

Professional Standards and Profiles

Hans-Dieter Rinkens, University of Paderborn, Germany
 Annegret Helen Hilligus, University of Paderborn, Germany

The centre for teacher education at the University of Paderborn, named Paderborner Lehrerausbildungszentrum (PLAZ), has developed a model of teacher education at university level combining the introduction of standards in the curricula of all teacher education programmes with an approach that allows teacher students to obtain personal profiles in fields relevant for school. A system of institutional and personal strategies of implementation has been established as well as an evaluation concept in order to obtain information about the outcomes of the reform. In 2004, PLAZ won one of three main prizes offered by the "Stifterverband für die Deutsche Wissenschaft" and the "Stiftung Mercator" for this reform concept (Hilligus et al. 2004). In our contribution we will describe the reform process and some of its main components.

Quality development strategies

As a theoretical background for the development of standards we have especially referred to the INTASC (1992) standards from the United States, to the works of Fritz Oser (1997, 1999, 2001, 2004) from Switzerland, and to those of Ewald Terhart (2002, 2003, 2005) from Germany. In Germany, the Kultusministerkonferenz (KMK), the Permanent Conference of Ministers of Education, has recently published a framework titled "Standards für die Lehrerbildung: Bildungswissenschaften" (KMK 16.12.2004). Without being obligatory in a strict sense, the framework is meant to be referred to by the sixteen states and by universities when defining more specific standards within a modularized course system. National standards for studies in the disciplines and *Fachdidaktik*¹ are still to come – a difficult task on the KMK level as the ministers of all sixteen states need to agree.

Apart from discussions on competencies and standards that concentrate on questions concerning the contents of

learning, at present a discussion on the structure of our educational system dominates the reform debate in Germany: the introduction of the Bachelor/Master system to replace the German "Diplom" and "State Examination". Here, we personally have the feeling that arguing about structures sometimes makes a good excuse. It makes us shift away from the more important questions of teacher education, as there are e.g. values, contents and modes of teaching and learning. At our university, we therefore decided to put aside for a while the question whether a Bachelor/Master system should be introduced in teacher education or not and if so, how it should be developed. Instead, we decided to concentrate on the introduction of standards in order to establish a solid basis for a successive structural reform.

The introduction of standards is a highly complex matter for us in Germany though. The focus is put on the outcome of teacher education in regard to the competencies of future teachers, whereas, at German universities, teacher educators are traditionally more used to concentrating on the input, i.e. the contents to be taught: we tend to ask us what we should teach students instead of asking what competencies in regard to their future teaching profession students should have gained when leaving university. As for the complexity of the matter, we realized that the process had to be embedded into a broader process of quality and organizational development. We sought to involve as many teacher educators as possible in the process of development, so that they get acquainted with the new perspective and apply it in their lectures.

We have therefore carefully worked out a strategy of implementation for our university (Tulodziecki 2004, Rinkens and Hilligus 2004) taking into account on the one hand the necessity to involve many people and on the other the necessity to preserve the unity of teacher education. Students study two majors and educational studies – and often they have to study in two or three faculties at the same time. Therefore,

we decided on an appropriate mix of formal and informal strategies to ensure the process being successful.

At the University of Paderborn, PLAZ initiates, fosters and monitors the reform process in teacher education and has, to speak in terms of organizational development, the role of a development agency (Blömeke 2000, Hilligus 2005, Rinkens 2005). PLAZ was established in 1995/1996. It was founded as an institution with a trans-disciplinary organization structure to make sure that members from different faculties and disciplines participate in the reform initiatives. The central aim of PLAZ is to develop teacher education in Paderborn by cooperating with all those responsible inside or outside the University. A chairman and three directors from different faculties serve on the PLAZ board. Supported by a manager they are responsible for coordinating all activities. PLAZ assembles on the one hand university staff and on the other hand teachers from schools or teacher training seminars² that are delegated for a period of time to the institute to join the reform activities. Apart from PLAZ the University has a commission for teacher education with representatives from the faculties responsible for the formal part of the process.

