Vol. 8, No. 2, December 2012, pp. 88-125

Reflecting Education
http://reflectingeducation.net

From Best Practice to Next Practice: A Shift through Research-Based Teacher Education

Christian Kraler
Department of Teacher Education and School Research, University of Innsbruck, Austria

Michael Schratz
Department of Teacher Education and School Research, University of Innsbruck, Austria

ABSTRACT

The question on the formation of teacher education can never be solved once and for all. As part of our formal education system, teacher education is embedded in a complex network of social developments, political interest, national cultures and traditions. What we can do is to search for temporarily adequate answers within a system. In this context, the critical question is usually: how can the existing system be developed and changed in such a way that it can face the emerging challenges of education? In this paper, we describe how change and development can be implemented by combining a teacher education programme with research on teacher education in a special way. Research, teacher education practice and curriculum development thus evolve in an interacting co-evolutionary way. The Austrian system of teacher education is used as an example, focusing on the programme at the University of Innsbruck. By describing the crucial steps of our development and presenting the main research findings we discuss basic questions of today's teacher education. As a consequence, we conclude that the paradigmatic shift from teaching to learning within teacher education programmes and personalisation represent a promising way for teacher education in the second decade of the 21st century.

SETTING THE SCENE

Context

A look back in history illustrates that our educational institutions are shaped and driven by their individual (historical) genesis (cf. Labaree, 2008) and societal developments. According to Fend (2006), a main function of the formal education system, encompassing schools, universities and vocational education, is to ensure the transfer of the culture of a society to the next generation. By this process, the continuity and stability of societies should be if not guaranteed then at least highly promoted. To achieve this, our education system is in turn embedded in a stable structural framework with regard to its institutional implementation, bureaucratic support, management and content selection (curriculum).

At least since the beginning of the 19th century, reforms on different levels of (formal) education (primary, secondary and tertiary) have usually been designed and implemented in a close relationship with national political goals and interests. Being part of our education system, the same is true of teacher education. Of course, the education system should provide the next generation with the competencies needed to live a successful, satisfactory and responsible life within our society (cf. Havighurst, 1972). This view has become standard since the Enlightenment at least for democratic societies, but the concrete

© Institute of Education, University of London ISSN 1746-9082

educational realisation of these aims is also highly influenced by the societal and political norms and values of a particular nation-state. Hence, teachers are also seen as a decisive means within this process of generational transfer. They should familiarise future generations with the knowledge, norms and values of a nation and thus ensure the successful 'implementation' of societal and democratic continuity and stability. As a result, teacher education has been politicised and professionalised since the end of the 18th century.

Therefore, school reform, school innovation and teacher education can be defined as a dialectic process intertwined by many different political, institutional, content or person driven aspects. Nowadays, this dialectic process is a complex interplay between different conservative and progressive forces acting on different societal and political levels.

The conservative standpoint stresses the existing and inherited 'traditional' content-wise, bureaucratic and institutional structure. The existing formal education system is firmly established within our society on all levels (politics, economics, culture). Different influential and powerful groups (parties, unions, parents, business, the Church etc) try to preserve their interests within the formal education system. This seems to be natural because of the range of deviating visions, values and priorities of these groups. The priorities of trade associations, for instance, (economic stability, profit and growth) usually differ from those of trade unions or the Church (safeguarding jobs, adequate salary and stability). This simplified example demonstrates the intertwining factors of the dialectic process. Both groups want economic stability, but this is viewed as a means to achieve the goals of the particular group that is represented. Thus, the different groups' defence of their own interests and influences makes the whole system relatively resistant to change, especially on the level of governance. To borrow a term from fluid mechanics, formal education can be seen as a system with high viscosity (like magma, for example).

Nevertheless, this static, 'shaped' aspect of our education system has a dynamic, shaping force as a counterpart. Our culture's knowledge and traditions also serve as a starting point for development and change. Our fast changing society, surfing on waves of rapid transformations in social, economic and political sectors (cf. Eriksen, 2001), needs people who are able to meet the demands that come along with those alterations. School is a mirror of society and the rapidly changing social life diffuses in the education system. The everyday classroom experience, the results of national and international student assessments (e.g. PISA), questions of migration, fostering special groups of students and much more mirror societal changes within school and create an urgent need for appropriate answers from the education system. The established aspects and structures of school such as 45 to 60 minute long lessons, primarily subject-specific curricula, traditional classroom management concepts and teaching strategies no longer suffice to face the mentioned challenges.

To support these arguments we have attempted to illustrate the embedding structure of the formal education system within society in Figure 1. All levels of our formal educational system (primary, secondary, tertiary) are embedded in a societal, economic and political context. To put it simply, one can observe that our modern Western democratic society is built on stability and sustainable development (and growth). Modern natural sciences, technical developments and the philosophy of the Enlightenment (especially Kant's concept

of reason) have built the material, knowledge and cultural base. The basics of these concepts are handed over to the next generation by our system of formal education (especially schools and universities). This guarantees the stable preservation of society (especially its culture). That is why our education system has to be conservative in the sense of the original Latin meaning of the word (*conservare* = preserve). The conservative force of education is simultaneously rooted in its function and status. Education supports the preservation and reproduction of culture (function) to guarantee stability on the time scale and is a multiple intertwined part of society. On the other hand, social life changes so rapidly in our modern society that the latter needs and luckily has implemented an innovative force to face the challenges. Curiosity, a spirit of research and fascination for the unknown are deeply rooted within humankind. The economic desire for growth in this case might instead be interpreted as another form of exploring the unknown than being seen as 'more of the same' (this will be explored later in the paper).

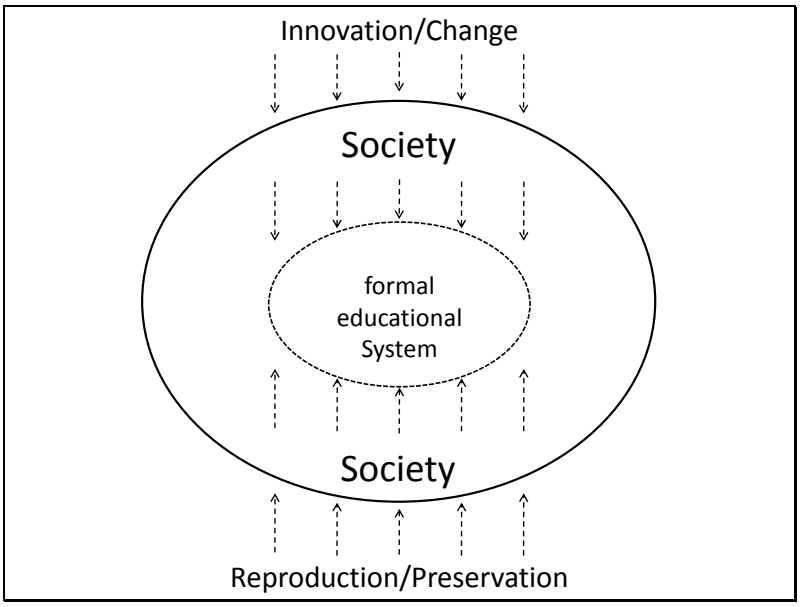

Figure 1: The interplay between society and education

As mentioned already, teachers and, therefore teacher, education play a major role within this system. Bransford (2005) argues:

> Education is increasingly important to the success of both individuals and nations, and growing evidence demonstrates that – among all educational resources – teachers' abilities are especially crucial contributors to students' learning (Bransford et al., 2005: 2).

The question of how much influence teachers really have on students' sustainable learning outcomes is undecided, but there is sufficient evidence that teachers play a crucial role (Wright et al., 1997; Nye et al., 2004). What one should always keep in mind is the model of a linear functional chain:

curriculum → teacher educators → teacher education students → teachers →
instruction/class → pupils → grades → sustainable competencies …
... (→ 'good' teacher education students → teacher education → curriculum)

which is a necessary simplification to provide a better overview of the processes in question. At least in Austria, one can observe that teacher education is much more on the reproductive, preservative side of the scale of things. Here the question is not only one of putting into practice the best possible concept of teacher education from the content-related point of view; who is permitted to teach, what has to be taught, who controls teacher education and similar questions are largely driven by phenomena of power, interpretive sovereignty, lobbying and the influence of certain groups of people. Within the context of the picture described previously (cf. Figure 2), the main question is:

How can we promote and support a more solid implementation of the innovative side of teacher education?

Teacher education as part of our culture and education system exists in the field of the tension between reproduction (educating new generations of teachers) and, at least at universities, research-based innovation (cf. Labaree, 2008).

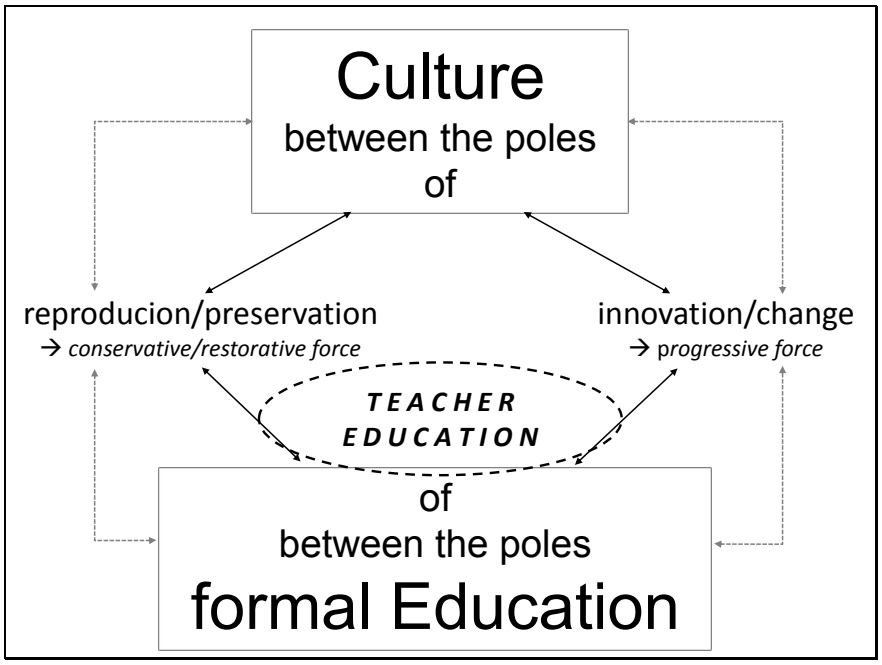

Figure 2: The interplay between culture, education and teacher education

Austrian teacher education institutions tend to respond to the question of innovation by using the 'more of the same' strategy: more credit points, more detailed curricula, more selection, just to mention some of the 'mores'.

The aim of the remainder of this paper is to describe by example how teacher education may shift from 'more of the same', which represents the (necessary) preservative force in education, to a different, innovative and forward-looking development and realisation.

What makes the difference – a framework model

In many ways, knowledge and excellence based on past experiences have lost their validity as a promise for future success. What we have learned about educating teachers and what has worked for us up until now does not necessarily provide answers to the diverse problems of today and less so of tomorrow. Education systems have very often reacted to pressure with an attempt to improve achievement within the existing framework of functionality. This 'more of the same' often only leads to little improvement since a typical learning curve reaches the upper limit of further outreach. The old pattern seems to strike against the limitations of the possible solutions. Sometimes, special arrangements are made (e.g. through incentives) to reach best practice status, which, however, are difficult to implement because of their special status (e.g. model schools). H. v. Hentig (1993), therefore, argues that it is not enough to renew or improve schools; he calls for a rethinking of schooling, which demands a new mindset for how one envisages school. In research, theoretical and methodological discussions have taken place in the process of reframing the 'classical approach' on changing the patterns of schooling at large and learning and teaching in particular (e.g. see Vosniadou, 2008) which must, not least, begin with teacher education. This reframing process can be seen as a shift of pattern from best practice to next practice (Figure 3).

