

CHAPTER 4

From Portrait to Practice Learning to research into learning and teaching

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Abstract: This chapter presents a promising practitioner research approach initiated at the Department of Teacher Education and School Research at Innsbruck University. It first explores the embedded assumptions or “deep structures” of schooling that prevent change in the school system and highlights specific beliefs which prevent teachers from aligning their practice with their own articulated beliefs despite all well-intended efforts to foster new practice. New approaches to teacher education require to alter conventional ideas about the nature of knowledge itself and how it is acquired. In an innovative pilot model student teachers conduct research in a case study mode that focus on the learning processes of individual learners in close collaboration with teacher educators and supervising teachers. The paper outlines and evaluates how closely observing and shadowing individual learners that represent a difference in gender, achievement level, behavior, or culture helps student teachers focus more distinctly on the learner, when designing instruction. It further investigates to which extent the insights gained by the students’ portraits of the learners support the development of educational (research) literacy, of inquiry as a stance, and, increased willingness to research their own practice.

Searching for a new approach to learning to teach

Similar to the situation in other countries, teacher education in Austria is modeled along the apprenticeship paradigm. Students in teacher education programs 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 in offering 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 right methods, but neither do they learn to establish a sustainable relationship with (young) students as a basis for teaching and learning nor do they learn to understand the persons 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 the one hand and the institutional context of their (future) work on the other in order to derive solu-

tions which help in setting up pre-service teacher education curricula. The continuum of professional education of teachers does not follow a linear pattern acquiring necessary competences alongside a static curriculum, but is instead a dynamic, co-evolutionary developmental process. Its dynamics are rooted in the tensions and contradictions that structurally (and culturally?) affect both the teaching profession and teacher education. The complexity and openness of any teaching situation leads to uncertainties and doubts – not only for student teachers during their training/studies but also later on in their practical, professional lives. Dealing with antinomies 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; Schratz & Wieser, 2002).

The conflict with uncertainty, the "crisis", representing the notion that educational encounters cannot be standardized, 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, 10). Teachers must be prepared to actively tackle contradictions throughout their professional lives. A more effective teacher education program must, in any case, strive to balance out the different antinomies and bestow 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 into their own teaching encounters in the field.

In this chapter we trace a pattern which crops up again and again: Students are, for the most part, actively involved in discussions on topics of current interest. They get to know new theories about learning, but often fail to apply them in practice. Although they hear and read a lot about student-centeredness, in their actual teaching they still teach subject matter instead of students. They cannot help it. They lack the models and an internalized rationale and that is what is predominantly demonstrated if not openly taught in their education. The traditional classroom has a number of well known characteristics. As an agent of the state and representative of the community, the teacher is primarily responsible for setting the academic agenda, organizing lessons and directing student traffic. This function is visible in the structure of classroom discourse; teachers initiate activities, students respond to teachers' initiations and teachers evaluate students' responses. The ubiquity of this pattern has led researchers to describe classroom lessons as an unfolding series of initiation - reply - evaluation (I-R-E) sequences (Cazden, 1988; Edwards & Mercer, 1987; Mehan, 1979; Sinclair & Coulthard, 1975).

The tacit "transfer theory" that underlies traditional classroom discourse assumes that the problem content is enough context for educational tasks. For Lave (1988) learning-transfer has the following characteristics: the separation of form and content implied in the practice of investigating isomorphic problem solving, and a strictly cognitive explanation for continuity in activity across situations. All of these dissociate cognition from its contexts, and help to account for the absence

of theorizing about experiments as social situations and cognition as socially situated activity. The enterprise also rests on the assumption of cultural uniformity which is entailed in the concept of knowledge domains. "Knowledge" consists of coherent islands whose boundaries and internal structure exist, putatively, independently of individuals. So conceived, culture is uniform with respect to individuals, except that they may have more or less of it. (p. 43)

Socialized through this pedagogical pattern of answering known information questions across the curriculum, students soon have to adjust to this kind of decontextualized learning in order to gain its institutional benefit in the form of good 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-centered (environment), content is fact-oriented and there is little emphasis on meaning-making (curriculum), there is a focus on teaching as opposed to learning (instruction) and achievement is primarily measured through low-level, single-right-answer questions (assessment).