Now to the formal strategies to introduce standards. They were the following:

- A formal agreement between the rector of the University and PLAZ as to the development of standards, core curricula and profiles in all disciplines of teacher education (studies in the sciences and the humanities, in pedagogics and in Fachdidaktik); PLAZ is asked to develop a concept to be used as a framework by the disciplines
- A formal agreement of the representatives of the faculties within the commission for teacher education to use the concept developed by PLAZ as a framework
- The wish addressed to PLAZ by the commission for teacher education to develop a curriculum framework for the disciplinary curricula
- A formal agreement on the framework for the disciplinary curricula by the representatives of the faculties within the commission for teacher education
- A review of the disciplinary curricula by the commission for teacher education

The formal steps of this process are either preceded or followed by informal steps in which many teacher educators from the faculties participated. PLAZ being asked to develop a framework does not consider this task as one to be fulfilled by an individual. We organized meetings on different levels and brought together teacher educators from different disciplines to integrate their perspectives. There were round-tables

- on university level with the vice chancellor and the prodeans responsible for the curricula with PLAZ as chair
- in the faculties with the prodeans and the members of the faculties, sometimes with support of PLAZ
- in the disciplines, sometimes with support of PLAZ
- with representatives from university and from teacher training seminars with PLAZ as chair.

The discourse and the final results were documented by the executive staff of PLAZ.

Introduction of standards

When we at the University of Paderborn started thinking about the introduction of standards and competencies in our educational system in 2003, we had an excellent basis to refer to. There already existed a position paper on teacher education

that PLAZ had worked out together with the faculties in 2001. It contains the aims and objectives of our teacher education:

"The basis for teacher education is provided by the concept of school as a house of learning and, at the same time, as a place of experience and development. This approach aims to enable children and youths to acquire the capability and willingness to act adequately, autonomously, creatively and responsibly in social contexts." (Position paper, 1, <http://plaz.upb.de>)

This view on school has consequences for teachers and for teacher education. Teachers have to obtain the necessary qualifications to enable children and youths to acquire the competencies named above and teacher education has to offer future teachers the chance to obtain the qualifications they need in this respect:

"Being responsible for teacher education in the first phase, university supports the acquisition of the scholarly principles with clear reference and relevance to teachers' later professional responsibilities. Within this process, scholarly principles and professional principles should relate to each other in a relationship of mutual and reciprocal motivation. Altogether, students in teaching degree courses should

- *acquire the academic principles needed to enable them to fulfil their responsibilities in the fields of teaching, education and school development,*
- *develop a basic inquiring approach and gain first practical experience in the professional responsibilities they will be expected to perform, and should*
- *continue to develop personality traits which are important in the teaching profession.*

Within the scope of the general academic goals, university teacher education should enable students

- *to develop networked (joined up) and flexible expertise (instead of merely accumulating fragmented and lethargic knowledge stocks),*
- *to critically analyse and reflect on the continuing development of their personal way of acting and their subjective theories against the background of theoretical approaches and empirical findings (instead of simply unthinkingly adopting existing teaching patterns),*
- *to familiarise themselves with a wide range of teaching and education modes and to assess them in view of their chances and limitations."* (Position paper)

In Paderborn, the process of introducing standards into the curricula is a natural step forward in a process, in which we get more and more specific as to what competencies future teachers should gain at university. The beginning of this new process was marked by the development of a curriculum framework with defined standards for all disciplines. The standards for the sciences and the humanities and those for Fachdidaktik will serve as an example:

"In the disciplines students will achieve the competence,

- *to understand substantial problems of the specific discipline and to develop relevant questions on their own,*
- *to understand and to apply the specific methods of the discipline,*
- *...*
- *to develop an inquiring attitude towards problems of the discipline,*
- *to get acquainted by themselves with new and future*

developments relevant for the school subject."