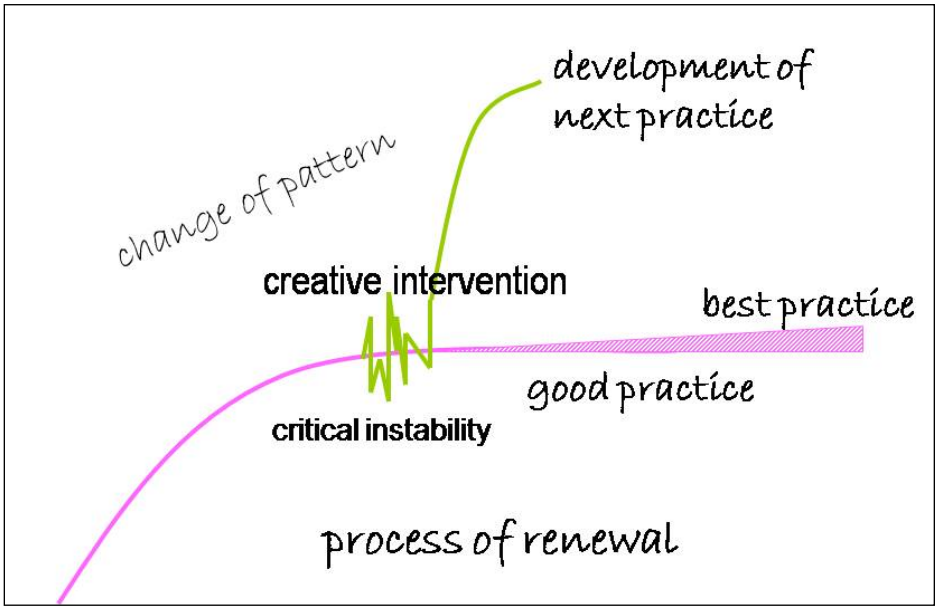

Figure 3: Change of pattern

For new patterns to emerge, critical incidents or interventions are necessary to enable the opening of the next practice perspective (Kruse, 2004). However, leaving the well-trodden path initially causes insecurity and instability: the old patterns of mind no longer function and the new ones have not yet gained stability. The experience is similar to an incubation phase for the emergence of the new, which transfuses the old or even questions it. Creating a mindset of sustainable change is a key concept, which runs through the phases of the curriculum in a teacher education programme. This process can be illustrated by paradigmatically describing the path the University of Innsbruck has taken.

Before proceeding, it is important to clarify the way in which we understand some of the key terms in question. The title of this paper is "From Best Practice to Next Practice: A Shift through Research-Based Teacher Education"[1]. It is assumed that "research-based teacher education" is clear to the reader, although the terms "best practice", "next practice" and "shift" may require further definition:

- **best practice**: trying to achieve more by intensifying efforts (*more of the same*)
- **next practice**: finding a novel way of dealing with a challenge (*change of pattern*)
- **shift**: (setting an intervention) to *change* the pattern

Of course, one must not misunderstand the definitions of best and next practice as a value judgement. Best practice, for instance, is at the core of programme and quality development. For example, it is absolutely necessary for establishing, improving and fine-tuning a teacher education curriculum. But the question is always: what comes next? One may say that best practice is necessary, but not sufficient in the long term. If a teacher education programme has been established and improved for some time, naturally more and more adaptive requirements are needed. This is caused by the ongoing change of the social and educational context. At one point, we have such a critical mass of necessary adaptations that we require new answers, new practices to solve the problem. One way to achieve this is to identify a shift as described above.

The crucial point of this model is clear: *what is a useful shift?* It is the challenging part of the game to answer this question in a prospective setting. This will therefore be described retrospectively within the context of the teacher education programme at the University of Innsbruck.

The Austrian Context – the Structural Framework

Teacher education in Austria and Germany has an evolving and politically influenced history (cf. Seel, 2010). The German-speaking countries have witnessed a significant upturn of research in teacher education since the mid-1990s, especially during the last 10 years (driven by TIMSS and PISA). Compelled by international studies, the main research questions focus on the effects of the education system on all levels. After concentrating on the school environment, pupils and their competencies, teacher education has come increasingly into focus. It seems that educational questions usually tend to be discussed from the tail to the head following the linear outcome logic mentioned previously.

The Swiss book "Die Wirksamkeit der Lehrerbildungssysteme" (The Effectiveness of Teacher Education Systems) has attracted much attention in the German-speaking scientific community. It provided the catalyst for the then quickly rising number of publications on this topic. The number of influential research-based German books and handbooks focusing completely on teacher education or containing substantial texts on teacher education has increased. The following (fragmentary) Table 1 might give an idea of the development since the turn of the century.

Title (Translation)	Year of first publication	Editors
Die Wirksamkeit der Lehrerbildungssysteme (The Effectiveness of Teacher Education Systems)	2001	Oser/Oelkers
Lehrerberuf und Lehrerbildung: Forschungsbefunde, Problemanalysen, Reformkonzepte (Teacher Profession and Teacher Education: Research Findings, Problem Analysis and Reform Strategies)	2001	Terhart
Unterrichtsqualität: erfassen, bewerten, verbessern (Quality of Teaching: Assessment and Improvement)	2003	Helmke
Handbuch Lehrerbildung (Handbook on Teacher Education)	2004	Blömeke et al.
Handbuch der Schulforschung (Handbook on School Research)	2004	Helsper/Böhme
Evaluation der universitären Lehrerinnen- und Lehrerausbildung (Evaluation of University-Based Teacher Education)	2004	Nolle
Handbuch Schule: Theorie - Organisation – Entwicklung (Handbook on Schools: Theory, Organisation, Development)	2009	Blömeke et al.
Lehrprofessionalität: Bedingungen, Genese, Wirkungen und ihre Messung (Teaching Profession: Requirements, Origins, Effects and Measurement)	2009	Zlatkin-Troitschanskaia et al.
Handbuch der Forschung zum Lehrerberuf	2011	Terhart et al.

Table 1: Handbooks containing sections on research in teacher education

Within the Austrian context, the Austrian Association of Research and Development in Education (ÖFEB = Österreichische Gesellschaft für Forschung und Entwicklung im Bildungswesen) has edited some books dealing especially with the Austrian system of (teacher) education (cf. http://www.lit-verlag.de/reihe/obb).

Accordingly, research in recent years has provided substantial evidence of how we can improve our existing system of (initial) teacher education. (In fact, Austria currently has two parallel, but structurally similar systems of teacher education, which depend on the type of school that student teachers are to teach in later). To conclude from the researchers' point of view, one might state that there is a wealth of theory and evidence but little curricular implementation and realisation of the findings. At this stage, it is important to take a step back and critically reflect on those two points.

Firstly, in the case of Austria the communication between researchers on teacher education and policy makers (the ministries) functions effectively, with fruitful exchanges between the two groups at different levels. Primarily there is communication between these two crucial actors, but this of course does not guarantee the implementation of findings.

Teacher education researchers in Austria are increasingly producing findings that lead to suggestions for policy makers, although the crucial hindrance to the realisation of the suggestions is due to the historically and structurally regulated context of education and in particular teacher education. Austria's teacher education is strongly shaped by several forces that highly influence the outcome of the communication between policy makers and researchers. It is important to mention that the influential aspects described here are not negative *sui generis*. The striking point seems to be whether they allow development and change or prevent it. Figure 5 provides an overview of the following five powerful influences:

- **discipline-driven:** the philosophy is based on a subject-oriented attitude and view (derived from the subject-oriented organisation of the universities) leading to the opinion that studying mainly subjects makes good teachers.
- **theory-driven:** which leads to a division of labour and study work between theory and practice. As a consequence of the academic education of teachers, we have the primacy and higher reputation of theory.
- **state-driven:** entry to the profession is safeguarded by the state (*probationary year*, *2. Staatsprüfung*). The reason for that has been discussed above. The state wants to keep control and power over a crucial area to ensure stability.
- **selection-driven:** it is a grades-based process: . The 'best' are allowed to teach at schools with higher certifications within the system (from elementary school to upper secondary school).
- **bureaucracy-driven:** solutions, changes or developments have to fit with the existing administrational structures.

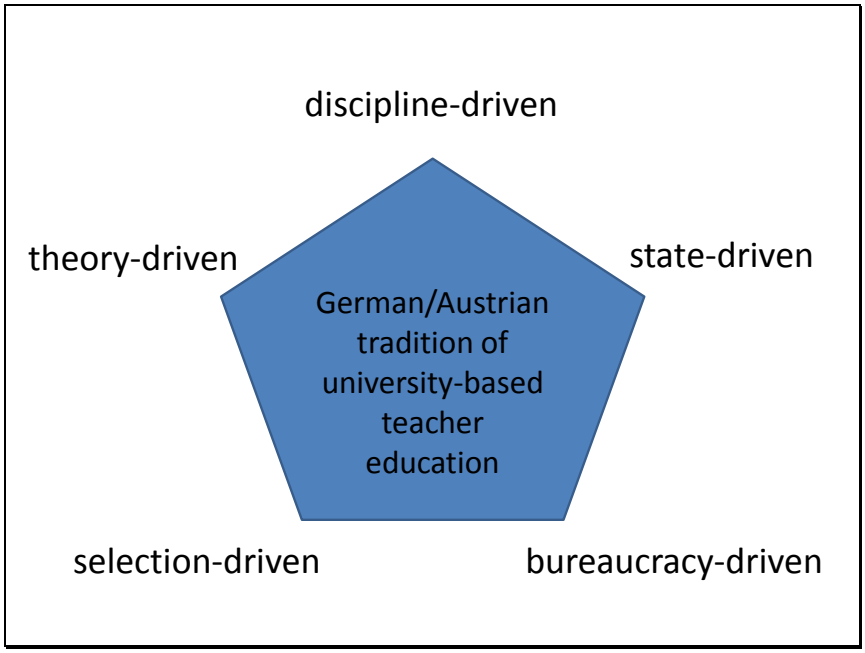

Figure 4: Influences on Austrian (and German) teacher education

These five forces are multiplied by another structural (Austrian) speciality of our education system that obstructs the realisation of innovations: It is structurally similar to a very high

degree on all levels. This concept is derived from biology and mathematics. Self-similarity means that a structure is exactly or approximately similar to a part of itself. Benoît Mandelbrot made this concept popular to a wider audience with his 1977 book "The Fractal Geometry of Nature". Peitgen, Jürgens and Saupe elaborated and explained the concept later in several popular as well as mathematically based books (cf. Peitgen et al., 2004). Up to the mid-1990s the concept was primarily used in natural sciences until 2001 when Andrew Abbott published an elaborated adaptation of the concepts to sociology and social sciences in his book "Chaos of disciplines". In this book, he discusses:

> the idea that a subset of a larger unit can contain scaled-down versions of structures and process in that larger unit (Abbott 2001: 3)

and its consequences. Abbott analyses pivotal self-similar social structures:

> Self-similar structures are based on a unit that repeats itself. To us, the most familiar case is that of the ideal typical bureaucracy. The unit here is a simple hierarchy placing one individual in a position of authority over several, a unit we customarily illustrate as a tree with the subordinates strung out as roots and the supervisors as the stem (Abbott, 2001: 165).

Self-similarity is generated by the phenomenon of fractal distinction that is reproduced along the social scale. In the example above, authority would be the distinctive factor. Abbott shows that fractal distinctions tend to repeat within themselves, both hierarchically at a given time and in descent systems over time (Abbott, 2001: 147). Important in our context is his finding that most self-similar systems are not designed, but arise naturally out of social processes (p. 170). The reason commonly provided is institutionalisation. In brief: organisation creates institutionalisation which creates hierarchy, and that establishes time invariant, static self-similar structures.

Adapted to the context of teacher education in Austria, we find the following phenomena. Austria's education system is historically heavily shaped by two self-similar structures, one affecting the system's structure, the other affecting the content. Concerning the structure of the education system, the fractal distinction is bureaucratic/administrative (and party political) power, while for content it is knowledge. The mechanism of educational bureaucracy is illustrated in Figure 5. One can identify the three mentioned in the above quotation and see how administrative power is broken down at the different levels.

