

TEACHER LEARNING AND LANGUAGE:

A PRAGMATIC SELF- STUDY

by

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Abstract

The study presented here addresses teacher learning. It is a 'self-study' in the sense that it is directed to my own efforts as a teacher educator in Iceland to establish a new kind of learning environment for my student teachers, guided by the view that, in doing so, I might better understand more generally what learning to teach entails and how such learning might be facilitated. I ask, "How teachers learn to think and act in particular ways?" Approaching this question, I turn inward, asking myself what and how I was learning when trying to build the new learning environment. However, the study also includes an inquiry into my own practice as a secondary school chemistry teacher, in particular my efforts to readapt to the culture of my school after two years of graduate studies in another country but also my efforts to bring the complexities of my own chemistry teaching to my student teachers on campus.

Records collected for this study include my own research journal, copies of my student teachers' written coursework, and audio tapings from our conversations both on campus and in school practicum settings. In the last case, the student teachers' school advisers were also involved. Beginning to analyze these records, I found myself grappling with fundamental questions related to the act of inquiry. Exploring this issue I became drawn to Rortyan pragmatism and this encouraged me to approach my records imaginatively, keeping in mind that my responsibility was to come up with descriptions that might point to new possibilities for teacher educators to improve their practices.

Following this lead, I have tried, in this study, to examine my records in light of both pragmatic and sociocultural perspectives. Two major themes emerged in the course of these

explorations, that is (a) learning to teach as “personal” and as “social” and (b) the role of language in learning to teach. I conclude that it may be useful to see learning to teach both as “personal” and “social”. Besides, I suggest that seeing learning to teach as a scenario of “language games” might turn out as a useful description.

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Dedication

**This dissertation is dedicated to my wife, Gerda,
whose unwavering support,
helpful feedback, and faith in my work
has made this endeavour possible.**

Chapter 1

Introduction

In recent years there has been a growing interest in *teachers as learners*, that is “how teachers learn to think and act in particular ways and what contributes to their learning” to quote Feiman-Nemser and Remillard (1996, p. 63). Behind this interest, they add, is the hope that “understanding more about teachers as learners, what they need to know and how they learn their craft, can help in clarifying the role of formal teacher education in learning to teach” (p. 63).

The study presented here addresses teacher learning and it does so on similar grounds as explicated above. Basically, it is an *inquiry into my own efforts to learn to teach teachers in new ways guided by the idea that in doing so I might better understand more generally what learning how to teach entails and how such learning might be facilitated*. In this sense, the study is a “self-study” (Bullough and Pinnegar 2001).

Having been a science teacher educator in my country (Iceland) for some years I went to Vancouver in Canada in 1997 for further studies in science education and teacher education at the University of British Columbia (UBC). Returning to Iceland two years later, I decided to rebuild the course I had been teaching within the teacher education program at the University of Iceland. In doing so I would make use of some of the things I had learned at UBC.

This study reports these efforts of mine to build a new kind of learning environment for my student teachers, hoping, of course, it might help them learn to teach. However, I was not only teaching teachers at the university. I was also teaching chemistry in a secondary school as I had been doing for almost two decades. Returning to Iceland in 1999 from my studies in Canada I was not only going back to my job at the university but also to my chemistry teaching in my ‘old’ school. Mindful that I had decided to examine closely my own

learning process and guided by the view that my chemistry teaching was indeed a part of that process, I began to document my chemistry teaching as well.

My *records* include my own journal, copies of my student teachers' written coursework and audio tapings of interviews I had with the student teachers both on campus and while they were student teaching.

Questions

Basically I am asking:

How do teachers learn to think and act in particular ways?

Approaching this question I look inward and ask:

What and how was I learning when trying to build a new learning environment for my teachers? What kind of learning was involved? What was I grappling with? What was I undergoing in these struggles of mine?

Asking these questions I was not only thinking of the classroom teaching part of my course. Part of my responsibilities included visiting the student teachers during their practicum teaching periods. Besides being their teacher on campus I was also their faculty advisor. Being in that position I could easily see that the school environment, the classroom in particular, was a powerful influence in their learning process. And I wondered:

How does the school environment affect my student teachers? What were they learning from their practicum, and how did this learning intermingle with their learning on campus, in particular in my course?

Asking these questions, I began to think about my own experiences when beginning to teach chemistry in 1979. I was not certified. I had simply walked into my first class with a chemistry textbook in one hand and (I assume) a packet of chalk in the other and began teaching. It was only a year later or so that I began my formal teacher education. However, things 'went fine' during that year so that by the time I began to *study* how to teach I felt I

knew already how to do my job. Things in the program were like icing on a cake that had already been baked. In hindsight I wonder:

Had I indeed “learned to teach” before beginning my formal teacher education? If so, what had I been learning?

Broadening the scope, we may ask:

Where do teachers learn to teach? Is the school the most significant context for learning? How does the coursework at campus enter this picture? Is it the “cake” or is it the “icing” or both?

The Beginning of My Story

Beginning to teach teachers in the late 1980s and searching for good ideas to teach I came across the idea of *constructivism*, that is, the notion that we should think of people as “knowledge makers” instead of thinking about them as “knowledge receivers”. To put things straight, this idea “captured” me almost instantly. Accordingly, I decided that the course I was about to establish within the teacher education program at my university would be a “constructivist” course. However, there was a problem. Trying to make use of the constructivist idea in my chemistry teaching I experienced difficulties. It did not seem to align so well with the “storyline” of my school. I felt I was running into a “wall” or being caught into a web of complexities.

What kind of “wall” was this? What was I grappling with?

In hindsight I see these early struggles of mine with constructivism as a case story illuminating the *complexities* involved when attempts are made to change existing school cultures and therefore a plausible introduction to this thesis that significantly is a study of complexities involved in learning to teach. Besides, I see these early struggles of mine with constructivism as the beginning of a story that ultimately resulted in a doctoral program and

the thesis presented here. Accordingly, I begin this thesis (chapter 2) by exploring these difficulties.

Trends and Hopes

This is an inquiry into learning to teach teachers. In spite of having been a teacher for more than two decades and a teacher educator for fifteen years, I still feel perplexed by the complexities involved in learning teaching and helping people learn to teach. This, of course, makes it difficult for me and, I assume, for other teacher educators as well to *act purposefully*. *We need a better understanding of what learning teaching entails*. Without such understanding we have no clear guidelines for our doings, no rules of action. Our field of action is foggy.

However, there is hope. At least, so I believe. The hope, I argue, relates to efforts of many teacher educators and scholars in this field to *redraw* the picture of learning to teach in an attempt to see how its various parts come together. Besides there is a clear willingness to reconsider our conceptual underpinnings, a willingness to face the possibility that some of the conceptions we have been carrying with us might require revisiting, not least the very notion of learning. Traditionally, learning has been thought of as something occurring only in the heads of people. Some researchers such as Lave and Wenger (1991) who study learning in out-of-school settings challenge this narrow conception of learning, even contending that it has bad effects. Lave (1996), for example, claims that, “theories that conceive of learning as a special universal mental process impoverish and misrecognize it” (149). I agree with her and I think that we (teacher educators) would be better off by *broadening* our conception of learning. Indeed, there are some signs such a broadening of the notion of learning is creeping into the domain of teacher education. Borko and Putnam (2000) for example present in a recent article in the journal *Educational Researcher* what they call the “situative perspective”, a concept that is meant to weave together three themes that have recently been

intersecting at the crossroads of educational research, namely cognition as situated, social, and distributed. Exploring in this thesis my own experiences when returning to my old school (chapter 7) and also when visiting a student teacher during her practicum (chapter 8), I found such concepts quite useful. Actually, I find it difficult to see now – with my thesis nearly done – how I could have made sense of those experiences without being guided by a situated or contextual view of cognition and learning. And this is precisely what gives me hope. Guided by these new views, I feel that I am beginning to understand better those problematic questions that have been “with me for so long”, in particular the “strong forces” apparently at work in the place we call the “classroom”, forces that often seem to “engulf” our students from the very moment they step inside this place.