The classroom discourse we have just outlined is the culture of most classrooms. It has been located in schools throughout the world. It is the classroom culture which will develop unless the teacher makes specific decisions to use language and organize lessons in other ways. It is the "default condition" (Cazden, 1986, 1988), the way the system will work unless action is taken to initiate a change. There are many converging influences which make this default option the most common pattern of classroom discourse: the weight of tradition and previous school experiences of teachers and students; the pressure from administrators and supervisors for silence, order and time-on-task; the public's emphasis on easily coded educational results, which encourage multiple choice tests.

As a result, more recent findings in different areas of teaching reveal that educational reform cannot only be a matter of implementing new academic standards that project a defined knowledge base of competences into a curricular structure on the assumption that it can be applied in any school situation. New approaches also require that we alter our more traditional ideas about the nature of knowledge itself and how it is acquired. 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.

Such approaches, which get to the roots of the embedded assumptions or "deep structures" of schooling can be found in the field of action research or reflective practitioner movements. "Action research is simply a form of self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their practices, their understanding of these practices, and the situations in which the practices are carried out" (Carr & Kemmis, 1986, p. 162). Almost twenty years ago Elliott (1993a) optimistically stated "Talk of promoting teachers' based action-research in schools as a process of educating teachers to be reflective practitioners is sweeping through faculties of education in universities across the world" (p. 176); however, we do not see evidence of this concept implemented in educational practices on a large scale yet. Mainstream teaching - probably not only in Austria - still lacks to a large extent reflective practice as teacher research.

We have to consider why, after more than a century since Dewey (1909/1933) first introduced the idea of reflective inquiry as an organizing theme for change, we are still entrapped in the continuing debate over successful reform measures (e.g. Barber & Mourshed, 2007) which fail to bridge the gap between policy and practice (cf. Schratz, 2008). At this point, we do not want to venture further into the ideological struggle for the promotion of reflective teaching, but rather deal with its underlying problem, which seems to be one of transfer from theory to practice. In our experience, introducing too many new concepts for teachers to consider can be overwhelming, which is summarized in the following comment from a teacher: "Teaching which causes me to think of so many things at a time, sometimes makes me sick. I am worried about this constant pressure of having to plan. I somehow get the feeling as if I constantly have to give up myself in order to deal with all aspects."

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. The reason for this is at least twofold:

(i) Student teachers who have been socialized in a traditional way through their own schooling as pupils, through their training 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 tool-kits 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 on teaching as opposed to learning and achievement is primarily measured through right-wrong questions.

In order to create a suitable culture for fostering reflection about the deep structural beliefs behind the student teachers' practical theories which leads 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. At the Department of Teacher Education and School Research (ILS) at Innsbruck University, the authors set up an experimental design restructuring course components, comprising theory- and practice-driven elements, to find new ways for ensuring student teachers gain more ownership of both their own teaching practice and relevant research by looking closer at learning. A cohort of twelve students participated in this pilot model. The aim of this chapter is to:

- describe the impact of teacher research focused on learning on the professional stances of student teachers: *What happens if student teachers learn their trade by focusing on how learners learn rather than on how expert teachers teach?*
- report preliminary findings from the experiences of the first cohort of student teachers
- reveal the transformational potential of teacher research on specific aspects of university culture.

Integrating foreign methodology into our context

The novel approach to initiating teacher research described here is situated within the Innsbruck model of teacher education at the ILS (Department of Teacher Education and School Research), which is one of the most progressive and comprehensive university programs for teacher education in Austria for lower and upper secondary school teachers. The model consists of a triadic structure: A university-

based, research-oriented program and practice phases in close cooperation with the regional school authorities are interwoven with the subject-based education at various faculties at Innsbruck University. There are three phases of practice-oriented education at ILS: an introductory year including a two-week practicum at the very beginning of the students' university studies aims to support them in making a solid decision against or in favor of the teaching profession. Half-way through their degree program, 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 synthesizes their subject-based and practical education by means of three major assessments and a third school-based practicum¹.

The small-scale study that we present here is methodologically based on a research design developed by Pat Carini (1986) in the USA in the 1980s. The method, the Descriptive Review Process, 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 aim of this process is 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 Descriptive Review as a method of collaborative inquiry draws on the detailed knowledge teachers and parents have of children. In the Descriptive Review Process data include characteristic as well as irritating behavior of children, and data of biographic details, aspects of formal and informal learning, relations to other children and adults, and preferences and interests are collected.