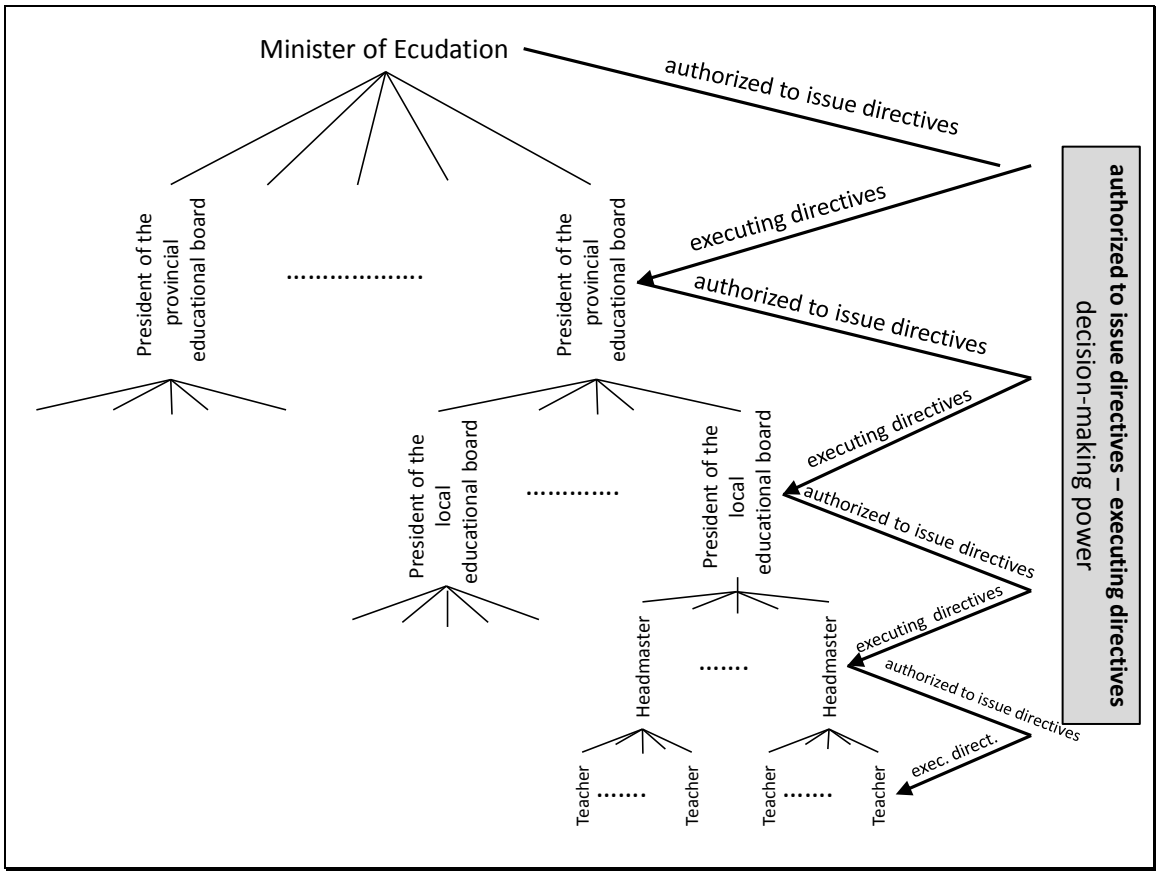

Figure 5: Self-similarity and power in the bureaucracy of formal education

Evidently educational bureaucracy is organised in a similar way in most Western countries. But the point for Austria is that we have either 4 or 5 levels of self-similar bureaucratic structures in a country with just 8.5 million inhabitants, thus making the system cumbersome. The second formatting self-similar structure relates to the core of formal education. There are people who know (teachers) and people who have to learn (students). They differ in knowledge and this knowledge is a factor of power on all levels of the education system. Teacher education students become accustomed to this system repeatedly throughout the duration of their education (cf. Figure 6).

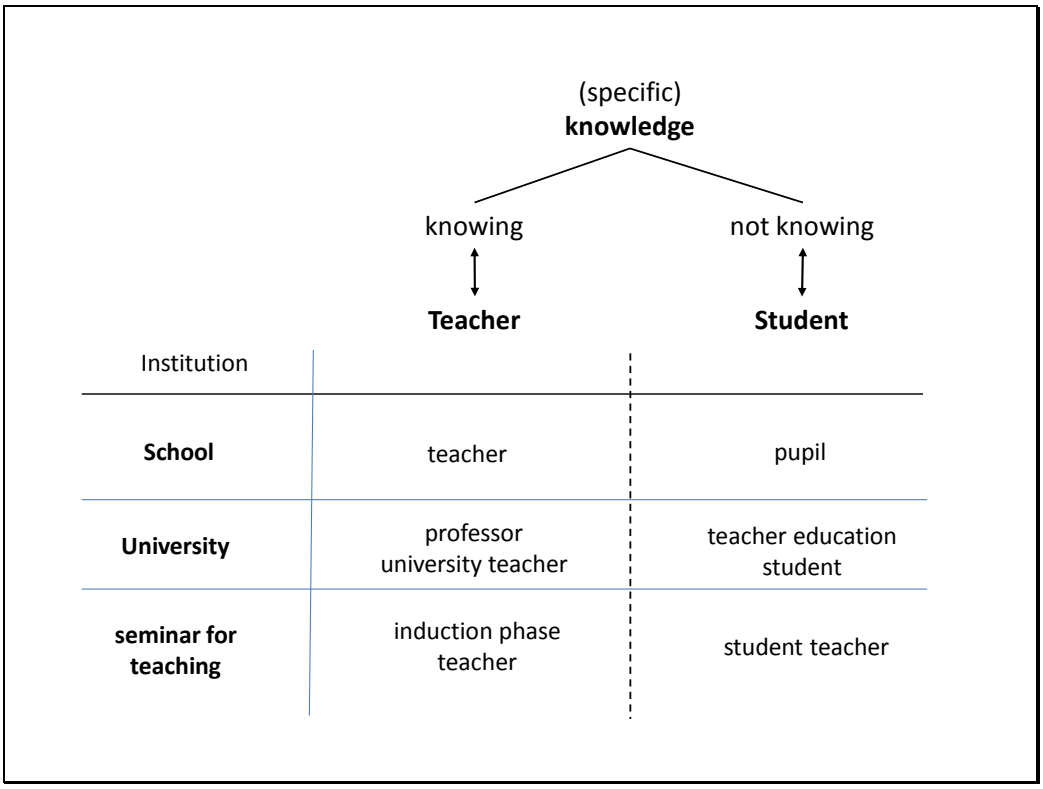

Figure 6: Fractal distinctions in the teacher education system

The issue concerning the Austrian teacher education system is that there is a very teacher-centred form of instruction at all levels of education. In a nutshell, one may say that whoever has no knowledge has no power and consequently cannot have a profound opinion that can count, and students at all levels of the system 'have no knowledge' because they are learners.

To sum up, we have a self-similar reproducing system of higher education concerning the bureaucratic structure as well as the inner logic and means (grades, transfer of knowledge, didactics etc.). Teachers tend to teach the way they are taught rather than the way they are taught to teach (cf. Britzman, 1991) and, as discussed previously, the Austrian system reacts viciously to innovations. Therefore, the main question is: how is a teacher education institution embedded in such a structure able to change its patterns? In the following we describe our struggle at the University of Innsbruck to change patterns to face the current and coming challenges in teacher education. In order to reduce complexity, we focus on the area of educational research ("Allgemeine Schulpädagogik") and exclude subject-specific didactics and subject-specific education.

THE STRUGGLE FOR RESEARCH-BASED TEACHER EDUCATION

A brief history of the ILS department

At Austrian universities teacher education students are required to study two subjects (e.g. mathematics and a foreign language). Up until the 1980s it was believed that studying two subjects in the disciplines provided a solid scientific-based preparation for teaching in Gymnasium. The shift from a pure teacher training institution to a department for teacher education and school research as a research-driven institute was based on multi-causal reasons. These included a fusion of legislative changes, new curricula, personnel and structural decisions made by the head of the University. The following Table (2) summarises the process since the 1980s:

Year	Initiative
1986	BUSch: Special University Unit for School Practicums organising teaching practice for the first time in a more systematic form at university level (loosely linked to the senate)
1995	Task Force at the Arts and Humanities Faculty to find a solution for an integrative structure of teacher education at the university. A department structure recommended to the Ministry
1998	Ministry of Science and Research approves the creation of the "Department of Teacher Education and School Research" (ILS)
1999	Appointment of the first professor
2001	External evaluation secures status as a full university department
	Curriculum reform competence orientation (including stakeholders)
2008	Kick-off: a university-wide network meeting for teacher education (→ 2010: Centre for Teacher Education)
2010	Appointment of the second professor
2011	Formation of the ILS – "Centre for Research on Learning"
2012	Restructuring the Institute (ILS) within a School of Education

Table 2: Structural development of teacher education at the University of Innsbruck

As one can see, the logic behind the development involves the transition from a pure service facility to a modern research based teacher education institute. The growing number of academic staff, PhD students and teacher education students at the University of Innsbruck correlates with this development. Another correlating sign of this development is the Institute's publication strategy. In addition to the usual publishing activities, members of the scientific staff worked as editors of books dealing with questions of teacher education ("from governance to competency"). Table 3 provides an impression of this activity (in extracts).

Year of publication	Title (Translation)
2001	Founding of a new journal: Journal für LehrerInnenbildung (Journal for Teacher Education)
2002	Lehrerinnen- und Lehrerbildung braucht Qualität. Und wie!? (Teacher Education Needs Quality. But How!?)
2007	Ausbildungsqualität und Kompetenz im Lehrerberuf (Quality of Education and Competency in the Teaching Profession)
2008	Wissen erwerben, Kompetenzen entwickeln: Modelle zur kompetenzorientierten Lehrerbildung (Acquiring Knowledge, Developing Competence: Models of Competence Oriented Teacher Education)
2010	Pädagogische Professionalität: quer denken - umdenken - neu denken: Impulse für next practice im Lehrerberuf (Pedagogical Professionalism: Thinking Outside the Box – Rethinking – Fresh Thinking: Inputs for a Next Practice in the Teaching Profession)
2012	Kulturen der Lehrerbildung: Professionalisierung eines Berufsstands im Wandel (Cultures in Teacher Education: Development of a Profession in Change)

Table 3: Teacher-education-specific publications

In this way the Institute tries to avoid organisational blindness and seeks to feed back new ideas to influence curriculum development at the University of Innsbruck. The philosophy behind this is that editing a book/paper means one has to deal with concepts and findings, which differ from one's own research focus. One key aspect in this process was and is the steady exploration of one's own teacher education curriculum, its effects on students, framework conditions, possibilities, challenges and limitations. Some milestones of this process are described below. Typical examples have therefore been chosen that might be easily transferred to similar circumstances.

Milestones

The examples show prototypically different research approaches to the question of teacher education, which can be read as an evolutionary development 'from method to context'. The initial question for the Institute was 'how': how can we obtain information that on one hand produces relevant new findings and in addition gives us an insight we can use as soon as possible to develop our existing curriculum (method)? The result of that led to more research on our curriculum (content) and with the ensuing outcome we tried to readjust our theoretical approach and undertake relevant research (theory). All these research-driven questions were realised within the university-teacher education programme and this remains an on-going project. The next step we have started is to combine this with deeper research into teaching practice in the field where contextual questions play a crucial role (context). The following is necessary:

1. a morphological approach (*method-driven*);
2. a curriculum approach (*content-driven*);

3. focusing on students and teacher educators (*theory-driven*); and
4. teaching practice (*context-driven*).

It is, therefore, important not to confuse the respective research content logically with motivation. In the 3rd example, for instance, teacher education students and teacher educators are the focus, although the trigger for the actual research question was theory (more exactly, a revision of our own theoretical approach to teacher education). The overall idea/strategy/concept is shown in Figure 7.