However, these understandings developed gradually through my work with my data and the writing of this thesis. Returning from my studies in August 1999, I was still confused by all these new conceptions. Situated learning? Learning as social? What on Earth are these people taking about? So I decided to push aside these ‘strange’ terms. Not completely though – as will be evident in the next section.

Learning as “Personal” and as “Social”

I am wondering what learning teaching entails. In particular, I am wondering if learning to teach should be seen as “personal” or as “social”. Indeed, this tension had already “captured” my mind when returning to Iceland from my studies in Canada in 1999. Eager as I was to use some of the things I was carrying with me from Canada I made a list of ten statements that I called “My Pedagogic Creed” – a good label I thought because it reminded me of a philosopher that I had come to admire, John Dewey. While leaving the details of this to chapter 5, I will only say that at the *bottom* of that list was the following statement:

I believe that my course is only a part of a much bigger picture. You will experience influences from many sources, e.g. other courses, your school advisers and the pupils

you come to teach. Your experiences from your schooling will be with you and affect your knowledge making and the shaping of your attitudes.

Please note that I write “you” at the beginning of the second sentence. I was addressing my student teachers, trying to tell them (and myself by the way) that they had entered a *complex landscape*. So, the social perspective *was there* but on the *bottom* of “My pedagogic creed”.

What was on the top? This:

I believe that *good teaching comes from within*, that it is always rooted in personal attributes and the world-view of the one that teaches. Learning to teach means *developing one's own theory of teaching*.

Making this statement I was influenced by Parker J. Palmer's (1998) wonderful book, *The Courage to Teach – Exploring the Inner Landscape of a Teacher's Life*. Indeed I borrowed the slogan “good teaching comes from within” that you see in the quote from Palmer's book. However, I was not borrowing it because it “sounded well” or something like that. I was borrowing it because I found it to be “deeply true”. Reflecting on my own teaching career “with” these words from Parker I found that my teaching was indeed grounded in a strong sense of *who I am as a teacher*. Turning to the literature on learning to teach (e.g. Aoki 1986, Kagan 1992 and Wideen, Mayer-Smith, and Moon 1998) I found that many teacher educators and scholars were saying this same thing. I also felt supported by authors like Russell and Munby (1992), Zeichner and Liston (1987), and Korthagen and Kessels (1999) – all claiming the importance of helping student teachers develop their conceptions of teaching and learning in a dialectical relationship to their own classroom experiences. Apparently, Schön's (1983) *The Reflective Practitioner* was not far away.

What I am trying to convey is that when I returned from “my campus”, that is UBC in Vancouver, I felt I was bringing with me two *types* of stories of learning to teach, one type

pointing to “learning as personal”, the other to “learning as social”. In practice, I embraced the former while pushing *gently* aside the latter. That I acted in this way, points, I think, to a still deeper issue, namely my way of thinking about the world and things in the world: The fact that I, in practice, pushed aside “learning as social” was, I argue, rooted in a cultural imprint telling me that we cannot have two different types of “Truths” simultaneously. How should we conceive of learning as *both* personal *and* social? One of them must be closer to “how things really are”.

I thought: Were not Lave and Wenger (1991) simply “playing with words”? Everybody (except Lave and her supporters) *knows* that learning *actually* takes place in the head. We *think* with our brains, do we not?

Questions of this kind were flashing through my head (where else?) when beginning to rebuild aspects of my practice upon returning to Iceland from my graduate studies at UBC in 1999. Honestly, they made me somewhat anxious. I felt Lave and her likes were saying something very important (this explains why I use the word “gently” above when telling that I put the social perspective aside) but could not really *align their words with my own words*. Gradually, this knot began to dissolve. Gradually I came to understand that “learning as social” and “learning as personal” were by no means contradictory or incompatible. Both were good but for *different purposes*. Speaking in this manner one has most probably adopted a *pragmatic* perspective. As a matter of fact I had. Allow me to give you a glimpse of this part of my story. It appears in full in chapter 3 and colours, I think, most of the text constituting this thesis.

Pragmatism

Studying at UBC in Vancouver I was introduced to the pragmatists, in particular John Dewey and Richard Rorty. However, similar to Lave, their *language* appeared to me as “peculiar”. I felt they were not speaking “in concert” with the rest of us. With time I realized

that this was indeed *what they are after*. That is, they are suggesting that we speak of things in ways different to what “common sense” finds adequate. They are suggesting a new language for us (e.g. educators) to use, the *language of pragmatism*. This language is *non-dualistic*. It does not accept distinctions made by the Greeks, for example the appearance-reality distinction, nor does it accept Descartes’ invention of the mind-body distinction or Locke’s and Kant’s further work on that project that laid the ground for what later became known as “epistemology” – the theory of knowledge. In short, they want us to reject those old world pictures and replace them with “a picture of a flux of continually changing relations” as Rorty (1999, p. 47) puts it. A key idea here is that we (human beings) have been sort of “lured into a wrong path” by now dead philosophers: *There was never a mind* in the Cartesian sense. Human beings did not divide from other animals by beginning all of a sudden to *represent* reality. That idea was possibly sensible *before* but not *after* Darwin. Rorty (1999) explains that:

when Darwinian evolutionary theory was brought together with the suggestion, mooted by Frege and Pierce and anticipated by Herder and Humbolt, that it is *language* rather than consciousness or mind, which is the distinguished feature of our species, Darwinian evolutionary theory made possible to see all of human behaviour – including that ‘higher’ sort of behaviour previously interpreted as fulfilment of the desire to know the unconditionally true and do the unconditionally right – as continuous with animal behaviour. For the origin of language, unlike the origin of consciousness, or of a faculty called ‘reason’ capable of grasping the intrinsic nature of things, is intelligible in naturalistic terms. We can give what Locke called a ‘plain historical account’ of how animals came to talk. However, we cannot give a plain historical account of how they stopped coping with reality and began representing it,

much less of how they stopped being merely phenomenal beings and began to constitute the phenomenal world. (p. 68)

There are a number of “deep issues” in this quote that need a lengthy elaboration to grasp the story this quote is telling. I have not space for those in this introduction (see chapter 3 for further discussion on this matter). What I would like to stress at this point are two things. First, contemporary pragmatism gives primacy to *language as a tool* or as a social instrument. Secondly, there are no “Truths” – we do not know the world “as it really is”. Whenever we try to say something about the world we meet ourselves – our ways of speaking. Therefore, what matters, is *how we speak* – how we *describe* reality. There are *useful* descriptions and *less useful* descriptions but no “right” or “wrong” descriptions. Useful descriptions are those that make us feel better, that bring us less pain and more pleasure.

Linking to the last part of the previous section where I told you about my tendency to push “learning as social” away, you may now understand why I became – in the end – comfortable with this notion. Following the pragmatic stance, the only criteria of “what is a good thing” is its *usefulness for particular purposes*. Thus, if the phrase “learning as social” helps us to improve our programs then it has performed a useful task. Most likely, epistemological sceptics will ask us, for example, “Better on what grounds?” pointing, of course, to epistemological foundations. However, if we feel good and if our students feel good and if there is a general agreement in the group that we are indeed making progress relative to *our* shared goals and visions then that may be all that we can ask for. Whether these goals and visions are “right” or “wrong” we will never know. But there is always the possibility of *working out an agreement* of the type “this seems like a good program”. That is the very idea of *democracy*, is it not?

Language

“Language” is a central theme in my thesis. This springs in part from my inclination to neopragmatism which gives primacy to language. But there is another reason and that is the fact that my study crosses countries and national languages, British Columbia and Iceland, English and Icelandic. As told, returning to Iceland from my studies in Canada I felt I was bringing with me some good ideas that might be useful for the new course I was to establish. Much to my surprise these ideas “disappeared” or “evaporated” when I attempted to translate them into Icelandic. I was almost unable to speak of my ideas in my native language. I brought this issue up in an interesting virtual dialogue with Rorty, which I bring to you in chapter 5. Suffice to say here that this strange experience and my conversations with Rorty pushed me to start thinking of this thing we call “language”. It became an *issue* for me. I began to ask questions of the type: “How should we think of language?” To shorten my story, I came down saying (and believing) that “Language is a tool” or “Language is a social instrument”. Saying such things of language points to Wittgenstein, the Austrian philosopher and, in his later life, a pragmatist. He also made us aware that there are lots and lots of “language games” going on in every society. In other words, *groups of people develop different kinds of speaking depending on their needs, interests and purposes*. In education, there are several such language games going on, for example a ‘positivistic’ one and an ‘interpretive’ one. People in those two groups are in different language games with different ‘rules’. Following the pragmatic lead, neither group is closer to reality. The problem is that they may find it difficult to *communicate* – because they have *different rules*. Holt-Reynolds (1992) tells an interesting story illuminating this point – of a professor and his students who were (in a pragmatic frame) playing different language games and could therefore not understand each other. I revisit her story in chapter 4.