In our pilot, we used the descriptive review process to create "student portraits". The portraits under investigation stem from an experimental design intended to link the second and third phase of the ILS program 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, chosen specifically because of its diverse student population. A group of twelve 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 also the school profits from the stronger ties enabled by their presence over a year. The teachers at the school 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 make a contribution to school development at this school by providing new insights into learners as the teachers struggle to practice inclusion.

The main objective for ILS was to engage the twelve student teachers into meaningful individual research settings in which they could not only learn how to

1 For further information see the website of the ILS (www.uibk.ac.at/ils).

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 (Kanevsky, 1993; Himley & Carini, 2000) the students were supposed to follow one child during their semester at the school and observe and describe him or her in a multi-faceted way. We planned to feed the data gathered by the student teachers back into the school, thus offering structured review processes and involving the teachers at the school. There were, however, barriers to this aspect of the pilot. Expert teachers often consider the teachers-to-be that are sent to the schools during their pre-service education as the extra child to deal with, as burdens, threats and obstacles to their regular daily routines. Quite rarely do they welcome them as new resources for the latest innovation in teaching or different perspectives on their practice. Being fully aware of this delicate situation we regularly conferred with the school's principal, a former lecturer at our department and familiar with the department's program, to draft adequate settings for this to happen.

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 aims at integrating 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, a situation that Roters et al. (2009) critically observe throughout the German-speaking world. 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 "personalized" research in our teacher education model, to sensitize student teachers to learner needs and expectations, to link theory and practice, to relate already existing reflective practice² more meaningfully to research, and, last but not least, initiate practicing teachers into conducting research as well in order to build and sustain professional learning communities.

In the experimental design that we describe here we are particularly interested in the following questions:

- Which competences do student teachers need as teachers if involved in research on learning by conducting descriptive reviews of children?
- How does this stimulate their call for solid instructional models?
- How do real life tasks, e. g. finding out more about the learners in their practice groups, affect the quality of student teachers' research, attitudes, and self-efficacy?

2 Reflective Practice such as journal writing and portfolio work have already been firmly implemented in the teacher education program the ILS so that the student teachers could dispose of considerable expertise in this.

- To what extent does this enhance 'research awareness' and 'academic disposition' and intellectual reasoning among the student teachers (and ILS instructors)?
- How do the instructors at ILS benefit from this?
- What research competence do student teachers acquire in the process of teacher research?

From Practice to Portrait: "What am I going to learn at school today?"³

Exposing student teachers to research into learning represents a distinctive way of knowing about teaching that will both contribute to and alter what we understand about teaching. Therefore, the main focus in this chapter is not so much on the children being described in the portraits but more on the change processes of student teachers when conducting Descriptive Reviews in the culminating phase of their teacher education. Observation as a key skill in teacher education poses considerable problems for student teachers in this phase of their training. Awareness of how perceptions are driven by experience, knowledge, (pre-conscious) theories and beliefs and distinguishing between fact and interpretation are, in our estimation, essential components of being a professional educator.

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 of 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 higher than evidence-based knowledge from research. Even at this very tentative stage of the project, the student portraits created by the novices to both research and teaching in this pilot display a more sophisticated stance towards and competence in educational research, as the following analysis reveals. The student teachers relate their own observations to what they learn from teachers (and parents) and turn to research literature to find answers for the nagging questions stimulated by the process of creating student portraits.

Sandy's Portrait

Sandy is one of the female participants in the cohort of students taking part in this experimental study design. She is an engaged and reflective young woman wanting to become a teacher for theology and German. Observing Benjamin was suggested to her by her supervising teacher and he really became dear to her. When her instructor told the group around Christmas they could stop watching the kids, she declined. "There's a game fair at the weekend," she said. "We'll go there with some of the kids from the class and I want to see how Benjamin acts outside of school."

³ This is a quote from Benjamin, one of the children in the portraits.

Benjamin is 11 years old and attends grade 8 at the school. Both his parents are in retirement: His mother was a primary teacher and his father a truck driver. He is the only child to parents approaching their sixties. I have learned from interviews that his parents care intensively for him and strongly support his education in a pretty over protective way. It is no exception that his mother designs his notebooks for him. His parents regularly check on his work and probe him or give him extra input. "I already knew everything we dealt with at school," he once said to me. "My mom taught me this. What am I going to learn at school today?"