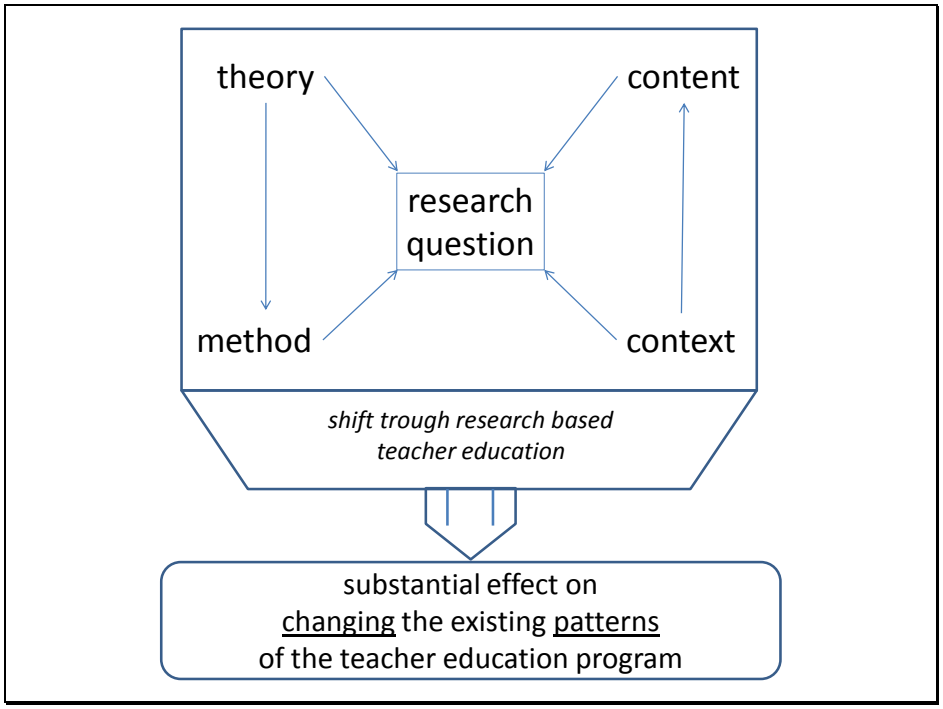

Figure 7: Strategy for research-based teacher education

Naturally, there should be more arrows between the parameters, including explicit or implicit interactions between all variables. However, the number of arrows has been reduced in this case to focus on operative forces.

Our first extensive research approach to our teacher education programme is based on a well-established phenomenon. Teacher education students meet our programme with resistance and we know that this psychological resistance is reasonable because students join the programme with 12 to 13 years of school knowledge. This results in the majority thinking they know how teaching works (cf. Hartmann/Weiser, 2007). As students are confronted with the reality of the profession, they usually project this developing tension onto the training institution. However, extensive discussions with students reveal the complexity of the situation.

Morphological Approach (RE Heading 3) → ("Method-driven")

Those talks were then systematised with the study "Qualitative Analysis of the Effectiveness of Teacher Education at the ILS Innsbruck". The study aimed to collect data

concerning approaches, attitudes and opinions of teacher education students at our department (ILS). It brought to light ambivalences in situations in which students as trainee teachers find themselves. Pedagogical education was the main focus of this study because that seemed to be the area where ambivalences culminated. Concerning our teacher education programme, the question was what is the significance of this ambivalence for the ILS. As Marcellus says in Hamlet "*Something is rotten in the state of Denmark*". We, therefore, sought to investigate from the students' point of view what at the ILS was 'rotten'.

Becoming a Teacher: A Morphological Analysis

Due to the importance of partial unconscious expectations, we used an interview technique developed in the context of psychological morphology during the 1950s and 1960s at the University of Cologne (Fitzke, 1999).

In order to comprehend the ambivalence and other phenomena, which arose out of the interviews with students at the ILS, the 'image' or 'Gestalt' of becoming a teacher was arrived at, which can be explained by the following six characteristics.

1. Stubbornness
2. Being a Pupil
3. Forming a Profile
4. Sublime Educational Ideals
5. Inadequate Qualifications
6. Willingness towards Flexibility

More details of those characteristics include:

(1) Stubbornness

This expresses the idea that the students experience themselves in their development towards becoming teachers as being already fully qualified. This is reflected in statements such as *"One doesn't become a teacher. One is a teacher."* or *"Either you possess that certain something or you don't. That certain something cannot be learnt."*

For a large number of the people interviewed, their own personal school days were still fresh in their minds. With the completion of their school education, something in their own individual development process had also been drawn to a close. At university, both learning and being are completely different – more 'adult' (the highest educational institution). This attitude has a very pleasant side effect – any expectations of alterations or modifications on the part of formal education can be held at a distance. One has been 'born' to become a teacher, hasn't one? Any educational attempt to remodel or reshape a student with such an attitude meets fundamental difficulties.

(2) Being a Pupil

Following up on this preliminary structural characteristic is the next stage – the feeling of being a pupil once more. The decision to study represents a fresh start. But one is obliged to

'return' to the school bench, as it were. Thus, what one has 'become' and 'completed' becomes threatened – a situation which can be experienced as very unpleasant and was articulated in that way. This is exemplified by comments like *"It gets on my nerves when we have to sit in a circle. It's like being in kindergarten".* In particular, reflections upon one's own behaviour are especially met with great ambivalence. They threaten what one has already achieved and has already become. The result: a defence mechanism, temporary, limited involvement and rationalisation.

(3) Forming a Profile

The characteristic of 'being a pupil' is countered by the education towards professional competence and expertise. This professional course of study and the education involved are given precedence. A distinguishing profile is achieved through professional education to a significant degree. The process of becoming professional is two-fold: as a result of the knowledge procured during the professional course of study, one achieves a professional status in one's special field of study (an identity-forming process in the shape of an internal distinction). Moreover, one achieves a status and, therefore, a profile, which – in turn – counters the feeling of 'being a pupil'. In this connection, it appears relevant that the basis of an *educational* process is not a clearly emphasised psychological image of 'becoming a teacher' but an image of a particular special subject (subject image, demands, status of the subject at school, content etc.). The psychological aspect of how a special subject predominates teacher education as opposed to the educational content of the course can lie in the fact that this safeguards against the feeling of 'being a pupil'.

(4) Sublime Educational Ideals

The interviewees were aware of the educational aspect, which centrally distinguishes the teaching profession. The students fill their 'gaps' caused by a lack of images in this respect with sublime educational ideals which are often drawn from one's own personal school biography (to encourage and form the development and personality of children and young people in a positive manner, to be a friend of the pupils, to educate the children in 'matters dear to the heart' and not only to 'pass on knowledge' etc.)

(5) Inadequate Qualifications

A few students hesitantly admitted that they were inadequately equipped for the job of teaching. This state of affairs becomes particularly apparent when confronted with practical experience (phase of school practice; teaching practice etc.). This is reflected in comments such as: *"The hard part begins when we have to get down to the serious business of teaching in front of a class of children. One then realises just how suitable one really is for the job."*

The participating students are aware of the relevance of practical experience – to be successful in practical work is what one is striving for. In the case of terrible experiences in a teaching practice situation, one often develops anger towards the educational training: *"We were thrown in at the deep end without any preparation whatsoever".* It became very apparent in the interviews that the acceptance of the significance of an educational training course arose out of the confrontation with teaching practice. It is, therefore, not surprising

that almost every interviewee demanded more practical training. Psychologically speaking, this demand makes sense. Only after the experience of practical teaching is one confronted with one's own limitations. The need for further development with regard to the application of pedagogical know-how thereby makes itself felt.

(5) Willingness towards Flexibility

Particularly among those participating students who are already engaged in practical teaching or (biologically or emotionally-) older participating students, a final characteristic of becoming a teacher became clear. They showed a willingness to learn and become involved with the tasks of development, which arise during the process of becoming a teacher. This characteristic was particularly clearly stated in comments offering praise for the educational training of the ILS whereby, at the same time, the intensiveness of the processes of learning and reshaping was stressed.

The processes along the path towards becoming a teacher described above can be graphically depicted from (1) – (6) as follows: (cf. Figure 8).

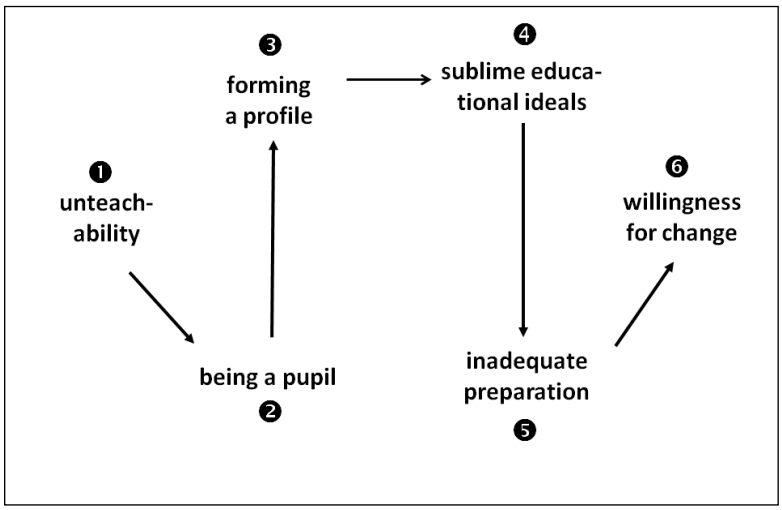

Figure 8: Phenomena along the path towards becoming a teacher

If one regards the individual 'stages' of the phenomena experienced by the students along the path towards becoming teachers structurally as an overall shape, a picture of opposites results – opposites which were brought to light as ambivalences in the students' statements during the interviews (cf. Figure 9).

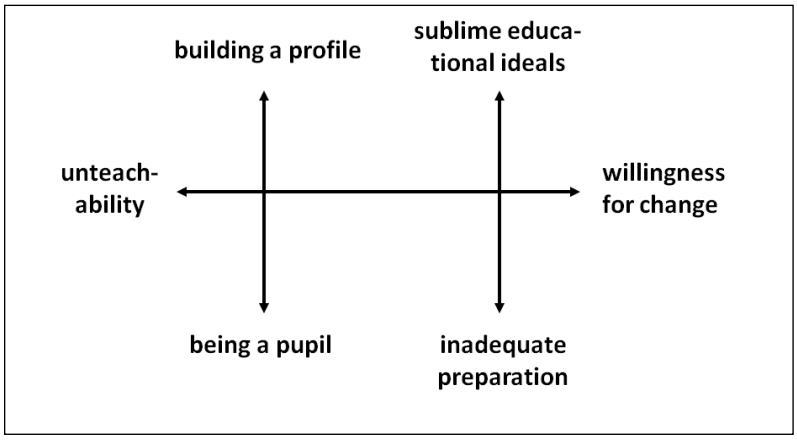

Figure 9: Phenomenological structure of becoming a teacher

The nearer the students move towards the opposite pole, the stronger the ambivalence can be felt. For example, if during their degree studies the students move into an identity (specialised) profile-forming situation, then they find themselves once more in a learning role as a pupil (compiling seminar papers, learning and reproducing subject matter etc.). On the other hand, in a desire to achieve the state of a sublime educational ideal one becomes aware of the inadequacy of the qualifications, which would be necessary to realise one's wishes.

Similarly, on a horizontal level; the greater the willingness to be flexible and change, the less chance one has of falling back on teaching (instructive) models which would be of use in bringing about change. The bounds of opposition, which can be perceived between 'becoming undeveloped' and 'developing beyond', arise out of this ambivalence (Fig. 10).

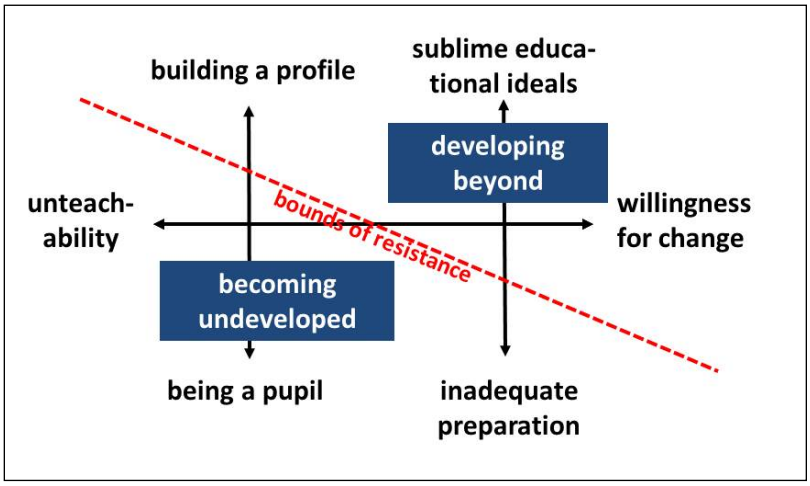

Figure 10: Bounds of opposition between 'becoming undeveloped' and 'developing beyond'

Psychologically speaking, teacher education is a process of reshaping that, which lies between the relationship of 'becoming undeveloped' and 'developing beyond' (cf. Figure 4).