Learning and Language

Most of us may feel that learning and language are close allies. This, of course, links to the fact that we are doing a lot of things “in” language when we are learning (speaking, listening, writing). And few would doubt that a prerequisite for successful academic learning is a good grip of the national language involved, say English. If I do not understand English I cannot, for example, read my textbooks (which, we suppose, are written in English).

However, in the scenarios of the type described here and (I assume) in most of our social practices we tend to take language as something that simply “is” like the atmosphere that surrounds and penetrates all of us much without our noticing *unless something is wrong* – for example when someone experiences difficulty breathing. Similar for language: We are most likely to become aware of it when there is some kind of “friction”. For example: One does not understand a word or a sentence (spoken or written) and therefore *attends* to it.

As hinted at in the previous section, “language” becomes something different when taken into the pragmatic vocabulary. Here it is thought of as a *tool* people are using to cope with their environment. Just as we need tools (say a hammer and a saw) to build a table or a house so we need words and phrases and stories to build our lives and carry on our projects, teaching say. And, as for the ordinary tools, words and phrases and stories are in need of “updating” from time to time. Human beings are not only language-users; they are also *language-developers*. These changes in the way people speak are indeed happening all the time. We just *do not notice it*. How we speak and how our speaking changes bypasses our attention. We are not conscious of these peculiar tools of ours because they are as ‘ordinary’ as the air we breathe. “For their *application* is not presented to us so clearly”, according to Wittgenstein (1972, p. 6e; see also Wertsch 1991, p. 105; emphasis in the original).

Now we may ask: Given that learning and language are “close allies”, what happens to this relationship when we start thinking of language as a *tool* (rather than as medium of representation)?

I intend to come back to this question in the last chapter of this thesis – after all my stories have been told. Suffice to say here that my own learning experiences while working on this thesis indicate to me that a *useful* description of those experiences might go something like this: I was busy picking up terms from the people I was working with (at UBC) and from the books I was reading and *using* them to “see things new” and recreating myself as an educator. Saying that this description might be useful I am indicating that it might serve as a good tool in *future* situations, for example when figuring out how I should work with my student teachers.

The Approach to Inquiry

I tend to think of this study as a “self-study”. Using this term I have in mind a recent article by Bullough and Pinnegar (2001). They write:

When biography and history are joined, when the issue confronted by the self is shown to have relationship to and bearing on the context and ethos of time, the self-study moves to research. It is the balance between the way in which private experience can provide insight and solution for public issues and troubles and the way in which public theory can provide insight and solution for private trial that form the nexus of self-study and simultaneously presents the central challenge to those who work in this area. (p. 15)

In effect, writing this thesis I was constantly “conversing” with diverse authors about my experiences, for example Rorty. As hinted at earlier, he pointed out to me that writing this thesis I should try my best to be *imaginative* because what matters most in such projects is *how we* (inquirers) *describe* our experiences. I read Rorty to be saying that it is not our data

that matters most but *how we deal with them*. If they are texts (as in my case) the issue is to find good “answering words” (Bakhtin; see Wertsch 1991 for references) to them so that a “good story” may result, that is a story that points to new and promising ways of speaking and acting when dealing with our projects. I took this suggestion seriously such that I established a group of authors to which I refer in this thesis as “my guides” and which includes Jerome Bruner, John Dewey, Jean Lave, James V. Wertsch, Mikhail Bakhtin, and, of course, Richard Rorty. I introduce these people in chapter 3. Suffice to say here that I cannot imagine how I could have done this thesis without their help.

The Chapters and Some Further Questions

Chapter 2 is titled “Early Struggles with Constructivism”. It addresses the beginning of my story as a teacher educator and, by the same token, my “first love” with constructivism. As told, trying to adopt this idea and make it integral to my practice, I faced some unexpected difficulties. Exploring difficulties of this kind, I argue, may help us figure out useful ways of thinking about constructivism.

Beginning to explore my data I felt uncomfortable. Reading my journal, my students’ accounts and listening to the audio tapes I had made, I began to wonder what I was trying to do and what I was aiming at. Facing these realities I decided to explore my assumptions. Chapter 3, “Towards Pragmatism” describes this journey. Here I introduce “my guides”, the people who helped me figure out what I was doing and what kind of researcher I wanted to be.

Chapter 4, “Stories of Learning to Teach”, is, in a sense, a further inquiry into my own thinking. In short, returning from my studies in Canada I faced the task of beginning to create a new story of me as a teacher educator. Accordingly, looking at the collection of stories of learning to teach I gathered while in Canada, I wondered: Which of these stories are most useful for the text I am creating?

“Back home” is the title of chapter 5. Yes, I was back home and that meant most of all one thing: Back to the practical! As every teacher knows, planning things is one of the most important things we do because plans guide our work and give it meaning. Now I faced the task of making plans in accord with all my “new and promising” ideas. As usual for me, this task turned out to be not that simple. In particular, my mother tongue did not seem to like my new ideas. Accordingly, I felt compelled to consider the issue of language and I describe my attempts to develop “My Pedagogic Creed” as mentioned above. Then I was “ready to go”, guided as I was by my new “rules of actions”, in particular the belief that “good teaching comes from within”.

Done with my creed and my plans, time was ripe to see how good they were. Chapter 6, “En Route to a New Pedagogy”, tells of my attempts to evaluate “how things were going” once the new course was running. Was the Palmerian idea of “learning to teach from within” that was guiding my efforts showing its value? How did my student teachers respond to this new adventure?

But I was not only teaching teachers; I was also teaching chemistry in a secondary school. Chapter 7, “Teaching Chemistry and Teaching Teachers” explores this relationship, in particular my attempts to bring some of the complexities of my own chemistry teaching to my teacher education students – by means of personal case stories. However, it also explores another issue. To put it bluntly: Returning to my old school was almost a nightmare to me! Exploring this issue I found clear similarities to the story told in chapter 2 of my difficulties making constructivism part of my professional life. In both cases, it was like I was caught in a web of complex social relations and deeply held cultural beliefs that made it difficult for me even to “air” ideas I had become drawn to during the “days at campus”, that is when I was studying at UBC in Vancouver. And now I wonder: Was I experiencing a similar “thing” as do many beginning teachers when they are trying to establish relationships with students and teachers in schools? If so, what is this “thing”? How should such experiences be spoken of?

Chapter 8, “Visiting Goldie”, is an account of a visit I made to one of my student teachers while she was doing her secondary school practicum. Writing this chapter I was guided by an idea that many teacher educators share, namely that schools somehow “engulf” our students when they begin to teach and “teach them a lesson” that is so powerful that “things from campus” simply “evaporate”. The account I give focuses on both the student teacher and me – our actions and interactions – in particular our ways of speaking. In this description I use a sociocultural lens, in particular the idea of “mediated action” that I borrowed from James V. Wertsch (1991). In the main it says that human action typically employs “mediational means” such as language.

Chapter 9, “Bringing Things Together”, is – as the title indicates – an attempt to figure out what chapters 2 to 8 tells relative to the major themes dealt with in this thesis, in particular the issue of learning to teach and the issue of language and how these two might be *usefully* related.

