2008 (KMK 2007). The big hope is that by this new accreditation modus expenditure and costs for HEIs could be lowered (see Witte 2007). But one main problem is that there are hardly HEIs in Germany which possess a functioning QM system for teaching and learning. The predominant part would have to develop one, which costs again a lot of time and money.

The CHE research project

To provide some orientation in this difficult discussion, the Centre for Higher Education Development (CHE) performed an empirical research project on "institutional QM systems in universities and Fachhochschulen" (Nickel 2007). The study proceeds in four steps:

1. Development of a basic model for QM systems adequate for HEIs and implementing a learning cycle comprising the whole organisation.
2. Analysis of six case studies (three universities and three Fachhochschulen) using the basic model.
3. Survey of professors in German universities and Fachhochschulen to gain information on the usefulness and the frequency of application of QA instruments and procedures.
4. Conclusions for the use of QM systems in HEIs.

The case studies are examined systematically using the same pattern of analysis following the basic model for QM systems, but the identified QM-systems are not judged as good or bad on basis of the applied criteria. The purpose of the study rather is to elaborate whether and in which way the HEIs produce ties and connections between their QA elements, which positive experiences they make with this and which gaps and problems exist. All case studies describe work in progress and possess exemplary character. The CHE research project pursues the goal of producing results by pointing out strengths and weaknesses of the different QM systems from which other HEIs can learn. Learning is a crucial purpose of QM systems: By helping organisations to get more knowledge about themselves they can develop themselves as social systems (Agyris/Schön 1996; Willke 2006).

The question how a QM system in HEIs can be adequately operated would remain incompletely answered if only the institutional perspective was applied. Universities and Fachhochschulen are expert organisations in which the persons working there play a particularly central role (Pellert 2002). This means, that without the commitment and motivation especially of the academic staff, QM systems in HEIs cannot produce successful teaching and research quality. Therefore the CHE research project uses the method of triangulation. This means that the system perspective is supplemented by the micro perspective in form of a survey of professors’ views. About 2400 academics representing 15

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subjects\textsuperscript{3} were asked about usefulness and application of QM instruments in the field of research as well as in the field of teaching and learning. This was done to receive information about how well QA is embedded in the sense of a living quality culture and get more knowledge about which QA instruments professors experience as helpful for their daily work.

The CHE research project identifies which benefits HEIs achieve by using QM systems. It does not discuss how HEIs can achieve the accreditation of their QM systems. The question about possible ways certifying QM systems sets a completely different focus. Putting aside the fact that the current debate about accreditation of QM systems in Germany only refers to a part of QM, namely teaching and learning, standards for QM systems are still missing. The aim of the CHE study is not to set standards. It proceeds empirically and shows rather that, if a uniform standard for QM systems is used as analytic scale, the heterogeneity and range of the present approaches is very large.

**Basic concept for institutional QM systems in HEIs**

It is not a brand new finding that the various QA instruments and procedures should be better practiced in form of a system of actions: "In particular it seems to me a holistic model that must be processed still further in details" (Müller Böling 1995, p. 45). Nevertheless it took several years until these thoughts reached the every day live in German HEIs. Meanwhile a small number of universities and Fachhochschulen has begun to follow this approach. They realised the increasing strategic meaning of quality as a crucial success factor in the national and international competition in research and student marketing. Therefore they try to integrate QA activities more directly and intensively in their decision making processes.

The range of approaches is large and reaches from concepts that place a combination of strategic planning and institutional evaluation\textsuperscript{4} into their centre over the adaptation of models from the private sector like the norm DIN EN ISO 9001\textsuperscript{5}, Total Quality Management (TQM) including its European version EFQM\textsuperscript{6}, up to mixtures of all three approaches. Despite the heterogeneity of the QM systems in German HE, an overarching basic concept can be derived which was used in the CHE research project as pattern of analysis for the six case studies.