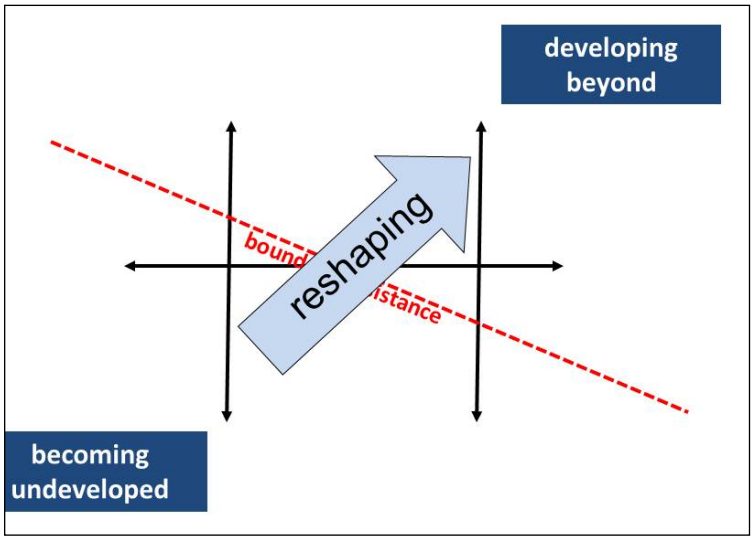

Figure 11: The process of reshaping between 'becoming undeveloped' and 'developing beyond'

Reshaping is a process (which takes time) and means the working out and development of a sound, acceptable image. The familiar image of what one has already become serves as a basis for the *process of reshaping*. Psychological concomitants of processes of reshaping and reforming are, among other things, not only opposition, depreciation and reluctance but also enthusiasm, pleasure and gratitude for the new insight gained. These attitudes are voiced in numerous variations in the students' statements made during the interviews. However, since these processes of reshaping and reforming are limited to the amount of experience that is gained during training, there is no automatic transfer to later phases of professionalism.

Image-Effect Structure of the ILS

Image seems to be more important in educational settings than one usually thinks. They influence unconscious prejudices, amplify resistance or transference. In the interviews, the experiences one had when dealing with the ILS (pedagogical education) were usually a main topic of discussion. Most statements made during the interviews had a negative touch – whereby the analysis of becoming a teacher in a previous section of this paper presents a clue to understanding this as being an expression of the process of reshaping. The bounds of opposition (cf. Figure 11) are depicted in the organisational anchoring of an institutional organisation as a wailing wall.

A Wailing Wall

One is always willing to complain profusely about the ILS: it is notorious for its negative reputation since the timetable of its lectures often overlaps the timetable of special studies. Since profile-forming is achieved in the studies for a degree, the lectures of special degree studies have precedence. The ILS is, therefore, the Institute for "incompetent teachers", i.e. for those who most require support. Students complain of the compulsory character of lectures and the strict instructions and guidelines, which have to be observed when dealing

with the given topics. One wonders at the vehemence of the complaints: it can be psychologically founded in the sphere of 'becoming undeveloped'. This is characterised by an 'away from' movement and not by a 'movement towards' as is the case with 'developing beyond'.

Stubbornness

One is born to be a teacher; it is something that cannot be learnt. The ILS as an identified authority, which places the topic of becoming a teacher as the focal point of its assignment, might easily find itself in the position of being seen as a place for those who do not fulfil the basic requirements.

Inadequate Qualification

Given its content, the ILS confronts education with practice. It, therefore, touches upon the alleged developmental tasks of the students as far as education leading towards a differentiated qualification is concerned.

The Love-Hate Relationship with Orientational Guidelines

The ILS can, however, also be experienced as an institution, which reflects the stage of development towards becoming a teacher, which one has already achieved. Considerations about becoming a teacher and considerations concerning practice units allow a (forced) opportunity to determine whether one is a suitable candidate for the teaching profession. In addition, it becomes quite clear how far one has developed towards becoming a teacher or, in other words, where one finds oneself, at the moment, in the process of reshaping and reforming. Conscious confrontation with this process – which also consists of subconscious elements – can easily trigger resistance.

Personality Changes

The ILS – since it educates – is experienced as an institution in which students are the focal point of attention. The interviewees commented that this became apparent in certain mannerisms and forms of behaviour which were not usual in degree courses at the university – e.g. sitting in a circle, a relaxed atmosphere, the inclusion of their individual estimations in proficiency evaluations, a great deal of reflection. A summary of this could be given the motto: "A personality change brought about by becoming personal".

A Place Far Removed from Practice

The ILS and its course of training are experienced as spheres, which are far removed from practice. This is reflected in the general nature of the topics, which are dealt with, tutors who are not themselves school teachers, tips and support which are far removed from practice, construed role plays of the situation at school and much more. Thus one continually queries the 'purpose of the training'. For several students, the necessary expense and energy involved (diary of learning process, notebook of methods, collection of newspaper cuttings, lectures and talks etc.) have no connection with the effectiveness of

learning. As far as that is concerned, the students are appreciative when 'guest speakers with experience of practice' are invited to give lectures.

These findings led to manifold consequences concerning our curriculum and the organisation of the pedagogical education at the ILS. First, we tried to improve the communication between the Institute and the students. The bigger task was the upcoming reform of the teacher education curriculum at the University.

Curriculum Approach ("Content-driven")

In 2000 the University of Innsbruck implemented a competence-oriented curriculum. Nowadays this might be standard, but at that time it was quite innovative within German-speaking countries. The idea of the then new curriculum was not a radical reform, which would have been quite problematic on the basis of the political and social context dependencies discussed above. A reform from within promised to be the best way to implement innovations like the then new competence orientation. The philosophy behind the competence orientation was (and still is) to implement an integrative process-product-orientated teacher education programme. Use of this methodical concept led to the implementation of a coherent portfolio concept, which forms a common thread throughout the course of education (a development- and showcase-portfolio). The purpose of the portfolio was to make the students' profession-specific development visible and provide a better balance between individual development and outcome product and was thus a move away from abstract decontextualised grades. The portfolio also became an instrument that helped our students integrate their partially disparate learning experiences in the polyvalent curriculum (two subjects, subject didactics, pedagogy, practical school training) with different subjects and courses. One only has to compare an introductory course on medieval English literature with Analysis 1. In this way, the competence-orientated portfolio concept had an important integrative function and established something completely new that had previously been missing. From the didactic point of view, our concept led to a shift in focus from teaching to learning. German-speaking teacher education programmes are usually primarily teaching- and teacher-centred. The axiom behind that is the conviction that if somebody knows how to teach properly, then good learning is an automatic consequence. The change of perspective from teaching to learning as a starting point in teacher education meant for Austria a true paradigm shift on all levels of the system (personal, institutional and content-related).

The main aspects of the curriculum are:

- contextualising and integrating instruments (as orienting common threads throughout the programme);
- a biographical, resources-oriented and meta-cognitive approach;
- a focus on working and studying in small groups (12 to 20 students in a course);
- early and in total much more practical school training (combined with theory-based analysis); and
- making professional individual profession-specific (competence) development visible.

Competence orientation in a curriculum needs a competence model upon which it is based. The Innsbruck curriculum references a range of the pedagogical competence models available at that time. Local structures, requirements and resources led to a three-dimensional concept differentiating between:

- social and personal competencies;
- subject-oriented and didactical competencies; and
- organisational and systemic competencies

where the social and personal competencies act as the cornerstone of competence-building and enhancement of existing profession-specific competencies. The three competence fields are each divided into several sub-competencies, which are then operationalised verbally with reference to the profession.

Overall, these fields and sub-domains result in a systematic overview of the school, focusing especially on processes of school development. Thereby, the curriculum stresses the fact that working as a teacher in a school is more than just 'teaching'. Altogether, the curriculum was arranged as an initial provision for the student teachers, a first step in a process of lifelong profession-specific learning. Table 4 provides a synoptic summary of the 5-year curriculum.

Academic year	Pedagogy and teaching practice	Subject and subject-specific didactics
1st year	Introductory phase (introductory course/WS, teaching practice, reflection course/SS	Subject-oriented introduction and basic courses
2nd year	Basic competences in general didactics (psychology of learning, communication, school education)	Consolidation and expansion of subject-oriented key competencies
3rd year	Internship semester at school, guided/autonomous teaching	Consolidation and expansion of subject-specific didactics
4th year	Synopsis, expansion and correction/adaptation	Specialisation & consolidation
5th year	Diploma thesis & diploma examination	

Table 4: Teacher Education curriculum (University of Innsbruck)

This rudimentary summary of the current teacher education programme at the University of Innsbruck was necessary to allow one to interpret the findings currently described. However, constructing and implementing a new teacher education curriculum is one thing; operationalising it is a more challenging task.

When the first cohort of teacher education students came to finish their education based on this new curriculum, we started a research project in collaboration with Birgit Weyand from the University of Trier. The purpose was to identify the effects of the competence-oriented curriculum on our students. A well-established instrument was used to measure competencies, which were compared to a reference group with a different curriculum. It is beyond the scope of this paper to go into details of it (cf. Kraler, 2008) and the focus is on the crucial result relevant to this discussion.

One part of the study was a quantitative project (111 students, 55 beginners and 56 master students, 68% female, 32% male). The Bochum Inventory of Personality instrument was used (cf. Rust, 2008, a business-focused version is only available in English). It is based on a competence concept and aims to systematically assess job-relevant personality character traits. It measures 14 personality characteristics with 251 items. Its four main dimensions are occupational orientation, occupational behaviour, social competencies and psychological constitution.

The following table illustrates the core results comparing novice students ($1^{st}/2^{nd}$ semester) with students in their diploma thesis year (8^{th}–10^{th} semester). The table shows the items and the average points (mean) achieved with respect to an adequate norm group (students in the same age interval).

Items	Sample	Beginners	Master students
Achievement Motivation	***52.56***	***53.8***	***51.34***
Power Motivation	43.68	43.62	43.73
Leadership Motivation	56.23	56.24	56.21
Conscientiousness	53.83	54.47	53.2
Flexibility	***50.98***	***52.75***	***49.25***
Action Orientation	52.14	51.78	52.5
Social Sensitivity	52.96	53.76	52.18
Openness to Contact	69.39	69.71	69.07
Sociability	***60.11 w***	***61.2***	***59.04***
Team Orientation	***45.87***	***43.71***	***48***
Assertiveness	***47.73***	***49.02***	***46.46***
Emotional Stability	***54.52***	***56.05***	***53.02***
Working under pressure	***48.98***	***50.51***	***47.48***
Self-Confidence	58.34	58.69	58

Table 5: Bochum Inventory of Personality: results

The gender difference one would suppose from other studies was confirmed in this study. Female students achieved significantly higher scores on items attributed to social competencies. (This is not differentiated in Table 5). The surprising point is the significant decrease of the means of six items over the years of teacher education. One has to take into account that Table 5 only shows the means. A detailed statistical analysis including variance, confidence intervals and other parameters demonstrated that the results are even more significant because occasionally the distribution of sub-samples (e.g. male students) shows even more differences between the first and second items. The only increasing variable was team orientation. A small qualitative accompanying study answered this by pointing to the polyvalence of the teacher education programme as a whole. Most students reported they had to work together because of the high time load and heterogeneity of the content.

This overall result for us was equally astonishing and disappointing. It might have been that a curriculum constructed around parameters other than competencies could result in higher scores, but the significant decrease measured with a well-established psychological instrument had to be interpreted. In 2000 we tried to change our pattern (more of the same) with a new curriculum. Change resulted, but it appeared to be in the wrong direction. However, prior to interpreting these results as an overall setback it was fundamental to understand what was happening and, therefore, a follow-up study offered a change in perspective.