A Final Note

I kindly ask my reader to keep in mind that the account given here is a *practitioner’s account* in the sense that it is driven by my felt need to figure out better ways of helping my student teachers learn how to teach. It is simply so that I bring my own struggles as a teacher educator “into the open” and align them with the public discourse on learning to teach. I am not making any epistemological claims. Indeed, doing so would be contrary to my pragmatic attitude. What I am trying to do is quite simply to write “good stories” of my experiences guided by the hope that these stories may enable me as well as other teacher educators to improve our future work with our student teachers. In doing so, I grapple with the series of questions that I have raised in the opening pages.

Chapter 2

Early Struggles With Constructivism

A story, Carter (1993) tells, may be framed as “situation-transformation-situation”. My story as a teacher educator seems to fit neatly with this scheme. It began in the late 1980s with a problematic situation that caused me to start rethinking my practice as an educator. Troubled as I was by my situation I decided to go to Canada to figure out “how things were”. There the transformation part of my story began. In retrospect, I like to think of this transformation as a vocabulary thing. That is, studying in Canada I learned many new words that enabled me to *redescribe* my original problematic situation.

This chapter addresses the beginning of my story as a teacher educator and, simultaneously, my initial problematic situation. As evident from the title it links to constructivism. Beginning my career as a teacher educator, I became “hooked” on this idea and began to experiment with it both in my chemistry teaching and the new science-teaching course I was about to establish within the teacher education program at my university. To begin with, the sky was blue. Soon, however, clouds began to pile up. Somehow, this new idea that seemed to carry with it a new hope for science teaching was making life difficult for me. Why?

Mills (1959) noted that, “many problems cannot be solved merely as troubles, but must be understood in terms of public issues and in terms of the problems of history-making” (p. 226; quoted in Bullough and Pinnegar 2001). Surely, I was experiencing a problem. However, my problem could be seen as a part of a bigger story, that is the story of constructivism. Actually, at the time my story as teacher educator begins, constructivism had already become a leading idea among science teacher educators (Solomon 1994). A new wave, a new thinking, was splashing on the shores of teacher education programs everywhere bringing hopes of better times, at least in science teaching. In essence, it said that there are

“many worlds”. Each one of us constructs his or her own “inner world” in response to things “out there” and in accord with the ideas already in place within our heads. Surprisingly, although sweeping like a fresh wind over the world, this new idea did not seem to spread significantly to schools. Even at universities, teacher educators proclaiming their admiration of it seemed to “hold it at distance”. I link this to what Wideen, Mayer-Smiht, and Moon (1998) say in their review on learning to teach, namely that it appears that many teacher education programs advocating progressive practices do so only in *content*. That is, good teaching practices are *told of* rather than *practiced*. Actually, the story I tell below of my first encounters with constructivism speaks to this point. Albeit being thrilled by the notion of constructivism I “held it at distance”; that is, I did not let it shape *the way I was teaching* student teachers.

Now I wonder: Why?

As hinted at above, I also brought this new idea to my chemistry teaching. Although it was refreshing to begin with, it soon became a “disturbing element”. At least it did not seem to not fitting neatly with “the system” or the forms of life characteristic of my school.

Again I ask: Why?

Writing of these early difficulties of mine with constructivism, I am certainly trying to “come to peace” with them. Indeed, I feel compelled to do so. These struggles were like “the big earthquake” in my life as a beginning teacher educator and left me in a state of confusion for years. As it does with big earthquakes, smaller quakes followed “the big one”. Even today, these events of my past continue to visit me. Now, however, they come dressed in new words, words I have discovered while exploring the vocabularies of various authors, including “educational change” authors like Fullan (1991, 1999), Hargreaves (1994), and Cuban (1995). These authors have enabled me to look at my early struggles with constructivism as a *case* illustrating the *complexities* involved when attempts are made to

change existing structures or forms of life in schools and universities. Looking at my experiences this way, they appear *less* as a story of my troubles and *more* as a case story of educational change. Most recently, looking at these early experiences from my pragmatic point of view, they seem to be turning into a story of “different vocabularies at war”. Using this metaphor, I am seeing constructivism as a “way of speaking” rather than as an “idea” and proponents of constructivism as an army fighting for the case of establishing new linguistic practices in schools and universities. Faithful to pragmatism (Rorty 1999), we cannot decide if such a linguistic description of constructivism is closer to reality than other descriptions. On the other hand, we cannot *a priori* reject the *possibility* that thinking this way of constructivism may be *useful*. Accordingly, I would like you to consider if it might be useful to frame the case story given below as a “language story” and, broadening the scope, of the constructivist movement as an attempt to establish new linguistic practices in schools and universities.

The Spark of Constructivism

Prior to my acquaintance with the constructivist idea, I did not spend much time on epistemological issues. I even doubt that the term “epistemology” existed in my vocabulary during the first part of my chemistry-teaching career. Largely I did my job in accordance with the rules set by my school and the rules set by the subject chemistry as I understood them. Following these rules, teaching was not a problematic issue. My duty, I felt, was *explaining* things well to my students and measure (by means of tests) if and to what degree my students were “getting the stuff”. Apparently and in hindsight, the social practice I was part of was guided by a behaviouristic line of thinking, focusing on “input” and “output” but not worrying about what went on between the two. However, behaviourism or any “ism” altogether was not a matter of *concern* or an issue of conversation in this community of practice. We did not talk about “our inputs” and “the students output” or something like that.

In other words, “theorizing” about the teaching-learning relationship was not part of our social practices or of concern to us. We did things in accord with the “map of our culture” (Gee and Green 1999). Following that map, we took it for granted that knowledge was a commodity preserved in books and in the heads of people, especially subject-specialists like ourselves. This line of thinking, it seems to me, is so firmly ingrained in my culture at large, and, implicitly, in our (Icelanders’) ways of speaking, that we do not really become aware of it *unless we face a “counter-idea”* like constructivism, that is an idea that goes counter to traditional ways of speaking. At least, constructivism entered my life as such a counter-idea and caused me to “go meta” with regard to my teaching, that is, to start wondering how I was thinking of my teaching. From now on, I really became *conscious of* that I was, while doing my job, following a particular line of thinking about teaching, learning, and knowledge and, no less importantly, that there was an *alternative* way or even ways of thinking about these issues. Following the constructivist idea, we (science teachers) would see our students as meaning-makers busy making their own ‘inner worlds’ and, in doing so, building on their ‘entering ideas’ or ‘preconceptions’. Logically, this implied the possibility that they might go astray in their building process relative to the agenda set by the teacher or the school, the result eventually being a set of *misconceptions* damaging for further learning. What a thrilling idea! I said to myself. Turning to my chemistry students, I started to see them with a fresh eye. Instead of depicting them as more or less “intelligent”, I now began to see them as active knowledge makers *experiencing difficulties* of various sorts and to a varying extent when trying to make sense of the topics presented to them.

I felt almost immediately comfortable with the constructivist view of knowledge and learning. Moreover and somewhat enthusiastically, I felt I was entering a new ‘era’ in my career and became filled with new hopes for science teaching in my country. Armed with this

new idea, I turned to the science-teaching course that I was about to build within the teacher education program at the University of Iceland. Surely, it would be a 'constructivist' course.

Facing Better Times

I should tell you that I am a textbook writer too. Co-occurring with the first encounters of mine with constructivism described above, was the publishing of my first chemistry textbook. That was in 1988. With it, at least for me, something new was appearing on the scene of secondary school chemistry teaching in my country. Until this point in time, we had been busy translating foreign textbooks, especially in the natural sciences. My book was created in my native language, Icelandic. Besides, it carried with it an emphasis on societal and environmental issues; and, not to forget, it was illustrated with nice colour pictures, unusual for a chemistry textbook in those years in my country. No wonder then, my heart was filled with good hopes in these years. Hardly had my first "revolutionary" chemistry textbook found its way into schools in Iceland when the wave of constructivism splashed at the shore of my consciousness. How promising!

Flashes of this kind must have gone repeatedly through my mind in those years around 1990. I may not have been alone feeling this way. Reading the literature on science teaching and participating in conferences related to constructivism, one could hardly avoid feeling that "something new and refreshing" was being born. The most optimistic teacher educators seemed to be envisioning the rise of a new era with science teachers everywhere in a "constructivist mode", busy exploring their pupils' 'alternative ideas' and teaching them in accordance with those ideas. Soon days of mindless remembering would belong to the past to be replaced by an era where genuine understanding would be the rule rather than the exception.