\textsuperscript{3} The subjects were combined into four groups: philology and cultural sciences, humanities, architecture, engineering.

\textsuperscript{4} In the German discussion institutional evaluation is mostly identified with the model of the Zurich University/Switzerland. The "Zurich Model" regards QA in research and teaching as a combined process and furthermore examines the organisational conditions for developing quality in research, teaching and learning. Organisational conditions mean services, leadership, financial and personal resources, material equipment etc. For more Information: http://www.evaluation.uzh.ch/index.html, visited on 01.07.2007.

\textsuperscript{5} ISO 9001 is an international management standard for QM-Systems, see http://www.iso.org/iso/home.htm, visited on 30.09.2007.

\textsuperscript{6} EFQM is an acronym for „European Foundation for Quality Management“, see http://www.efqm.org/, visited on 30.09.2007. Informative examples for long term practising EFQM in HEIs can be found in the Netherlands (Expertgroup HBO 2006).
QM systems consist of the following core elements (Kamiske/Brauer 2003/Stockmann 2006/Zollondz 2002):

- Quality policy
- Strategic quality goals
- Responsibility of the leaders
- Suitable structural, personnel and financial conditions for the processes realising the quality goals (= input)
- Process management
- Controlling of the results (= output/outcome/impact)
- Feedback between results and goals

The overarching purpose of QM systems is the middle- and long-term success of an organisation through high-quality performance. Therefore the institution needs a clear quality policy and strategic quality goals including operative tools to reach them. Besides that, organisational conditions (structures, equipment, finances etc.), processes, results and the external requirements from the relevant stakeholder groups must enter into the strategic concept. To be able to observe and reflect the strength and weaknesses of its quality, the organisation has to build an information system. Such data warehouses enable the management to recognize undesirable developments early enough to bring about the necessary reversals or improvements. The process management plays a central role: Undesirable developments are to be recognized not only during the result controlling, but can be avoided in the run-up. QM philosophy is that smooth functioning is a substantial basic condition for high-quality performance of the organisation. QM systems are based - exactly as peer reviews are - on a leaning-cycle model (PDCA = plan, do, check, act).

Transferring these principles to HEIs, the main concern is to understand that research and teaching quality is not only a result of the individual performance of professors and students, but also a result of interlinking activities of the institution as a whole. The existence of HEIs is directly linked to the quality of the produced achievements in research as well as in teaching and learning. Consequently all other processes have the task to support the successful operative sequence of the core processes. Therefore both the leadership processes within the rectorates, boards and deanery and the administrative processes have a service function for research and teaching. The input to both core processes are quality-promoting decision structures and mechanisms for resource distribution as well as a personnel management, which appoints well qualified personell to the university, which offers extended training to their members and thus altogether guarantees a high motivation and qualification level both in academia, administration and on the management level.

This yields the following basis concept for QM systems in universities:
Results

The case studies present three universities\(^7\) and three Fachhochschulen\(^8\) which try to integrate their QM activities into a holistic system. A key result of the study is that the universities have the tendency to operate their QM more strongly as institutional evaluation systems, while the Fachhochschulen tend to adapt management systems from the private sector such as EFQM and DIN EN ISO 9001.

Furthermore it turns out that there is no gold standard for QM systems in HEIs. Rather all cases show that the universities and Fachhochschulen are still in an intensive experimental phase. The QM system must fit the type of HEI and the special profile of its research and study programmes. This is filigree individual work, which costs years and must be constantly developed further. Despite of all differences of the shown approaches, the following main success factors can be determined:

- **Coupling of strategy and QM**
  The coupling of strategy and QM is seen by all examined HEIs as a main condition for continuous quality improvement. Nevertheless the way how the two areas are connected is extremely heterogeneous.