Benjamin is curious and intelligent. He questions whatever content he is taught at school. He participates and is cooperative. He gets excellent grades in all subjects. In primary school Benjamin was even allowed to jump a class much to his parents' pride. "They were so proud and got me a Carrera racing track! Well, I didn't care about being transferred to another class, but I liked the racing car," he said. I would like to add that he started reading at the age of three.

Further evidence from Benjamin's learning style analysis (Prashnig, 2006), a concept used learn out more about the learning profiles of every student in fifth grade t the school, shows that he tends to both holistic and analytical modes of work. According to this he is highly flexible in moving between the two modes. His style of thinking is found to be impulsive, though. This analysis describes him as a quick thinker who is spontaneous in his decision-making and tends to disorganized think patterns.

I found evidence for this in the way he designed a poster. Without pondering long he immediately started to draw and glue. He did not seem to have a clear-cut concept in mind. This I want to underpin by the photograph in which Benjamin works at the bottom right corner. He is the one



using the green. In contrast to his colleagues using the green and blue, Benjamin seemed to proceed without a clear-cut concept in mind. While his colleagues preferred an analytical mode of work, Benjamin proceeded holistically.

Another interesting observation was that Benjamin talked to himself while working. He confirmed the fact that inner dialoguing helps him tackle difficult tasks in an interview. He loves verbal interaction and he needs to talk about con-

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tent in order to remember it. This observation is in accordance with his learning style analysis.

(From Sandy's Portrait)

Sandy describes Benjamin, a hyperactive, and very gifted pre-teen boy (11) at the Innsbruck school involved in the project. Throughout her extensive portrait she maintains a descriptive mode and carefully distinguishes between observation, summary, hypothesis and analysis; she is transparent about her own assumptions, fantasies, or emotional resonance. Her description is highly inter-subjective in that she continuously bases her observations on anecdote, original statements in the boy's wording, as well as detailed field notes in a variety of both formal and informal situations.

Sandy adds biographic details to her portrait and describes Benjamin as the single child of parents approaching their sixties and already in retirement, a boy who has experienced a lot of home schooling due to the fact that his mother worked as an elementary school teacher. Other details stem from her supervising teacher, whom she interviewed about Benjamin, such as a lack of social competence when working in groups. She collects observation details and probes deeper into the matter before coming to conclusions. Frequently, she validates her observations by asking Benjamin and interviewing his teachers and peers and even includes a photo as evidence of his particular working style.

She relates her observations as well as probed findings to the learning style profiles (cf. Prashnig, 2006) used at the school and to expertise from other research. This indicates that she has already mastered "educational (research) literacy" (Huberman, 1991; Ginns et al., 2001; Kiper, 2001) to a certain extent. The students' initial difficulties into adopting a thorough stance of inquiry and proceed professionally in this may also be due to fuzzy instruction. Sandy relates her findings to the already existing knowledge-base on ADSL-learners, open instruction, and Montessori Pedagogy. In this, both her realization of the project as well as her facilitating, responding, feeding forward, and critical inquiry taken together represent an ideal frame for co-developing research projects that are both meaningful and self-instructive for the research novices as well as cohesive with and supportive in further developing contextual requirements.

Sandy's portrait responds well to the high expectations when launching this project. Half of her paper she devotes to suggesting instructional devices to deal with Benjamin's learning particularities in a strength rather than a deficit orientation. They are sound and well reasoned. She resonates about her own emotional status when watching Benjamin so closely and speaks of an emotional turmoil. She experienced feelings of insecurity as well as a strong inclination to grapple the challenge of responding to the varying needs of her future students. In order to find out about those needs, observation and learning style profiles come in handy, she argues. In her conclusion, she states to have understood the necessity to teach according to her learners' needs instead of against them. What more can a teacher educator hope for?

Nadja's Portrait

Nadja is a meticulous young woman wanting to become a German and Geography teacher. She needed to deal with a rather unsupportive supervising teacher who often showed almost hostile reactions towards her and, at times, considered her presence in her lessons a threat. She had little support in the descriptive review process since her supervisor thoroughly questioned the relevance of such an endeavor and sometimes acted as if Nadja's attachment to the child would deprive her of any devotion towards him. Nadja would not want any intervention from the principal's or the instructor's side in the troubled relationship but resisted having shown her portrait to that teacher.

It's Monday morning and my first sitting in on classes is due. My supervisor teaches German and it is a lesson called „Soft Skills“ which was newly implemented at the school to respond to undisciplined behavior, conflicts, and lack of skills in which I choose my child to observe. I position myself in the back of the room and watch the students and the teacher move into a circle of chairs and play a game.