Student and Teacher Educators Approach ("Theory-driven")

The shift from teaching to learning, the use of portfolios and the concentration on individual profession-specific development during the course of education can be summarised by one word: personalisation. If one interprets learning as an individual process, and if we focus on learning, then the teacher education programme needs to be personalised (cf. Illeris, 2009). Small group teaching, the implementation of a development and showcase portfolio, peer learning and systematic feedback and counselling within the process accompany the student through his/her education at the University of Innsbruck. Of course, this strategy was and is very time-consuming and requires a large amount of human resources that could and cannot be realised in every case.

During the first round, it was realised that the theoretical approach required adaptation. Basing the curriculum within the ideas of school development created a necessary but not a sufficient framework. Every now and then questions arose regarding the appropriate point of view. On the one hand, the curriculum and its content were the core point of the programme and everything else referred to that. On the other, our approach was personalised, with the student and his/her competencies and possibilities at the centre. The problem was that of teacher/curriculum-centred versus student-centred instruction. This is a contradiction Immanuel Kant described more than 200 years ago in the following way:

> One of the biggest problems of education is how to combine the submission to regulated force with the ability to use one's own freedom. Compulsion is necessary. How can I cultivate freedom under constraint? I should accustom my pupils to tolerate a constraint of his freedom. Simultaneously I should instruct him to use his freedom well (Kant, 1803)[2] Lectures on Pedagogy [translated from the German edition, see the references].

An adequate model elaborated by a research group at the University of Hamburg was found and helped us improve our theoretical basis. The Hamburg University Ph.D. Graduate School on Learner Development and Educational Experience had similar questions in their focus (cf. Meyer, 2011). A theoretical framework was built partially on the work of the Hamburg research group (especially the contributions of M. Meyer and U. Hericks) and on the original concept of developmental tasks (developed by R. Havighurst between the late 1940s and 1970s). Havighurst writes in "Developmental Tasks and Education":

> The developmental-task concept occupies middle ground between the two opposed theories of education: the theory of freedom – that the child [in our case the teacher education student] will develop best if left as free as possible, and the theory of constraint – that the child [teacher education student] must learn to become a worthy, responsible adult through restraints imposed by his society. A developmental task is midway between an individual need and a societal demand. It assumes an active learner interacting with an active social environment (Havighurst, 1972: vi).

Havighurst then describes developmental tasks:

> A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks (Havighurst, 1972: 2).

Based on this definition, Uwe Hericks from the University of Hamburg research group identified professional developmental tasks for student teachers (Hericks, 2006: 92–138). The Hamburg group incorporated this concept in their "Bildungsgang-Forschung" (research on the course of education).

This concept starts from the observation that every realisation of a curriculum is highly individual. Accordingly, one has to distinguish between the objective course of education prescribed by the curriculum, and the subjective course of education realised by the individual learner based on his/her biographical background, interests and wishes (cf. Gruschka, 2002: 436). These two positions, the prescribed 'objective' and the individually realised so-called "subjective course of education" span an area of tension. From the students' point of view: "What do I want to learn and what do the institution, the curriculum and the teachers want me to learn?" This question needs to be well balanced if one is to take personalisation in teacher education seriously and therefore must encompass a reflection and scrutiny of the hidden aspects of the curriculum (implicit and explicit norms and values).

Havighurst's original theory is based on a concept of normative developmental stages. Hericks unfastened the absolute stage reference but retained the normative approach. For instance, he heuristically identified four developmental tasks for student teachers by applying the didactic triangle to the induction phase. Based on that, focusing on personalisation, we gave up the stage concept, the normative setting and started to reconstruct developmental tasks from the field (teacher education students, teacher educators, curricula). This ongoing project is labelled "developmental tasks in initial teacher education" (Kraler, 2009). Figure 12 illustrates this idea.

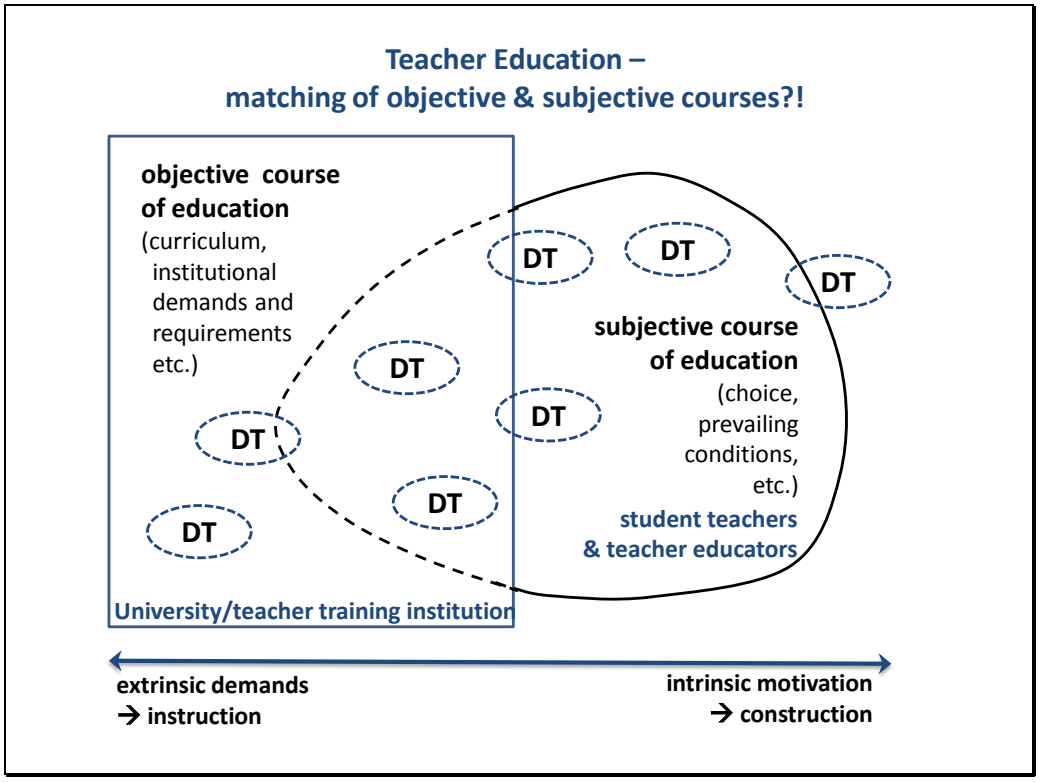

Figure 12: Developmental tasks in initial teacher education

Without going into detail one can see that the key point is to find a highly overlapping area of 'objective' and 'subjective' developmental tasks. This must not be mixed up with the old idea of making or presenting the curriculum in an attractive manner to the individual learner. The personalised philosophy requires that both views have equal rights (didactics ≠ make something attractive). With this theoretical background and the knowledge from the earlier research projects on our own teacher education programme, we analysed the competence-oriented curriculum from the developmental task point of view. The left column of Table 6 sums up the results of this analysis.

Academic year	Pedagogy and teaching practice	Subject and subject-specific didactics	Developmental tasks (curriculum)
1st year	Introductory phase (introductory course/WS, teaching practice, reflection course/SS	Subject-oriented introduction and basic courses	• Shift in perspective from pupil to teacher • Trial identification & self-assessment → **Introduction & fit** (subjects & career aspiration)
2nd year	Basic competencies in general didactics (psychology of learning, communication, school education)	Consolidation and expansion of subject-oriented key competencies	• Acquisition and comprehension of fundamental professional ideas (education, subjects, didactics, teaching) • Developing **basic trust**, **professional competence**
3rd year	Internship semester at school, guided/ autonomous teaching	Consolidation and expansion of subject-specific didactics	• **Practical implementation** of professional knowledge with regard to an individual strengths-weaknesses analysis • Deepening of knowledge & competencies
4th year	Synopsis, expansion and correction/adaptation	Specialisation & consolidation	• Reflective theory-praxis synopsis • Compensation of competency deficiencies → **Professionalisation**
5th year	Diploma thesis & diploma examination		Integrating academic & profession-oriented diploma thesis/certification → **Initial provisions**

Table 6: Developmental tasks from the curriculum point of view

A qualitative study was also undertaken using a special form of profession-specific biographical interviewing ("Biographisches Tiefeninterview") partly based on the Eugene Gendlins' Focusing concept (cf. Gendlin, 1982/2007). This was conducted to reconstruct the students' point of view. Interviews lasting 90 minutes were administered to 26 graduates (mean age: 26.5, sex: female 77%, male 23% which almost describes the long-term distribution of 70-73% female to 27-30% male students). The initial interview question was: "How and why did you become a teacher student?" Developmental tasks from the students' point of view are presented.

Developmental tasks (students)	Description
Role allocation	growing into the role of the student
Relations	new relations: disengaging from the parental home, relationship/new friendships/old friendships sustained, students studying together
Frustration	dealing with frustration concerning course organisation and specific contents
Socialisation	subject-specific and initial professional socialisation (subject-specific culture and habitus)
Change of perspectives	through periods spent abroad (especially when studying languages) and changing the role (from student to teacher)
Earning money	subject-related, e.g. tutoring, or non-subject-related, often also just to get a change
Profession	developing a (diffuse/implicit) more comprehensive understanding of the profession and the challenges of the future job

Table 7: Developmental tasks from the students' point of view

As one can see, initially there is at best a partial overlapping of the students' and the curriculum's developmental tasks. Research was also conducted on the teacher educators' point of view. The picture there is similar in that way and offers a third perspective. It strongly differs from the curricular and student based developmental tasks, especially the fact that teacher educators are not mere transmitters of the curriculum but they also conceptualise and act similarly to the students they teach. This must be taken into account. In conclusion, it demonstrates that one has to differentiate at least three positions, one 'objective-institutional' (the curricular developmental tasks) and two subjective (the students' and teacher educators' developmental tasks).

A consequence of the research was that is clear the original question concerning the measured decrease of competencies could not be answered easily but it instead provided us with a much more complex picture. Analysis of all the results demonstrated that at the core of the problem the theory-practice aspect within the teacher education programme plays a central role. It seems that competencies decrease during the course of education. That seems to be logical because as we have seen students, teachers and the curriculum have different profession-specific aims. If the overall basic philosophy behind the programme is the shift from teaching to learning, a personalised point of view, then we will need a closer analysis of the transmission of individual competencies within the context of teaching practice. This brought us to the next step.

Next step: teaching practice ("context-driven")

Searching for a new approach to learning to teach

Similar to the situation in other countries, teacher education in Austria is modelled in line with the apprenticeship paradigm. Students in teacher education programmes proceed through a curricular corridor of classes which are either structured like a school curriculum where students have to follow a strict progression of classes (at college level) or are scattered about in different subject departments (at university level). Both approaches fail to offer future teachers a space where they can learn what it means to develop a foundation of knowledge on learning and how it relates to teaching. Students usually learn how to teach the correct methods, but they neither learn to establish a sustainable relationship with (young) students as a basis for teaching and learning nor do they learn to understand the people they are supposed to teach.

Current theories on teacher professional development (cf. Guskey & Huberman, 1999; Darling-Hammond & Sykes, 1999; Darling-Hammond & Bransford, 2005) pay attention to the particular individual biographies on one hand and the institutional context of their (future) work on the other in order to derive solutions which help in setting up pre-service teacher education curricula. The continuum of teachers' professional education does not follow a linear pattern acquiring necessary competencies alongside a static curriculum, but is instead a dynamic, co-evolutionary developmental process as can be seen with the developmental task project. Its dynamics are rooted in the tensions and contradictions that structurally (and culturally) affect both the teaching profession and teacher education (cf. referred to previously). The complexity and openness of any teaching situation leads to uncertainties and doubts – not only for student teachers during their education/studies but also later on in their practical, professional lives. Dealing with contradictions and complexities is challenging and arouses uncertainty; at the same time, however, it is the essence of the professional procedures of teachers' work (cf. Helsper, 1996; Kraler et al., 2012).