Studies in Fachdidaktik have an integrative function concerning studies in the sciences and the humanities on the one hand and in pedagogics on the other. Here, students will achieve the competence

- ...
- *to seize the pre-conditions of subject learning by diagnostic means considering the continuous changing and diversity of the every day life of children and youths,*
- ...
- *to analyse, to plan, to test and to reflect school lessons in the respective subject on the basis of theoretical approaches and empirical findings and to use adequate media,*
- ...

The framework is a general basis for the more specific definitions to be developed by the disciplines themselves. Mathematics will serve as an example for the disciplines. After thoroughly discussing aims, contents and teaching styles in about ten meetings, teacher educators in the field of mathematics agreed on the following standards to be achieved by students of Mathematics at the end of their university course.

In Mathematics the students especially learn,

- *to apply theoretical structures to practical problems ("to mathematise") and to de-velop the related "economy of thinking",*
- *to verify given arguments, to advance in building up a chain of argumentation, and finally to perform proofs on their own,*
- *to develop an adequate capacity to describe mathematical issues in a written and oral way,*
- *to survey and structure mathematical content areas by describing impellent ques-tions and to build up a network of mathematical knowledge by combining different content areas,*
- ...
- *to define and justify aims and contents of mathematical education at school,*
- *to analyse the learners' ways of thinking based on theoretical approaches and empirical findings,*
- *to foster and to assess the aims they have set up for themselves with regard to teaching heterogeneous learning-groups,*
- ...

Development of profiles

As, in future, schools will need more and more teachers specialized in interdisciplinary areas (as e.g. media education), we give students the opportunity to develop an individual profile in accordance with the specific profile of the University of Paderborn. Interdis-ciplinary teams with experts in the fields of sciences and humanities, pedagogics and Fachdidaktik have meanwhile developed profiles in three fields: "Media and education", "Dealing with diversity" and "Health promotion and school development".

Thanks to the initiatives of the project-group "Media and education" students have the possibility to prepare themselves adequately with respect to the growing importance of information and communication technologies in our society. There is a wide range of courses in all disciplines dealing with digital media, and there are different options for students to gain competencies and having them certified. They can e.g. do

a supplementary study course that leads to a State Certificate or else have their courses docu-mented in a portfolio. The teaching and learning initiatives are accompanied by a re-search training group focussing on teaching and learning with media in which about 15 PhD students from different disciplines work together. What has become clear in recent years is that if technology is to serve learners and teachers, it must accommodate prin-ciples of learning and teaching in its design. Design, development, implementation, and evaluation of media-based learning scenarios tailored to the needs of specific groups of learners raise a wide scope of questions – e.g., with respect to institutional and organizational conditions, the choice of contents, the type of media mix (blended learning), the learners' prerequisites, and, last but not least, the paradigm of learning.

Diversity is a phenomenon that has become more and more meaningful and important for educational and pedagogical initiatives in the last decade. As the PISA study has shown, in Germany, we are faced with the problem of social and cultural diversity. Our school system does not succeed in supporting certain groups in a way that gives them the same opportunities as their fellow groups. The success of our educational system will very much depend on the way we deal with diversity in and outside the classroom. Apart from social and cultural diversity, teachers have to cope with diversity with respect to ethnic background, gender, ability and disability.

"Dealing with diversity" is a field for interdisciplinary learning and research in which the University of Paderborn has done good preliminary work. After the bad results in the PISA test teacher educators from various disciplines joined a task force organized by PLAZ to discuss the impact of the results on teacher education. As a result of the initia-tive the group has developed a study profile titled "Dealing with diversity" where students can obtain a certificate if they gain extra experience in this field, equally relevant for school as for educational institutions outside school.