Suddenly the door opens and in comes David. He enters the room without any apology or explanation for being late. The teacher who lets him get away with this tells him to come inside the circle and take a chair. He sits down next to a boy whose style of clothing is very similar. Later on I get to know that this boy also shares a desk with him⁴ in class and they frequently spend break times together. After one moment of work David starts to chat with his neighbor and laugh out loud. Again and again he yells out comments which are obvious signs that he is not on task. Once he says, „Let's burn the school!“

One of the goals is to define what the term „soft skills“ is all about. The students are assigned to work out different aspects in groups. David appears absentminded, leaning back into his chair and dropping his shoulders and arms. He does not take part in his group members' dialogues but is constantly shaking his half-long hair in and out of his face. He plays with the cut-off fingers of the black gloves that he wears. He wears stylish clothes in dark colors all throughout the semester I was watching him. This is a characteristic feature of his outer appearance as it clearly sets him off from his peers.

[...]

At the first sound of the bell, David jumps up and dashes out of the classroom. He does not hear the teacher's command to put the chairs on the table anymore.

4 It is a particularity of Austrian schools that there are pairs of students sitting at one rectangular desk in most classrooms rather than having one desk to themselves like in US schools, for instance. So who sits next to whom is quite an issue in our schools.

What does David want to achieve by his disruptive behavior and absentmindedness? What do teachers need to know about him to better understand him and adequately respond to his needs?

(From Nadja's Portrait)

Nadja's portrait reveals a lot about her own stance towards observation, one of the key areas of our education model in which she is supposed to gather expertise. Her wording in this passage suggests that she seems to fear observation, and she jumps at quick conclusions about David's behavior. David's talking to his neighbor is 'trouble' to her. The *Descriptive Review Model* also makes transparent which constructs about teaching and learning the student teachers hold. Thus, it constitutes space for revealing and uncovering them for reflective analysis. All the novice students in our program are required to focus on disclosing and reflecting on one of their practical theories about teaching and learning on the basis of their data as well as from focusing their data analysis on different views of the research discourse in their field. The experimental design of our model creates a particular opportunity to enable this.

Nadja's question at the end of this extract from her portrait, however, shows the deep concern that observing David in formal as well as informal situations arouses in her. What is behind his behavior? What does it mean? are her questions which, in the course of her portrait, lead to differentiated insights into his personality, his learning preferences, his behavior, and talents. Nadja finds out that David prefers to work alone, that he is quick at completing tasks if he is interested, that the quality of work done at home and handed in at school differs considerably from his attention span during the lessons. She observes that he is liked by the girls and admired by his mates for resisting teacher tasks that are obviously not meaningful to him. She repeatedly notes in her portrait that he is always the first to run out of the classroom in the breaks. Her supervising teacher's perception that he is a difficult student coming from a complex family background differs from her own and the question of how to deal with such a character as a teacher poses particular challenges for her future professional life.

Like Sandy and Ulrike, she consults research literature to make head or tail out of her findings and she arrives at some promising instructional devices of how to best respond to students like David. "The most important thing I have learned by watching David so closely is," as Nadja writes in her conclusion, "I shouldn't pigeon-hole students only because they show irritating behavior!" Her portrait also demonstrates the conflicting potential that such research projects hold for the school context. Nadja was denied access to David's learning profile by her supervising teacher who seems to have felt threatened by an external person investigating her students

Ulrike's Portrait

Ulrike is seeking certification in physical education and biology. She has a great sense of humor and a deep interest in children. In the beginning of the project she

critically questioned the ethics of this practice. Are we supposed to probe so deeply into children's lives? What if Sophie's teachers turned the knowledge she gained against the child?

"Sophie finds it hard to concentrate. I don't know if she doesn't understand the concepts or is not interested. She also has problems with her peers." (biology teacher)

The teachers worry about Sophie. She is one of the most struggling learners in mathematics. "She doesn't seem to dispose of any logical thinking capacity." This is how the teacher describes her. In swim lessons she does not participate. The teacher says she faces an F if she continues to play truant from the lessons. She is absentminded in biology. "I do not like biology at all," is how the teacher quotes her.

I am going to present my experience and observations with Sophie in order to gain more insight into her world.