Moreover, a new era in *teacher education* might be underway as well! I remember my student teachers and myself in the autumn 1990 busy carrying out a study into pupils' ideas in

science in some Icelandic primary schools. Our rationale was simply that time was ripe to see if *our* (that is Icelandic) kids were bringing to the science classroom ideas similar to their peers' in other countries. With that study done, we felt that this was indeed the case.

Apparently, our kids too were constructing their own ideas about scientific topics, some of them even extending the imaginative power of the most imaginary science teachers. A paper (Gudjonsson, 1991) reporting our findings appeared a few months later in a teacher magazine evoking, it seems, quite strong responses. At least there were many people who contacted me and expressed their interest and surprise, saying something like, "How imaginative the kids are".

Experimenting With Air

Things were blooming and my new science teaching course within the teacher education program at my university was about to take a "constructivist shape". Participants in it, most of them *science* student teachers, were eager to hear about constructivism and the 'odd' science-related ideas kids were creating in their own heads, even prior to their school experiences. Relating to these new research findings, we (my students and me) were convinced that science teaching in Iceland was in need of reform. However, the problem was, *how* should we teach if we were to follow the constructivist line of thinking? Exploring this issue to some extent in the literature did not bring us any decisive answers. Facing this and aware of my responsibility to show a good example, I decided to explore the issue in my own chemistry teaching in the secondary school where I was teaching part-time.

I remember a scenario, a chemistry class of mine in October 1990. We were about to begin with the topic 'atmosphere' and, faithful to my emerging constructivist thinking, I decided to start by giving my students the opportunity to elicit their spontaneous ideas about this topic. Holding up a big 'empty' glass bottle with a cork in it, I asked my students if it was really 'empty'. Having recovered from a previous period of surprise because of this new and

somewhat strange behaviour of mine, most of the students soon rejected this possibility, stating that the bottle certainly contained 'air'. Coming so far I asked them to imagine that they were using a "magic microscope" that allowed them to see the air that was inside the bottle and then draw on a piece of paper what they saw. Obedient, my students started to look at the bottle through their magic microscope and those able to see something started to draw pictures of what they saw. What they 'saw', in most cases, was not what *I* 'saw'. Whereas I 'saw' pure molecules of nitrogen and oxygen rushing through the empty space of the bottle, most of my students came up with pictures that pointed to something very different, for examples dirt particles and strange insects. Obviously, 'air' meant something else to them than I had expected given the science curriculum they should have been exposed to in the Icelandic primary school. Facing this situation and still carried along by the constructivist spirit I found it plausible to continue exploring the topic 'air' through various kinds of activities.

These experiences were made public. I included them in the article I mentioned above, together with a report on the investigations I did together with my student teachers in our inquiry into primary school pupils' ideas in science. Having told the reader about the "air bottle experiment" and the activities that followed, I wrote the following:

Oh, my God! Things are going too slow. The Mid-term exam is coming close and I am far behind with all the stuff. Therefore, I finished the topic with a quick lecture in the next class. (Gudjonsson 1991, p. 16)

To shorten the story: I ran into a "wall". In the article referred to, I talked about the "covering-the-textbook-ghost" as the invisible enemy of my efforts. Pointing to the constructivist slogan "less is more" I argued that we (me and my colleagues in the science department) were too much taken by the view that "covering the textbook" was a central issue. What mattered most, I contended, was that the students *understood* what was being

taught. In hindsight, I do think that my colleagues agreed with me on this point. However, if this is true it is equally true that no reduction in the chemistry content followed my constructivist exercises. Saying this I feel obliged to inform my reader that we were, at this time point, quite free to decide what to teach and how much stuff to cover. This has now changed as the secondary school in Iceland (from the year 1999) is bound to follow a state curriculum that requires certain topics to be taught. Therefore, even though we were “free” to decide what to teach and even though we felt that understanding demanded much more time to be given to particular themes we did not cut down significantly the list of chemistry topics to be covered. Curiously, even I, the “constructivist enthusiast”, was hesitant. As told above, my first chemistry textbook had just been published at this time. Writing it, I had been driven by a desire to make something that the students could “really grasp”. Much to my pleasure, many science teachers in my country seemed to welcome it wholeheartedly, seeing it as a promising thing. Should such hard won “treasure” be sacrificed to the constructivist “less-is-more-altar”? Besides, what would happen to those students who later decided to enrol in some of the science subjects at the university level and had not be taught about topic X or topic Y? The stories we heard from the science university professors were all in the same spirit: you must teach “that and that and that”. Almost every topic seemed to be “so important”.

Thinking about these events now, approximately fifteen years later, I tend to see my colleagues and me as actors in a “play” that had been in the making for long time and in which we were mostly “following the script”. That play, I argue, links to a positivistic view of knowledge as “information packets” to be delivered to the students. The more information is delivered the better because this implies more knowledge being accumulated in the students’ brain. *Quantity* is what matters. Given this attitude and the fact that nowadays scientific knowledge expands in an accelerating fashion, the real issue is to secure “rapid

delivery” of information. For most science teachers that I know, lecture-type teaching presents itself as the method *par excellence* in this regard. And, I should not forget, this was significantly my way of teaching chemistry the twenty years I spent in the secondary school. The story told above of my teaching about air tells about a *deviation* from my teaching habits. In doing this, I was acting against the grain, making my own map instead of just following the map my school and my culture at large had given to me. Such deviations can hardly be tolerated, in particular if they result in a reduced number of topics covered – can they?

Slowing Down

In the time following the air bottle experiment, I felt rather sad. These experiences were like a blow to my emerging constructivist thinking. I felt confused and I think I may say that I lived with this confusion for about seven or eight years until I, in my graduate studies at UBC, began to study educational change and read books by authors like Fullan (1991) and Hargreaves (1994). Then I began to say to myself, for example, that doing that little exercise in constructivism I had been swiftly overcome by “organizational and cultural forces”. At the time of the air bottle experiment, such words were not in my vocabulary, neither in English nor Icelandic. Lacking such words, I may have felt somewhat powerless because I was unable to *describe well* to myself what I was going through. Reading educational change theorists years later, the air bottle experiment surfaced again but now as a story exemplifying how “change forces” may constrain one’s efforts. *Redescribing* things this way made me feel better because now I could see that I was not the only one responsible for the “outcome” of my experiment; certainly things were more complicated than that (cf. Britzman, 1986).

Returning to the years in Iceland that followed the air bottle experiment, I can say that the blow, although hard, did not knock me quite over. I did not give up on constructivist ideas. However, the episode taught me two things: a) teaching against the grain is not that easy, and b) the secondary school may not be the best place for “pedagogical adventures”.

The impact on me as a chemistry teacher was that I turned to a *slower* and more *careful* 'inventive mode' in the years to come, evident in that fact that from now on I focused on 'small innovations' such as replacing 'cookbook' lab activities with 'think-about-it' activities. Teaching my *student teachers* at the university, I continued to *approve* constructivist ideas but had to admit to them that teaching in accord with these ideas might be 'a bit problematic'. As years passed and, in particular, during my graduate studies at UBC, I began to realize that I was not the only educator in the world experiencing problems with constructivist approaches to teaching science. Later still and back in Iceland (and adopting a pragmatic attitude) I have begun to think of the "constructivist problem" in linguistic terms, claiming that constructivism is a specialized vocabulary that does not fit very well with our more habitual ways of speaking.

There is still another issue that may be seen as an "aftermath" of the air bottle experiment. It appears to me that this "lesson" caused me to become more "accepting" toward my student teachers when observing them teaching in schools. *I*, the "expert" had "failed the test". What should I expect of *them*? Should I expect them to be able to demonstrate "innovative constructivist teaching strategies" in this harsh landscape of secondary school science teaching where "covering the content as rapidly as possible" is the norm?

Telling About Constructivism

A survey among Icelandic secondary biology teachers in 1993 indicated that teacher *lectures* were by far the most common teaching method (Jónsson & Ólafsdóttir 1993). This finding did not come as a surprise to me. Lecturing is the common way of teaching in Icelandic secondary schools, at least when it comes to science subjects.