As this field is not only important from a pedagogical point of view but also from the point of view of the disciplines, there are professors from the sciences and the humanities in-volved. In these fields the University of Paderborn has prominent research activities to offer. Since the early nineties diversity with respect to gender has played an important role especially in the humanities and in pedagogics. Apart from subject-specific initia-tives there is an interdisciplinary forum for gender research that focuses on themes like "Technologies of the Humane", "Social, symbolic and medial construction of gender", and "Gender and processes of modernization." Furthermore, in the aesthetic fields, as-pects of heteronomy of the cultural patterns (like gender, social or economic back-ground, different cultures), which enormously influence the aesthetic experience of chil-dren, are topics of research-orientated as well as biographical approaches. Questions concerning the transmission of cultural heritage to multinational groups as part of educa-tional processes open up new areas of research for the art education section at the Uni-versity of Paderborn.

To name but a few other examples concerning diversity with respect to ability and dis-ability, in music there is an expert in research on highly gifted children and the develop-ment of extraordinary talent, in mathematics an expert is dealing with dyscalculia, and in pedagogics the integration of the disabled is a field of research.

"Health promotion" is an issue of vital importance in a society with increasing illness and health problems in young people, many of them caused by sedentary lifestyles, poor diet, and an energy imbalance in which energy intake exceeds energy expenditure. Health promotion is the science and art of helping people change their lifestyle to move towards a state of better health. According to the WHO concept, health does not

simply mean the absence of illness. It is defined as a balance of physical, emotional, social, spiritual, and intellectual health. In the United States, health literacy as a concept has played an important role in educational policy for many years. Health literacy describes the extent to which individuals are able to obtain fundamental information with regard to health themes, to understand it, and to make appropriate use of it (IOM 2004). In Germany, we slowly become aware that health literacy is an important issue and that schools should focus more on it. Development projects have shown that lifestyle change can be facilitated through a combination of efforts to enhance awareness, change behaviour, and create environments that support good health practices. These aspects are especially important when planning to promote the establishment of all-day schools in Germany. Questions of structuring day-time, of the balancing of bouts of physical activity and periods of relaxation, of designing schools and classrooms, and of dealing with nutrition have to be answered well, so that school does not add to the problems instead of solving them.

Unlike e.g. Finland, Germany does not know a discipline called "health education" at school to promote health literacy. Similar to questions dealing with information technologies, health questions cannot be answered sufficiently from the perspective of one discipline only. This was the reason why in Paderborn members from different disciplines joined to develop a crosscurricular study profile that allows future teachers to gain the relevant expertise within their normal curriculum or by spending a few extra lessons at the most. First of all in the disciplines of sports, nutrition and consumer sciences Paderborn has substantial expertise visible e.g. in the number of research and development projects and the amount of third party funding. Yet integrating more than these core-disciplines is seen as a chance to implement health literacy as a cross-curricular task in schools as well.

Assessment and portfolio

Assessment and portfolio are two important means we intend to introduce at the University of Paderborn to help students with the acquisition of competencies for their future profession. Both are instruments that support students to develop a reflective attitude. As to assessment, there will be materials for students before they actually commence their studies to help them assess whether the teaching profession and consequently teacher education is the right choice of a future career. For the first year of study, a re-organization is planned to focus on core lectures, seminars and exercises to enable students with the help of tutors to reassess their decision made.

The portfolio has two dimensions: 1. as a professional development portfolio it is a means to enhance the reflective attitude in the process of studying. Students will e.g. have to document their learning processes and their experiences to obtain a certificate for the profiles mentioned above. It will also serve as an instrument when they do their practical phases in schools. There, the future teachers will especially be asked to reflect the relation between theory and practice with regard to a given aspect. 2. As an application portfolio it is to be used at the beginning of a new phase: either when entering the teacher training seminar or when applying for a teaching post. The applicants shall give an authentic résumé of their studies and profiles with respect to the forthcoming step in their professional career. The résumé should refer to the standards of teacher education. The portfolio was developed in roundtables with representatives from teacher training seminars and schools. This approach is new in so far, as PLAZ and the teacher training seminars of the region have succeeded in

agreeing on covering both phases of teacher education. The portfolio contains the following chapters:

- Personal background (educational philosophy, professional biography)
- My competencies concerning the main professional aspects
- Subject knowledge and didactic competence
- Pedagogical competence
- Practical experience
- My personal profile
- Dossier