(From Ulrike's Portrait)

Ursula starts out her portrait by reporting the information she hears about the child rather than beginning with her own, unbiased observations. She does not know her at all and sees her with fresh eyes. She reveals her prime motivation in writing her portrait and it is fascinating to see how she links her supervising teachers' biases and perceptions of *Sophie* to her own observations and experiences with the child. It is convincing how she interrogates the former by relating what she hears about *Sophie* to what she learns about her through observation and interviewing as well as contrasting her findings with references to research literature as documented in the following excerpt:

Sophie (13) seems very hesitant and reluctant with boys. I mostly observed her in groups of girls. I observed several fights she had with boys and heard about one when she even cried. She doesn't participate in the swim lessons⁵ because she is embarrassed in front of the boys. She asked the teacher to separate boys and girls in an ice-skating lesson. „They always laugh at me!“, she said, when being asked for reasons. Situations like this make me wonder if co-education in physical education is positive or negative. Does this help *Sophie* learn having a natural way with boys or does she develop an aversion to sports?

While coeducation in sports is hardly practiced in Austria unless for organisational reasons, it has been widely implemented in Germany in the 1960s (Landrichtinger, 2009, p. 24). There is both supportive as well as critical argumentation in the research literature. According to Faulstich-Wieland et al. (2004, p. 13) coeducation results in limiting interests and the development of skills for girls. Coeducation without conscious gender-

5 Unlike the majority of Austrian schools this one organises sports lessons in a co-educative mode out of a lack of resources. Since they cannot dispose of any gyms they need to tour the city in search of others.

education discriminates girls, as Landrichtinger (2009, p. 20) argues, and diminishes their self-esteem. More than 50% of the girls were against having sports with the boys in another study. Feelings of embarrassment and shame as well as disliking their own bodies are cited as reasons for this by the authors (cf. Landrichtinger, 2009, p. 20ff).

(From Ursula's Portrait)

Ulrike uses different character styles in her text to differentiate between the different voices in her portrait. The first passage, in *Modern 2.0*, shows her own reasoning based on her own observations: She explains Sophie's reticence with the difficulties she has with boys. She relates her hesitance to participate in a PE activity to shame. However, she also voices how her observations question a basic belief and lead to a burning question for her future as a sports teacher. How supportive or hindering is coeducation in physical education? The second passage, in *Arial*, demonstrates that she consults research literature to find answers to her question. In this it becomes obvious why Ulrike relates Sophie's reticence to shame.

Ulrike's portrait shows that she has mastered basic skills as a researcher. She collects data from observation and interviews; she differentiates her own views, beliefs, and perceptions from those of others; she interrogates what she sees; she formulates relevant (research) questions; she consults research literature. The form in which she fills her findings does not yet fulfill criteria of research discourse. As mentioned before, this may be due to fuzzy instruction in the beginning of the project and the fact that she lacked a solid model of how to do this.

In her conclusion to the portrait, she verbalizes several insights that are evidence for the relevance of implementing research designs such as the Descriptive Review Model in our teacher education program. Sophie stands, as Ulrike argues, for many girls her age. Thus, she tentatively sees what supporters of Descriptive Review Process state as a prime advantage of the model. Rhody Decker Kanevsky (cf. 1993, p. 153ff) argues, for instance, that each time she participates in a review another layer is added to her understanding of children and classrooms in general. Likewise, Ulrike voices that the knowledge she has gained goes beyond her small case study of one single child. She further states that by focusing on Sophie she learned several things: Students act differently in different situations. Some of her findings confirm, others contradict the perceptions of her supervising teachers. Due to her research into Sophie's interests – Ulrike logged herself into a web-community and found out that the girl lists jazz-dance, soccer, singing, and playing games as her hobbies – she found new ways of responding to Sophie's interests in physical education. "I shouldn't stick to a broad perception of a child," she writes, "because this could block my views of more complex issues," and suggests the importance of consciously changing her perspective every now and then.

In her conclusion, Ulrike also states that daily school life offers little space for so closely observing children. This clearly resonates with what the supervising teachers said when the portraits were presented to the school staff half way through the practice year. This is true. It emphasizes, however, that the findings of

this pilot study have potential for both the school(s) and the teacher education program. While expert teachers gain fresh perspectives on their students as well as references to current research trends and instructional alternatives through the portraits, novices in the profession learn the trade from the most important angle of all: Who are the learners I plan my lessons for? In addition, they acquire a basic educational research stance that gives justified hope that they will continue to research into their own practices once university doors close behind them.