The conflict with uncertainty, the 'crisis', representing the notion that educational encounters cannot be standardised, is the core element of teacher activities. If teacher education tries to eliminate critical irritations from their work with student teachers, it restricts the openness for actions in the classroom and the reciprocity of interactions (cf. Helsper, 2001, p. 10). Teachers must be prepared to actively tackle contradictions throughout their professional lives. A more effective teacher education programme must, in any case, strive to balance out the different contradictions and endow our future students with an increased awareness of themselves and foster a reflective stance. One crucial starting point may be the challenges student teachers face when asked to research their own teaching encounters in the field.

Socialised through this pedagogical pattern of answering known information questions across the curriculum, students soon have to adjust to this kind of decontextualised learning in order to gain its institutional benefit in the form of positive grades. Therefore, students must learn the conventions of known information questions, distinguish them from information-seeking questions and adapt to the public nature of evaluation in order to

interact successfully in traditional lessons, a fact which has caused educational difficulty for students from different cultural groups and low-income families (Erickson & Mohatt, 1982; Philips, 1982; Barnhart, 1982; Heath, 1983). Benham Tye (2000) explores the embedded assumptions or "deep structures" of schooling that prevent change in the school system. Tomlinson (2010) highlights specific beliefs, which prevent teachers from aligning their practice with their own articulated beliefs despite all well-intended efforts to foster new practice; she explores the implications of these beliefs for the learning environment, curriculum, instruction and assessment. For example, a deeply embedded belief in the system is that teaching is telling, which reveals itself in practice in that learners are passive and the class teacher-centred (environment), content is fact-oriented and there is little emphasis on meaning-making (curriculum), there is a focus on teaching as opposed to learning and achievement is primarily measured through low-level, single-right-answer questions (assessment). But teachers, individually or even better, collectively can take a stand that the default condition can be changed (Mehan & Schratz, 1993). Different pedagogical purposes require different interactional patterns.

It is very often the complexity of the situation teachers find themselves in that induces change. Changing teaching always means changing one's 'practical theory' of teaching, which subjectively is the strongest determining factor in educational practice. Teacher development must consequently connect to each teacher's practical theory, fostering conscious articulation with the goal of elaborating it and making it susceptible to change (Handal & Lauvås, 1987). In conventional settings of teacher education found in Austria, it is rarely the case that the practical theories of participating teachers can be consciously articulated. There are at least two reasons for this:

(i) Student teachers who have been socialised in a traditional way through their own schooling as pupils, through their education as students in higher education and through their thus implicitly acquired teaching philosophy cannot turn their teaching upside down from one day to the next. Even if a teacher's practical theory of teaching is challenged in some way, it usually requires a long process to arrive at new ways of thinking. Second-order change leads to a radical jump from one way of thinking to another, rather than an incremental process. Changing practice is still step-by-step leading from good to best practice, but change in belief happens through irritations of old patterns leading to "next practice" (Kruse, 2004). Or, as Scharmer (2007) argues, through interrupting the "downloading of the patterns of the past", which "requires *letting go* of old identities and intentions and *letting come* new identities and intentions that are more directly connected with one's deepest sources of individual and collective action and energy" (Scharmer, 2007, p. 242).

(ii) The traditional set-up of pre- or in-service training often does not allow for a learning culture that promotes reflective teaching. Lectures or seminars about specific educational issues or ready-made toolkits or recipes will hardly help in transforming concepts of teaching and learning into a direction which represents the value of learning as a way of thinking, reasoning and understanding. The underlying learning theory resembles the 'default condition' of instructional design described above: teaching is telling, content is fact-oriented and there is little emphasis on meaning-making, there is a focus on methods of

teaching, as opposed to learning and achievement, which is primarily measured through right-wrong questions.

In order to create a suitable culture for fostering reflection about the deep structural beliefs underlying the student teachers' practical theories, which lead to 'next practice' instead of 'best practice', we have to work on both the institutional and personal levels or, as Giddens (1990) argues, on structure and agency. An experimental design pilot was set up at our department (with a cohort of 12 students) trying to restructure course components, comprising theory- and practice-driven elements, to find new ways for ensuring that student teachers gain more ownership of both their own teaching practice and of relevant research by looking more closely at learning.

Integrating foreign methodology into our context – a pilot model

The model has a triadic structure: A university-based, research-oriented programme and practice phases in close cooperation with the regional school authorities are interwoven with the subject-based education at the various faculties at Innsbruck University. There are three phases of practice-oriented education at the ILS: an introductory year including a two-week practice placement at the very beginning of the students' university studies aims to support them in making a solid decision against or in favour of the teaching profession. Half-way through their degree programme, the students spend the fifth semester almost exclusively at schools where they can test the extensive theoretical and instructional models in the university-based courses in practice at the schools as well as acquire comprehensive practical experience. The final phase synthesises their subject-based and practical education by means of three major assessments and a third school-based placement (cf. Table 6 and the website of the ILS *www.uibk.ac.at/ils*).

A pilot study course uses the descriptive review process (Carini, 1986), which is a systematic, documentary and reflective procedure in which multi-perspective data on individual learners are gathered by individual teachers over an extended period and then discussed under a particular focus in a structured review process in regular collaboration with other teachers. The process aims not to change a child or solve a (teaching) problem, but to gain comprehensive knowledge about children to better meet their needs in teaching them (cf. Kelly, 1996). The experimental design is intended to link the second and third phases of the ILS programme in one practice year. The project was conducted in close cooperation with the principal of a particular *Gymnasium* (8-year humanities-based secondary school) in Innsbruck that was chosen specifically because of its diverse student population. A group of 12 student teachers are assigned to the school for one whole year. Not only are the student teachers exposed to school reality in a more profound way but the school also profits from the stronger ties enabled by their presence over a year. To provide the general context, inclusion in the broader sense is a relatively new concept for teachers within the Austrian Gymnasium school system and they face the tremendous challenge of living an inclusive school culture in a school with an unusually high ratio of students of foreign-born parents for this type of school. The student portraits are intended to contribute to school development at this school by providing new insights into learners as the teachers struggle to practice inclusion.

The main objective of the ILS was to engage the 12 student teachers in meaningful individual research settings in which they could not only learn how to conduct teacher research on the job but also deepen their knowledge and understanding about learning and the impact of instruction on learning by focusing on the learners they encounter. While there is a much stronger focus on teaching than on learning in the regular teacher education curriculum, here the students were confronted with a new perspective. Following the Descriptive Review Model (Himley et al., 2011), the students were expected to shadow one child during their semester at the school and observe and describe him or her in a multi-faceted way.

Because acquiring basic skills relevant for professional teaching such as observation, instructional design, evaluation, reflection and mediation constitute a key objective of the regular curriculum in this phase, the project seeks to integrate the different areas in a more meaningful way. The student teachers are expected to research into their own practice while being in the field. However, our experience shows that students often find little relevance in doing this. We hoped that having them focus on learners might add a different dimension and provide them with more satisfying practice experience. The main goals were to implement a firmer concept of 'personalised' research in our personalised teacher education model, to sensitise student teachers to learners' needs and expectations, to link theory and practice, to relate the already existing reflective practice described above (e.g. portfolio work) more meaningfully to research and, last but not least, also to initiate practicing teachers into conducting research in order to build and sustain professional learning communities.

Novices in the teaching profession need to become aware of their own (hidden) theories about learners, learning, teaching and school in order to truly see their learners. They need to refrain from drawing quick conclusions about what the phenomena of learning and teaching might mean as they encounter them in their practice. It is an irritating fact and significant challenge that our student teachers value their supervising teachers' recipes much more highly than evidence-based knowledge from research. Becoming a teacher is to be understood as a comprehensive process of reshaping and reforming, which is involuntarily accompanied by various interventions.

In the pilot study design described we presented rich details of the student teachers' portraits of individual pupils to illustrate how inquiry-based approaches to learning can reshape their perceptions. If we want to enhance researching into learning as a basis for teaching, it is necessary to provide organisational time so that groups of teachers and students can work together and learn together. The obstacles to teacher research are deeply embedded in the cultures of school and university organisations and in the traditions of research. These obstacles include: teacher isolation created by school structures that provide little time for teachers to learn together and by school cultures that value individual autonomy and privacy behind classroom doors which perpetuate the myth that good teachers do not admit insecurities about their own practice; the knowledge base for teaching that is thought to be constructed by university researchers; and the negative views of educational research held by most teachers (Cochran-Smith & Lytle, 1992). The ambitious goal at the beginning of this experiment to also encourage other colleagues at the department to participate in professional research projects has hardly been realised so far.

Apart from two colleagues who suggested a similar procedure to the students in their own university courses, it has to date left little trace on the concept of our teacher education model.

The student teachers' initial difficulties in adopting a thorough stance of inquiry and proceeding professionally in this (e.g. a separate perception from own theories and interpretation; back up their hypotheses with references to data and literature; master the criteria of research discourse) ask for a different frame to gain insights into the deep structural beliefs by reflection – time to think over experience, (inner) dialogue with oneself to review the different ways of understanding and explaining; a discursive debate with the perspectives of other people who are present; a systematic way of obtaining the perspective of people who were not present, such as the perspective of professional researchers (cf. Helsper 2001: 9) A new framework for sustainable teacher education calls for reflexive inquiry, which occurs both within practice and during off-practice periods. Within the 'practical science' paradigm of reflective inquiry there is no dissociation of means from ends as there is in technical reasoning, where the means alone become the focus of reflection with the ends remaining as fixed target to aim at. In the 'practical science' paradigm reflection about means (the problematic dimension) and reflection about beliefs and assumptions, which frame conceptions of ends (the critical dimension), are inseparable and interactive.

In the future, we have to further develop practitioner research as a new positioning of both sides in the relationship between theory and practice, particularly if we acknowledge that there is no deductive relationship between theory and practice. Schneider & Wildt (2009) suggest a new relationship between education research and school practice, which does not see theorising as an illustration or mental anticipation of practice problems as often used in teacher education programmes. In practitioner research, the student teachers themselves experience the relationship between knowledge gained from theorising about practice and building up their knowledge base on teaching and learning. As novices, they are exposed to different perspectives on pupils' actions in and outside of the classroom. In the process of writing the individual pupils' portraits they are first led by naïve theories and assumptions, then start probing hypotheses and collecting empirical data to substantiate their knowledge. By analogy to a scientific research agenda, they relate the 'results' of their findings with theoretical explanation. In contrast to the conventional know-how of applying knowledge, they acquire new know-how for reflecting about knowledge, which creates a new relationship between theory and practice.

When further implementing the experiences of this pilot model in our teacher education programme, we also recommend using the same instruments such as shadowing, protocols of lived experience (Van Manen, 1990), focus groups and documents that show the results of their learning and the phenomenological orientation which are described in more detail in Schratz et al., 2011 and 2012.

CONCLUSION

The length of this paper already shows that, unfortunately, there is no short cut 'from best practice to next practice' in teacher education. But we hope that it also illustrates that the approach of 'a shift through research-based teacher education' is a very fruitful and exciting one. The next step for the teacher education programme at the University of Innsbruck will soon be to design a Bologna-conforming curriculum. In this, we can build on all the research findings (and unsettled questions) described above.

All in all, it can be summarised that our concept of a research-based change of patterns has indicated the following positive developments for our programme:

- the research orientation has given a boost to our teacher education programme;
- internationalisation has become a vital mirror for development;
- a critical mass of staff is necessary for a breakthrough;
- a team structure is crucial for coherence in curriculum delivery; and
- open-mindedness is the catalyst for new developments.

If we regard teachers as professionals in subject-orientated learning processes and if, in addition, they have to accomplish complex educational tasks, then we will need a resource-oriented personalised approach to teacher education based on a professionalised philosophy of teaching. This triggers the need for development and change:

> Urgent calls for something new and improved have been the rule rather than the exception in teacher education almost since its beginning (Cochran-Smith, 2005: 3f).

REFERENCES

Abbott, A. (2001) *Chaos of Disciplines.* Chicago: UCP.

Barnhart, D. (1982) *"Tuning-In": Athabaskan teachers and Athabaskan students.* In Barnhart, R. (Ed.), Cross-Cultural Issues in Alaskan Education (Vol. 2). Fairbanks: University of Alaska, Center for Cross-Cultural Studies.