The survey mentioned above is unique in Icelandic context, unique in the sense that we (secondary science teachers in Iceland) do not usually *inquire* into our teaching. In fact, at

least to my experience, we do very little of “reflective practice” if we take that term to mean an activity where genuine attempts are made to figure out the relationship between teaching and learning. We *teach* and we *teach a lot*. Not enjoying high salaries we have become accustomed to “teach overtime” as we say, that is, teach more lessons than required for the normal full-time teaching load, often extending the base-line 24 forty-minute-lessons a week to 30-35 lessons a week, 40 minute lesson-time serving as a reference. With such teaching loads, chances for reflective practice become meagre. On the other hand, routine habits are likely to take over under such circumstances. This trend, of course, may be accentuated if the school culture supports the belief that teaching is simply a *job*, not an issue worth exploring, a view apparently common in secondary schools (Hargreaves 1994).

Following Dewey (1916/1944), routine habits are “habits that possess us instead of our possessing them ... They mark the close of power to vary ... [and imply] aversion to change and a resting on past experiences” (p. 49). Holding on to a Deweyan language, ‘habit’ is not a ‘bad’ or ‘slavish’ thing. On the contrary, it is “a form of executive skill, of efficiency in doing” (p. 46), indeed a prerequisite for control and for growth:

Habits give control over the environment, power to utilize it for human purposes.

Habits take the form both of habituation, or general and persistent balance of organic activities with the surroundings, and of active capacities to readjust activities to meet new conditions. The former furnishes the background of growth; the latter constitute growing. Active habits involve thought, inventions, and initiative in applying capacities to new aims. They are opposed to routine, which marks an arrest of growth.

(Dewey, 1916/1944, p. 52 – 53)

Thinking about my own chemistry teaching and thinking about the landscape of secondary school science teaching in my country it comes to my mind that both may be characterized by *too few* instances of “active habits” and too much routine. Under such

circumstances, teaching practices tend to be fixed and disconnected from “thoughtfulness” or “caring attunement” to borrow terms from van Manen (1997). If this continues for a long time people begin to see their practices as ‘natural’ ways of doing things. If you lecture all the time and are never required to think *why* you behave in this manner you may easily glide into seeing lecturing as the ‘natural’ way of teaching, especially if your colleagues also do it this way and if your school culture and your culture at large supports you by its common sense way of talking about knowledge and learning.

I call this section “Telling about Constructivism”. Using this title, I am pointing to the fact that establishing a new “constructivist” course for prospective science teachers within the teacher education program at the University of Iceland in the late 1980s my teaching *practices* in that course were not particularly consistent with the very idea of constructivism. Let me explain.

Building the new course, I was certainly *inspired* by constructivism. Indeed, mediated by the fact that constructivism and related research on children’s ideas in science were the main topics of the course, I tended to think of it as a “constructivist” course. Years later, then at UBC in Vancouver and reading Richardson (1999), I realized that this labelling might not be warranted, at least not fully so: while deserving being called “constructivist in *content*” it was clearly not “constructivist in *form*”. Still following Richardson, my course could hardly be thought of as representing a “constructivist-learning environment”. For example, an imagined visitor might not have witnessed activities that aimed at “using pedagogical tools of dialogue, the development of meaningful tasks, and ‘giving reason’ to the participants” to quote Richardson (p. 152). On the contrary, he would have observed that I was, most of the time, *lecturing*, for example *telling* my students about constructivism and research findings on children’s alternative ideas in science. Apparently, I am not unique in this respect. Wideen et al. (1998) in their review of research on learning to teach, report that many teacher

many teacher education programs, even those who advocate progressive practices, appear to be a classic case of “Do as I say, not as I do”. Fensham and Northfield (1993), reporting on a study of science and mathematics teacher education in 52 Australian schools, tell that, “Only a handful of the more than 80 programs presented to the teachers even approached a consistent set of experiences, based on some model of teaching and learning or of the role of the teacher in today’s schools” (p. 71).

Now we may ask: Why this inconsistency? Why this ‘gap’ between form and content? Why do we (teacher educators) tend to teach in ways that seemingly violate ideas we hold dear?

For my part and thinking again about Dewey’s words about *routine habits* and *active habits* quoted above, I am inclined to think that I have, in my teaching career, been closer to the former than to the latter. Beginning to teach chemistry in a secondary school in Iceland roughly two decades ago, I was quickly and effectively swept into a particular mode of speaking and acting that has followed me like my own shadow ever since and made it hard for me to adopt alternative modes. In retrospect, I find it striking how effectively my teaching behaviour was ‘fixed’ from the very start of my career and how hard it has been for me to shake off this ‘old grip’ of old habits. Besides, I have noted that my student teachers seem to fall prey to these same forces as soon as they begin to teach in real school settings. Before they know, the ‘system’ or the ‘culture’ or whatever we call it has ‘tamed’ them, made them into what Erickson (1991) calls “aeronautical equivalent[s] of an autopilot” (p. 235). For teacher educators concerned about helping their student teachers become *reflective* practitioners who see their pupils as something more than “receptacle[s] waiting to be filled” (Bruner 1996, p. 56), this is an issue of utmost importance. Indeed, asking – as I do in this thesis – how I should think and act as a teacher educator, this dilemma is of great concern to me. I wonder how I or we (teacher educators in general) should grapple with this issue.

Plausibly then, this “autopilot issue”, this strong ‘cultural pull’ toward routine habits, will be a recurrent theme on the pages to appear. Before leaving it here, I cannot resist bringing up Heidegger (1962) who thought of language not as something we use to express our thoughts but rather as something that “speaks us”. Thinking about my entrance into the classroom twenty years ago and the associated “fixed behaviour” that followed I begin to wonder if I might adopt Heidegger’s phrase to my purposes and say something like: “Once in the classroom *it acted me*”. Saying things this way I have come close to a sociocultural way of speaking. Wertsch (1991), for example, suggests that one should think of human actions as *mediated* by physical, social, and cultural tools. From this vantage point, a teacher acting in a classroom is not merely an individual but an “individual-acting-with-meditational-means” (p. 12). Wertsch is one the people I speak of as “my guides”, that is one of the authors to which I turned for help when trying to interpret my data (chapter 3). Accordingly, we will meet him again. Now, back to the main story of this chapter.

Before starting to teach prospective teachers (in 1988), I had spent roughly a decade teaching chemistry in a secondary school, almost exclusively in a didactic way. This shaped my behaviour as a teacher educator. Quite simply, teaching chemistry I saw it as my task to present and explain “facts and principles” to my student teachers. I assumed that knowledge was propositional in form, something to be “looked up” (e.g. in books) or “listened to” (e.g. the teacher speaking). My role as teacher, I thought, was to *deliver* knowledge to the student teachers or see to it that they read some of the stuff available to them. The rest, “the knowing how”, would come by itself. This type of thinking seems to fall neatly with what Bruner (1996) speaks of as the dominant model in our culture of learners’ mind and as underlying didactic teaching, which, still following Bruner, is the most common ‘folk pedagogy’ in use today in Western cultures. Apparently, my chemistry teaching was mediated by a folk pedagogy of this sort. Later when asked to teach teachers at the university I simply continued

to teach the way my culture had imposed upon me. The fact that I was experimenting with constructivism at the same time did not influence my behaviour so much, it seems. Even though constructivism was carrying the message that teaching should be seen *not* as telling but as “mutual dialogue” (Bruner 1996, p. 56) my doings were in effect *mediated* by the former belief. In a nutshell, although *saying* to my student teachers that our pupils should be thought of as meaning makers and taught accordingly, *in practice* I treated them (my student teachers) as they were “receptacle[s] waiting to be filled” to repeat the quote from Bruner. In other words, *my way of teaching teachers went largely undisturbed by the story of constructivism that I was conveying to them*. For me, at this point in time, it was a story of *pupils* carrying idiosyncratic ideas to their science classroom but *not* a story about *my student teachers and me*, not a story of *our* way of knowing and learning! Constructivism for me, at this time, was a *story about others*, not a story about my student teachers nor myself, an idea *separated* from my practice as teacher educator, a *disembodied idea*.