Evaluation and research

As we understand the reform process as a process in which development and research influence each other in a productive way, evaluation and empirical research focussing on institutional and personal standards will be part of the development. The development of standards is a fairly new experience for us in Germany as we have shown. We do not take for granted that the products developed in this first phase and the results obtained by these will suffice. We can't be sure for instance, that

- the standards are really adequate in view of the general educational value attributed to the discipline, in some cases it may be necessary for the disciplines to determine their value for society anew,
- the teacher educators will succeed in adjusting content and teaching methods of their lectures and seminars in such a way that students have the possibility to obtain the competencies required; there might be a disparity between what they intend to do and what they actually succeed in doing,
- the standards can actually be reached by students as part of their normal workload; the expectations might be too high and might have to be adjusted later,
- a competence-orientated teacher education really produces better teachers.

A wide range of evaluation instruments such as self-reports, interviews, student questionnaires, and tests will be used. The choice of instruments depends on the aims and on the type of people questioned. Aspects of the evaluation may be:

- curriculum design, content and organization,
- teaching and learning,
- student progress and achievement,
- student support and guidance, and
- quality management and enhancement.

As Terhart (2002, 49) has made clear in his expertise evaluation based on opinions and convictions won't suffice. We need to develop an empiric-based evaluation to get more insight into the real impact of the reform. We haven't got far enough yet to develop the necessary instruments for this type of research on a large scale. In Mathematics though, we have regular assessment of lectures for more than twenty years. The assessment is performed by students. Our critique is however that up to now it is too much "input-orientated", it assesses only the parameters of teaching and doesn't reflect the outcome. To get a first idea of what students think about their acquisition of competencies in particular lectures, we are now in discussion with our students to complete the questionnaire with corresponding items.

Eilerts, one of my candidates for a doctor's degree, is

searching into the effects of our reform on the first year of studies in mathematics. How does competence increase and how can it be measured? Apart from questioning students in chosen lectures, Eilerts makes interviews with lecturers and asks them about the development process, their lectures, their opinions on standards and on their students' achievement, etc. Do the beliefs of the students and those of the lecturers correlate? And do they correlate with the outcomes measured by tests?

Speaking the truth, this type of research serves two purposes at the same time. On the one hand, we get information about our reform process and its success. On the other hand, we foster the reform process itself by making teacher educators and students speak about their beliefs and reflect on what they are doing. This type of evaluation can therefore be described as a supplementary reflective moment in teacher education.

Conclusion

Coming to an end, we would like to underline two aspects of our quality development approach that seem important for its success and may be valuable for reform processes in general:

Nowadays, there is so much talking on structures. If we want educational reforms to be successful though, discourses on aims and contents should have priority to discussions on structure. In our case, we have put emphasis on standards and competencies instead of struggling with the imponderability of an early change to the Bachelor and Master system. This can be the next step.

A successful reform process needs combined top-down and bottom-up strategies. Top-down procedures are important to fix responsibilities, an organizational framework, and time schedules. They have to secure the unity of teacher education against different egoisms and establish effective quality management structures to initiate and support the reform process.

Nevertheless, one has to keep in mind: The success of a reform in the educational field always depends on the persons involved. They have to play an active part in the process and support the ideas of the reform. How this can be organized we have shown by giving the two examples "Introduction of standards" and "Development of profiles", the products of which are both the result of an interdisciplinary discourse.

At first sight, discourse may seem to be a procedure in slow motion. Having a closer look though, it has the advantage that an early identification on behalf of the teacher educators favours an earlier success of the reform in teacher education.

Notes

¹ The term Fachdidaktik belongs to the German didactic tradition (Westbury/ Hopmann/ Riquarts 2000) and refers to the specific education and didactics of individual disciplines.

² The German teacher education system distinguishes between a first phase of initial teacher education at university and a second phase of induction teaching which is institutionalized in teacher training seminars and organized in cooperation with schools.

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