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\(^7\) Humboldt University Berlin, Johannes Gutenberg University Mainz, Freie Universität Berlin

\(^8\) Names of the examined Fachhochschulen: Regensburg University of Applied Sciences, Hannover University of Applied Sciences, Fulda University of Applied Sciences.
• **Main responsibility of the leaders**
A QM system must be operated from the top of the organisation, since it has to steer the success of the whole institution. Staff members to whom leaders like to delegate their responsibility for QM do not possess the necessary power to push through the quality goals within the HEI. Another responsibility of the leaders is to evaluate regularly the quality of their own management activities.

• **Cooperation between top and bottom**
Frequently faculties and institutes have their own strategy and specific quality goals which are not necessarily in line with those of the rectorates and boards. This is where conflicts and blockades can occur. In order to avoid that, a high degree of communication and facilitation is necessary. Regular common meetings of rectorate members and deans proved helpful. Beyond that a round table should be established where quality managers of all organisational levels meet regularly to discuss everyday problems and prepare decisions for the management forces.

• **Inclusion of professors**
The survey of 2400 professors shows a high acceptance for QA within the academic staff. More than half of the university teachers see the instruments and procedures\(^9\) as helpful. No difference between universities and Fachhochschulen can be observed in this respect. The quality culture at German HEIs thus seems to be very distinct. This is a good basis for implementing QM systems. At the same time the CHE survey shows that the instruments are not yet sufficiently connected with the information need of the professors and should be aligned in a better way.

Besides the success factors, the CHE research project also identified the weaknesses of QM systems. One main point is:

• **Large gaps in the feedback cycle**
None of the examined HEIs can exhibit a functioning feedback cycle that would cover the whole institution. Only in very few cases, a systematic alignment between quality of the results and strategic quality goals takes place. Even HEIs which made a lot of progress with the implementation of feedback cycles could not integrate all organisation areas so far. A lot of work must yet be invested in controlling improvements. The first step is that HEIs get more aware of the desired quality of their results so that, in the next step, they can measure it. German HEIs concentrate

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\(^9\) It was asked for the following QA-instruments and procedures: peer review, benchmarking, student course evaluation, graduate and dropout analysis, financial incentives, management by objectives, awards and performance measurement by indicators.
more on observing and improving their internal processes than on paying attention to
the quality of their outcomes and impacts.

Is it worth the effort?

The results of the CHE research project show that the implementation of QM systems is a
very complex task lasting several years. However the fact that all examined HEIs pursue
their way with high persistence allows the conclusion that the immense investment of time
and money seems to be worthwhile. Indeed some of the case studies emphasize that a more
systematic and a strategic adjustment of the QA activities leads to more clarity and slim
processes. However - and that is also an important result of the CHE study - the
development and implementation of such systems can only succeed when the leaders are
convinced and promote the idea with perseverance into the university. What makes the
implementation of QM systems particularly ambitious is the fact that the work has to be
integrated into the running of everyday business. Key actors have to react constantly on
internal problems and new external requirements, in particular on those of ministries and
higher education politics. From the political side, German HEIs have to cope with some kind
of QA “intervention staccato”. In this regard, simple solutions and "recipes" would be
desirable for dealing with QM systems, but - as so often - these do not exist. But now at least
first experience is available on which HEIs can build their efforts to develop and implement
QM systems. This study hopes to provide some support for institutions embarking on this
path.

Accreditation of QM systems

At this point in time, it is questionable whether the accreditation of QM systems by agencies
is a useful approach. The German HEIs still find themselves at the real beginning as regards
their QM systems. Now they need to be supported in their efforts and not judged by external
institutions. In Germany, accreditation always implies a yes/no decision, based on standards
and norms. Keeping in mind the variety of approaches, it seems to be too early for a
standardisation of QM systems. An institutional audit of QM systems seems to be the better
alternative. Institutional audits do not imply the approval or disapproval of QM systems, but
offer an external feedback with recommendations meant to serve the further enhancement of
the QM system. Thereby HEIs which have no functioning QM system yet could be
encouraged - with the help of external support - to improve their QM system step by step.

References


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