Now I sense the possibility that you might have begun to think that I was not doing very well as a beginning teacher educator; that I was merely swimming in difficulties and confusion. If I am suspecting right, I would like to balance my account and even convince you to think that “things may not have been that bad”. After all, I think it is fair to say that I was enthusiastic about the notion of constructivism and the associated research findings on “children’s ideas in science” (e.g. Driver, Guesne, and Tiberghien 1985). No doubt, this enthusiasm on my part evoked interest in some of my student teachers. Evoking interest in one’s students is, I believe, one of the most valuable things that happens to you as a teacher. If you are a teacher educator, it may entail that someone who is already searching for things to improve her or his teaching practices, *picks up your words and works them into his or her own teaching story*. Fortunately, I am able to bring in an example that speaks to this point. It is the voice of a woman and a biologist who participated in the teacher education program at

my university, including my own science-teaching course, in 1992. Her name is Rut Kristinsdóttir and she wrote about her experiences in a pamphlet published by an organization of Icelandic biology teachers (Kristinsdóttir, 1993). Her story is valuable not only because it exemplifies the point I am making about the interested learners' search for new ideas to improve their practices but also because it may enable you to build a picture of the "Icelandic context" that is a part of my story.

Kristindóttir's Reflections

Having graduated from her biology studies at the University of Iceland in the autumn 1990, Kristinsdóttir got a teaching position in a secondary school right away but enrolled a year later in our teacher education program at the same university¹. In doing so, she became a participant in my science-teaching course that, at this point, had definitely become constructivist in content although not in form as told above. Having made some comments on her biology studies, she makes the following remark about the teacher education program:

I started in the teacher education program with mixed feelings because there was a rather bad rumour following it among the older and experienced teachers. Some of them even went so far as saying that these studies had done more harm than good to them.

(Kristinsdóttir, 1993, p. 52)

I think it is important for you to note this "bad rumour" Kristinsdóttir talks about. I think it may be said that the general attitude toward teacher education in these years (ca 1980 to 1990) in Iceland was not positive. This applies in particular to a group of practicing secondary teachers who were required to "go back" to the university and teacher education studies because of a new regulation taking place in the late 1970s and making formal teacher preparation obligatory for all but a small group of teachers with very long job experience.

Some of those required to “go back” were not happy with this state of things and did not hesitate to speak out their opinion on the matter. I was part of this group and I remember that many of them complained about this ‘misfortune’ and even ridiculed the teacher education program or parts of it. I belonged to a minority of student teachers with a rather positive attitude toward the program.

When Kristinsdóttir arrived in the program it had changed substantially from the time I was a student teacher in it, having become, for instance, more school and subject oriented. Nevertheless, the “bad rumour” was still there, making Kristinsdóttir somewhat uncertain about what to expect from it. Fortunately, things turned out not that bad from her point of view. Reflecting on her experiences from participating in our teacher education program a few months after she graduated from it, she is indeed quite positive, for example toward the learning environment offered by my course:

In this course ... our attention was directed to how to teach our subject to people, not only teaching the subject ... we were also required to answer particular questions that every biology teacher should face from time to time. “What should be taught in biology?” “Why should we teach biology?” Faced with such questions one is forced, I think, to take a different look at the topics and encouraged to make it more goal directed and meaningful... Above all, what I remember best from this course is the so-called constructivist view. According to it, each individual shapes and builds his or her own knowledge. I find this especially important to keep in mind when I am introducing new concepts to my students and trying to explain their meaning. Because what I say or write they shape in their particular ways, depending on their prior

¹ Formally, teachers are required to have a teaching credential when beginning to teach in schools. Due to continuing shortage of teacher (science teachers in particular), however, people often begin their teaching careers without such a credential and (those who want to stay in the profession) only later enrol in a teacher education program.

knowledge and how they connect this new information to the knowledge they had previously constructed. (p. 53)

I must admit that I am very fond of Kristinsdóttir's words just quoted. Fighting uncertainty and struggling to find meaningful ways of helping people learn to teach, words like hers sounded (and continue to sound) most encouraging. It is good to know that somebody finds your ideas interesting. It provides you with a feeling that, after all, you might not be fighting against windmills, a feeling that often followed me in those years. Besides, and maybe most importantly, stories of this sort that remind us (educators) of the *contingencies* of life, including school life and teaching. Our control of "what happens" to our student teachers is bound to be limited. The "outcome" of our courses, what our students learn, is no less up to them than it is a function of our efforts. Fortunately, I have been blessed with many student teachers, who – like Kristinsdóttir – are eager to grow and rethink their entering ideas on education, teaching, and learning. Such students, it seems to me, are keen to make their own maps of the terrain we call "teaching" and may even influence their colleagues to start revising theirs. And all this may happen *regardless of* teacher educators like me who tend to teach in *discord* with ideas they hold dear.

Epilogue

In this chapter, I have been revisiting some of my early experiences linked to my attempts to make constructivism part of my practice both as a chemistry teacher and teacher educator. Trying this I soon ran into difficulties. In my school I experienced a head-on clash with the very way things were thought of and organized in my school, the time table and the emphasis on covering the content being obvious examples. Attempting to follow the 'constructivist trend' in teacher education when building my course at the university, I only made it 'half-way', that is, it was constructivist in *content* but not in *form*. This signifies to me that I, at this time in my career, kept constructivist ideas 'at distance', that I did not

'allow' them become parts of my teacher educator identity. Reflecting on this issue during my studies at UBC some years later I came up with the idea that I had, at this stage in my career, *not yet become a constructivist*. Thus, in June 1999, I wrote the following:

I feel that I have *become* a constructivist. I now *think as* a constructivist. Seeing myself and other people as constructing knowledge appears quite "natural" to me now. This is very different from how things appeared to me before. I saw constructivism as an "ism" and as a "more true" idea about how things "really are" when it comes to knowledge and learning. During my graduate studies at UBC, these ideas have somehow "moved inwards" and become one with me and *my way of seeing the world*.
(Gudjonsson, Comp 2/June 1999, p. 7)

Writing these words, I had just been exploring Belenky, Clinchy, Goldberger and Tarule's (1986) book *Women's Ways of Knowing – The Development of Self, Voice, and Mind*. I will revisit this book in the next chapter. Suffice to say here that it helped me start thinking of constructivism less as an "idea" or "theoretical framework" and more as a "way of knowing", less as something "out there" and more as something "in there". In hindsight, I see this event as the beginning of a profound shift in my way of being in the world, a change that in the end brought me to Rortyan pragmatism. Following Rorty (1999), knowledge should be seen as power: "a claim to know X is a claim to be able to do something with or to X, to put X into relation with something else" (p. 50). Speaking this way, Rorty is, of course, speaking from his pragmatic stance that also includes the view that the only thing we can do when describing a thing is to *relate* it to something else – adding:

For pragmatists, there is no such thing as a nonrelational feature of X, any more than there is such a thing as the intrinsic nature, the essence of X. So there can be no such thing as a description which matches the way X really is, apart from its relation to human needs or consciousness or language. Once the distinction between intrinsic and

extrinsic goes, so does the distinction between reality and appearance, and so do worries about whether there are barriers between us and the world. (p. 50)

From this point of view then, at least to my understanding, development of one's self is a matter of enriching one's vocabulary with new words and developing one's ability to use words imaginatively to cope with reality.

Studying in Canada I was always looking back at my early struggles with constructivism. As told, these events of my past gradually changed in a way that gave more room to the *social* aspect. Puzzled as I was, I consulted Rorty (1989) who convinced me that I had, quite simply, been bringing new words to that segment of my past, words that I had been collecting at UBC and that were now, through training (e.g. writing), gradually becoming *my own*. In the following chapter, I will explore this issue further.

Chapter 3

Towards Pragmatism

Essentialist claims involve a denial of responsibility – it is social reality that dictates the correct theoretical perspective. In contrast, pragmatic justifications reflect the researcher's awareness that she has adopted a particular position for particular reasons. (Cobb 1994, p. 19)

Studying in Canada, I began to 'look inward' and question some of my assumptions, especially those linked to education and research. Back home, I continued to do this, in particular when beginning to analyze my records. Confronted with the piles of records I had collected over months of work in the field and including my own journal, transcripts of interviews with my students and their written course work, I turned to myself asking: "Who am I as researcher?"