Blömeke, S., Reinhold, P., Tulodziecki, G. & Wildt, J. (2004) (Eds.) *Handbuch Lehrerbildung.* Bad Heilbrunn/Braunschweig: Klinkhardt/Westermann.

Blömeke, S., Bohl, Th., Haag, L., Lang-Wojtasik, G. & Sacher, W. (2009)(Eds.) *Handbuch Schule*. Bad Heilbrunn: Klinkhardt.

Bransford, S., Darling-Hammond, L. and LePage, P. (2005) *Introduction.* In: Darling-Hammond, L. and Bransford, J. (Eds.), Preparing Teachers for a Changing World. What Teachers Should Learn and Be Able to Do. San Francisco: Jossey-Bass, pp. 1–39.

Britzman, D. (1991) *Practice Makes Practice: A Critical Study of Learning to Teach.* Albany: State University of New York Press.

Brunner, H., Mayr, E., Schratz,M. & Wieser, I. (2002)(Eds.) *Lehrerinnen- und Lehrerbildung braucht Qualität. Und wie!?* Innsbruck: Studienverlag.

Carini, P. (1986) *Building from Children's Strengths.* Journal of Education, 168, pp. 13–24.

Cochran-Smith, M., & Lytle, S. L. (1992) *Communities for Teacher Research: Fringe or Forefront?* American Journal of Education, 100, pp. 298–325.

Cochran-Smith, M. (2005) *The New Teacher Education: For Better or for Worse?* Educational Researcher, Vol. 34, No. 7, pp. 3–17.

Cochran-Smith, M. & Demers, K. (2008) *How do we know what we know. Research and teacher education.* In Cochran-Smith, M. Feiman-Nemser, Sh. & McIntyre, D.J. (Eds.), Handbook of Research on Teacher Education. Third Edition. New York: Routledge, pp. 1005–1016.

Darling-Hammond, L., & Sykes, G. (Eds.) (1999). *Teaching as the Learning Profession: Handbook of Policy and Practice.* San Francisco Calif.: Jossey-Bass.

Darling-Hammond, L. and Bransford, J. (Eds.) (2005) *Preparing Teachers for a Changing World. What Teachers Should Learn and Be Able to Do.* San Francisco: Jossey-Bass.

Eriksen, Th. (2001) *Tyranny of the Moment. Fast and Slow Time in the Information Age.* London: Pluto Press.

Erickson, F., & Mohatt, G. (1982). *Cultural organization of participation structures in two classrooms of Indian students.* In G. Spindler (Ed.) Doing the Ethnography of Schooling. New York: Holt-Rinehart & Winston.

Fend, H. (2006) *Geschichte des Bildungswesens. Der Sonderweg im europäischen Kulturraum.* Wiesbaden: VS.

Fitzke, H. (1999) *Beschreibung und Interview. Entwicklungen von Selbstbeobachtung in der morphologischen Psychologie*. I: Journal für Psychologie 7 (1999) 3, pp. 19–26.

Gendlin, E. (1982/2007) *Focusing.* New York: Bantam.

Giddens, A. (1990) *The Constitution of Society.* Oxford: Polity Press.

Gruschka, A. (2002) *Didaktik. Das Kreuz mit der Vermittlung. Elf Einsprüche gegen den didaktischen Betrieb.* Wetzlar: Büchse der Pandora.

Gusky, T., & Huberman, M. (Eds.) (1999). *Professional Development in Education: New Paradigms and Practices.* New York: Teachers College Press.

Handal, P., & Lauvås, P. (1987) *Promoting Reflective Teaching: Supervision in Practice.* Milton Keynes: Open University Press.

Hartmann, M. & Weiser, B. (2007). *Unbewusste Inkompetenz? Selbstüberschätzung bei StudienanfängerInnen.* In: Kraler, Ch. & Schratz, M. (Eds.), Ausbildungsqualität und Kompetenz im Lehrerberuf. Wien: Lit.

Havighurst, R.J. (1972) *Developmental Tasks and Education.* Third Edition. New York: David McKay.

Heath, S. B. (1983) *Ways with Words.* Cambridge: Cambridge University Press.

Helmke, A. (2003) *Unterrichtsqualität. Erfassen, Bewerten, Verbessern.* Seelze: Kallmeyer.

Helsper, W. (1996) *Antinomien des Lehrerhandelns in modernisierten pädagogischen Kulturen: Paradoxe Verwendungsweisen von Autonomie und Selbstverantwortlichkeit.* In A. Combe & W. Helsper (Eds.), Pädagogische Professionalität. Untersuchungen zum Typus pädagogischen Handelns (pp. 521–569). Frankfurt am Main: Suhrkamp.

Helsper, W. (2001). *Praxis und Reflexion: Die Notwendigkeit einer"doppelten Professionalisierung des Lehrers.* Journal für LehrerInnenbildung, 1(3), 7–15.

Helsper, W. & Böhme, J. (2004) (Eds.) *Handbuch der Schulforschung.* Wiesbaden: VS.

Hericks, U. (2006) *Professionalisierung als Entwicklungsaufgabe. Rekonstruktionen zur Berufseingangsphase von Lehrerinnen und Lehrern.* Wiesbaden: VS.

Himley, M., Strieb, L., Carini, P., Kanevsky, R. & Wice, B. (2011) *Prospect's Descriptive Process. The Child, the Art of Teaching and the Classroom and School.* http://cdi.uvm.edu/resources/ProspectDescriptiveProcessesRevEd.pdf [20.2. 2011]

Illeris, K. (2009) *Contemporary Theories of Learning. Learning Theorists ... In Their Own Words.* London, New York: Routledge.

Kant, I. (1803/1964) *Über Pädagogik.* In: Weischedel, W. (Ed.): Werke in sechs Bänden, Band. VI, pp. 691–761

Kelly, K. (1996) *Making the Whole Student Visible: The Descriptive Review of a Child. Horace*, *11*. www.nsrfharmony.com [16.02.2011]

Kraler, Ch. (2008) *Das Selbstbild von Lehramtsstudierenden zu Beginn ihres Studiums.* In: Eder, F. & Hörl, G. (Eds.). Gerechtigkeit und Effizienz im Bildungswesen. Wien: LIT, S. pp. 295–321.

Kraler, Ch. & Schratz, M. (2008) *Wissen erwerben, Kompetenzen entwickeln: Modelle zur kompetenzorientierten Lehrerbildung.* Münster: Waxmann.

Kraler, Ch. (2009). *Entwicklungsaufgaben in der universitären LehrerInnenbildung - Startverpflegung auf dem Weg zu einer lebenslangen Professionalisierung.* Erziehung und Unterricht, 1–2, 2009, pp. 187–197.

Kraler, Ch., Schratz, M., Schnabel-Schüle, H. (2012) *Kulturen der Lehrerbildung Professionalisierung eines Berufsstands im Wandel.* Münster: Waxmann.

Kruse, P. (2004) *Next practice - erfolgreiches Management von Instabilität: Veränderung durch Vernetzung.* Offenbach: Gabal.

Labaree, D. F. (2008) *An uneasy relationship: the history of teacher education in the university.* In: Cochran-Smith, M./Feiman-Nemser, Sh. & McIntyre, D.J. (Eds.), Handbook of Research on Teacher Education. Third Edition. New York: Routledge, pp. 290–306.

Labaree, D. F. (2011) *The Lure of Statistics for Educational Research.* In: Smeyers, P. & Depaepe, M. (Eds.) Educational Research: The Ethics and Aesthetics of Statistics. Educational Theory, 61: 6 (2011), pp. 381–394.

MacBeath, L., Schratz, M., Meuret, D. & Jakobsen, L. (2000) *Self-Evaluation in European Schools: A Story of Change.* London: Routledge.

Mandelbrot, B. (1977) *The Fractal Geometry of Nature.* San Francisco: Freeman.

Mehan, H. & Schratz, M. (1993) *Gulliver Travels into a Math Class. In Search of Alternative Discourse in Teaching and Learning.* International Journal for Educational Research, 19(3), pp. 247–264.

Meyer, M. (2011) *Professional teacher development and educational experience.* In: Hudson, B. & Meyer, M. (Eds.), Beyond Fragmentation: Didactics, Learning and Teaching in Europe. Opladen: Barbara Budrich, pp. 404–422.

Nolle, A. (2004) *Evaluation universitärer Lehrerinnen- und Lehrerausbildung.* München: m press.

Nye, B., Konstantopoulos, S. & Hedges, L. (2004) *How Large Are Teacher Effects?* Educational Evaluation and Policy Analysis. Fall 2004, Vol. 26, No. 3, pp. 237–257.

Oser, F. & Oelkers, J. (Eds., 200l) *Die Wirksamkeit der Lehrerbildungssysteme.* Chur, Zürich: Rüegger

Peitgen, J., Jürgens & Saupe (2004, 2nd) *Chaos and Fractals. New Frontiers of Science.* New York: Springer.

Phillips, S. U. (1982) *The Invisible Culture.* New York: Longman.

Rust, J. (2008) *BIP – Business-Focused Inventory of Personality: UK Version*. Hogrefe.

Scharmer, C. O. (2007) *Theory U: Leading from the Future as It Emerges; The Social Technology of Presencing.* Cambridge Mass.: Society for Organizational Learning

Schneider, R., & Wildt, J. (2009) *Forschendes Lernen in Praxisstudien - Wechsel eines Leitmotivs.* In Roters, B., Schneider, R., Koch-Priewe, B., Thiele, J. & Wildt, J. (Eds.), Forschendes Lernen im Lehramtsstudium. Hochschuldidaktik - Professionalisierung - Kompetenzentwicklung (pp. 8–36). Bad Heilbrunn: Klinkhardt.

Schratz, M. & Westfall-Greiter, T. (2010) *Schulqualität sichern und weiterentwickeln.* Seelze: Kallmeyer.

Schratz, M., Paseka, A. & Schrittesser, I. (2010) *Pädagogische Professionalität: quer denken - umdenken - neu denken. Impulse für next practice im Lehrerberuf.* Wien: facultas.wuv.

Schratz, M./ Schwarz, J, & Westfall-Greiter, T. (2011) *Personale Bildungsprozesse in heterogenen Gruppen.* Zeitschrift für Bildungsforschung, 1(1), 25–39

Schratz, M., Schwarz, J, & Westfall-Greiter, T. (2012) *Lernen als bildende Erfahrung. Vignetten in der Praxisforschung.* Innsbruck: Studien Verlag.

Seel, H. (2010) *Einführung in die Schulgeschichte Österreichs.* Innsbruck, Wien: StudienVerlag.

Terhart, E. (2001) *Lehrerberuf und Lehrerbildung: Forschungsbefunde, Problemanalysen, Reformkonzepte.* Weinheim: Beltz.

Terhart, E. (2011) *Handbuch der Forschung zum Lehrerberuf.* Münster: Waxmann.

Tomlinson, C. (2010) *Paper presented at the ASCD Professional Development Conference "Differentiated Instruction for Administrators/Leaders".* 16–18 April, Rome, Italy.

Tye, B. B. (2000) *Hard Truths: Uncovering the Deep Structure of Schooling.* New York: Teachers College Press.

Van Manen, M. (1990) *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy.* Albany, NY: State Univ. of New York Press.

Wright, S.P., Horn, S. & Sanders, W. (1997) *Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation.* Journal of Personnel Evaluation in Education 11 (1997): pp. 57–67.

Zlatkin-Troitschanskaia, O., Beck, K., Sembill, D., Nickolaus, R. & Mulder, R. (2009)(Eds.) *Lehrprofessionalität: Bedingungen, Genese, Wirkungen und ihre Messung.* Weinheim: Beltz.

Correspondence

Mag. Dr. Christian Kraler
Institut für LehrerInnenbildung und Schulforschung
Universität Innsbruck
Innrain 52
A-6020 Innsbruck
Austria
E-mail: Christian.Kraler@uibk.ac.at

---

[1] The authors want to thank Fiona McKay for her critical comments.
[2] Kant (1803) *Lectures on Pedagogy* [translated from the German edition, see the references]