Owning and adapting the model

Becoming a teacher is to be understood as a comprehensive process of reshaping and re-forming which is involuntarily accompanied by various interventions. Marilyn Cochran-Smith (2005, p. 15) argues "that we need to make learning - not outcomes narrowly defined as tests - the bottom line of teaching and teacher education. When teacher education is learning-driven, there is a focus on ensuring that all schoolchildren have rich opportunities to learn ... When learning is the outcome, the goal of teacher education is to prepare teachers who believe in and know how to provide challenging learning opportunities for all students. That way everybody is prepared to participate in a democratic society."

In the pilot study design described we presented rich detail of 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 organizational time so that groups of teachers and students can work together and learn together. In promoting this project, we were unaware of the delicacy that practitioner research requires: How can the insights gained by the student teachers be communicated to the context so that the merits of focusing on learner needs are seen rather than the uncoverage of inadequate teaching feared.

The obstacles to teacher research are deeply embedded in the cultures of school and university organizations 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 in the beginning of this experiment to also launch other colleagues at the department into participating in professional research projects has hardly been realized so far. Apart from two colleagues who suggested a similar procedure to the students in their own university courses, it has left little trace in the concept of our teacher education model until now.

The student teachers' initial difficulties into adopting a thorough stance of inquiry and proceeding professionally in this (e.g. separate perception from own theories and interpretation; back up their hypotheses by 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. The time to think over experience, the (inner) dialogue with oneself to review the different ways of understanding and explaining; the discursive debate with the perspectives of other people who are present; the systematic way of obtaining the perspective of people who were not present, such as the perspective of professional researchers (cf. Helsper, 2001, p. 9) A new framework for sustainable teacher education asks for reflexive inquiry which occurs both within the 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. (Elliott, 1993b, p. 69)

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 theorizing as an illustration or mental anticipation of practice problems as often used in teacher education programs. In practitioner research the student teachers themselves experience the relationship between knowledge gained from theorizing about practice and building up their knowledge base on teaching and learning. As novices they are exposed to different perspectives towards pupils' actions in and outside of the classroom. In the process of writing the individual pupils' portraits they are first led by naive theories and assumptions, then start probing hypotheses and collecting empirical data to substantiate their knowledge. Analogical 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.

Another more advanced step of the model would be achieved if the student teachers further researched into the outcomes of portraits like the ones presented and probed deeper into the potential of what there is to gain from being a teacher researcher and expert teacher. Gerda Visser-Wijnveen (2009) provides evidence that student acquisition of a research disposition increases tremendously if they are invited to participate in the research of professional researchers. This study is further evidence that such a venue works out well. Right from the beginning of the project, the students were informed that there would be the option not only to present their findings to the school context to their supervising teachers and the principal but also disseminate their insights via a published book. Johanna, who lead

the group, told them of the research project she is currently affiliated with⁶ and – within the course – presented parts of her own research to them as a model.

When further implementing the experiences of this pilot model in our teacher education program we also recommend using the same instruments such as shadowing, protocols of lived experience (Van Manen, 1990), focus groups, and documents that show results of their learning and the phenomenological orientation which also forms a basis of the Descriptive Review Process. The descriptive portraits the student teachers created demonstrate that close and detailed observation in connection with probing, interviewing, and theory-based analysis vividly supports explicating the essence of a phenomenon. O'Connor and Dillon (2010), who report about a study on elementary education with similar intentions, refer to pedagogical relations as the key goal to initiate in teachers and schools. Their findings support Van Manen's notion of pedagogical relationships as personal, tactful, and thoughtful, in which a pedagogue tries to act according to what is best for the being and becoming of the learner and what is relevant for elementary students is still valid for learners at high school level as well as university students. Van Manen refrains from using *teacher* as a term that triggers off rational formulas or a set of techniques rather than such relationships at our schools.

Cochran-Smith and Lytle (1993) propose practitioner research as a particular way of knowing. The authors as well as others demonstrate the relevance of involving teachers in generating their own knowledge base. Even if the portraits investigated in this chapter may still lack some rigor they constitute a promising starting base for developing educational research literacy and give justified hope that the novices presented here will stick to conducting practitioner research also when they develop into expert teachers. By continuing such models we hope to eventually form communities for teacher research that play an instrumental role in school development. According to Lawrence Stenhouse, "It is the teachers who, in the end, will change the world of the school by understanding it" (Rudduck & Hopkins, 1985, Preamble).

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