Frankly, to begin with, reading my records, I felt somewhat frustrated. For some strange reasons, I had expected to find something 'interesting' in that little 'data mountain' I had managed to create. *I did not*. All I saw were words and ways of speaking and little anecdotes so mundane to me that I could not avoid asking myself how on earth these pieces could be turned into a doctoral thesis!

In retrospect, it strikes me that, during this initial grappling with my data, the 'natural scientist part of me' was particularly influential. As well known, natural scientists often discover most interesting things when they 'look deeply' into their data. I remember episodes from my own biochemistry research where I was looking with wide eyes at radioactivity numbers I had collected from a tool called a 'scintillation counter' into which I had put a sample of radioactively labelled cell membranes that I was studying. Looking at these numbers, I was assuming that they were somehow revealing to me 'the intrinsic nature of

things', in this case 'the structure' of the cell membranes I was studying. Similarly – and years later- reading the texts constituting the data of this current study, I was expecting the words to tell me something about the 'intrinsic nature' or the 'essence' of the events they were referring to.

Indeed, it may well be that expecting such things I was not only guided by the natural scientist in me but also, and more broadly, by my 'cultural background'. Speaking this way I am keeping in mind that how we, human beings, view the world may be significantly shaped by the words that have been with us long enough to become part of our *linguistic habits*, including what is sometimes referred to as 'common sense'. In particular, I keep in mind those dualistic distinctions invented by Greek philosophers like Plato and Aristotle, for example the appearance-reality distinction that wants us to think that the changing and contingent appearance of things is only a reflection of some 'underlying structures' making up the real world, Plato's 'forms' serving as an example. Closely associated with this distinction are the idea of 'Truth' and the idea of research as a 'Truth-seeking' activity. Given that the world is not the way it *appears* to us, the aim of research logically becomes figuring out 'how it *really* is'.

No doubt, recent developments in educational research indicate an attempt to break with the 'grip' of ancient ways of thinking about the world and the issue of inquiry. Increasingly, educational researchers have become 'travellers' to invoke a metaphor from Kvale (1996) that pictures researchers alternatively as 'miners' and 'travellers'. While the former see it as their task to 'unearth Truth', the latter see it as their responsibility to inquire into more earthly matters. *Conversing* with ordinary people and gathering *stories* from them, the traveller sees the possibility of coming up with accounts that throw light on how different individuals or different groups of people see their lives and cope with lives and their environment. Done with his account, the traveller (researcher) may feel that he has come up

with a deeper *understanding* of people and their social practices although not contending that he has come ‘closer to reality’ or something of that sort.

However, I think there still is a sort of ‘epistemological uneasiness’ hanging in the air in the field of educational research. Reading articles on teacher education, for example, I often start wondering ‘from where’ the author is speaking. Often people write in a ‘going between’ style, like they had not made up their mind if they want to be seen as miners or travellers, truth-seekers or storytellers. It may well be, as Barone (2001) suggests, that most of us (educational researchers) are *preoccupied with certainty*, that we “need assurance, with as high a degree of probability as possible, that our beliefs (including those about educational matters) are not untrue” (p. 24). At least do I think that this was the case with me when beginning to grapple with the records that I had collected during the school year when my new course was running, that is 1999 to 2000. No doubt, beginning to grapple with my records, I was closer to Plato than Foucault. Not seeing anything interesting in my data with my ‘Platonic lens’ I turned away from them and began to look for *alternative* lenses.

This chapter is an attempt to provide you with an insight into my search for alternative lenses and, by the same token, my attempts to answer *who I wanted to be as a researcher*. I feel justified to do this for two reasons. One is that I want to share with you the story of my personal growth, a story that I hope you may find interesting because it speaks to the ‘epistemological issue’ so pertinent to many of us in these somewhat bewildering post-modern times. Secondly, I see it as my responsibility to *inform you of my position*. Following Cobb (1994, cf. the quote at the very beginning of this chapter), I am aware that in writing this thesis I have been guided by pragmatic and sociocultural perspectives that gradually took form in me as a result of intensive conversations with authors that I refer to as ‘my guides’. Sharing with you some of these conversations, I am hoping to provide you with an adequate

background for you to build an understanding of the vocabulary that I gradually adopted and used when making sense of my records.

Looking For a Niche

No doubt, the natural sciences were my ‘intellectual home’ prior to and even far into my teaching career in which I, you may recall, was teaching chemistry. I got my Master’s degree in biochemistry from a university in Norway in 1976. My thesis was entitled “Iodination of synchronized plasma membranes in HeLa S₃ cells” (Gudjonsson and Johnsen, 1978). Please do not worry if this title does not make sense to you. My point is simply to draw your attention to the fact that I was *originally trained as a natural scientist*. Solomon (1994) thinks that:

Natural scientists have some problems with new usages of language because they have been socialized into defining words in precise, and indeed unlinguistic, ways. If a word has only one meaning how could it ever be used in a new way and yet communicate understanding to another person?’ (p.2).

I find this quote interesting because it helps me make sense of the fact that I felt rather confused when beginning my graduate studies at UBC in 1997 and confronted the *variety of meanings* different authors were assigning to various key-terms, for example the term ‘research’. Prior to my studies in Canada, research meant to me ‘finding out how things really are’, my hunt for the ‘real structure’ of the cell membranes I was studying in Norway being an example. In the community I was part of when doing my biochemical research, epistemological questions were seldom if ever raised. I dare say that my colleagues and me took it for granted that there was a world ‘out there’ waiting for us and other natural scientists to *discover its ‘true nature’*. With time that ‘big puzzle’ would come together.

Keeping an eye on this background it should not come as surprise to you that entering the world of educational research in 1997, was for me a rather disturbing encounter. Now I

learned, for example, that there was something called 'qualitative research' to be distinguished from 'quantitative research', the latter obviously the domain where I belonged to while studying my cell membranes in Norway, while the former was something that seemed to be attracting most graduate students in the department I had become part of at UBC. Uncertain as I was, I simply joined the 'qualitative people', guided by a homunculus in my mind whispering something like: "Now you are going to study *people*, my friend!" Once inside this qualitative camp, I noticed that one could choose between several 'sub-camps', for example 'the interpretivists', 'the critical theorists', and 'the deconstructionists', alternatively referred to as 'paradigms' or 'discourses' (e.g. Sipe and Constable, 1996). Somewhat hampered by my limited grip of the English language, I used considerable time to look for definitions of these terms and their associates in various dictionaries. However, this turned out to be a rather useless effort. Whenever I felt I was coming up with 'the right definition' of a term, I came across an author who appeared to use it differently. Now you may see my reason for quoting Solomon above. My point is that I, having worked as a natural scientist, had been "socialized into defining words in a precise ... way", and that this made it difficult for me to come to grips with the *plurality* of definitions and meanings characterizing this new field that I was entering.

Gradually I found a 'niche' in this complex terrain: I settled in the 'interpretivists' sub-camp', encouraged by the discovery of mine that many people in this camp also spoke of themselves as 'constructivists'. Being familiar with that term, I anticipated that I would feel at home in this place. I did. I felt comfortable because here I met people whom I found it most interesting to converse with and that I later invited to be in the team that was to guide me when working on my records.

How Should I Think?

Returning to Iceland I began to record my attempts to build a new course that would carry some of the 'things' that I had been learning in Canada. Soon, the records began to pile up. Beginning to grapple with them left me with a feeling of *emptiness*. Although carefully reading the paper work and listening to the audiotapes from the field, I did not find so much 'in there', at least not any 'interesting things'. Reflecting on this issue now, in my hindsight mirror, it comes to my mind that my look at things at this point in time, was coloured by attitudes related to my natural scientist background outlined above. Studying the cell membranes during my Master's years in biochemistry, I had seen it as my task to figure out how they 'really were'. Now, twenty-five years later, approaching the records I had collected from activities linked to my new course I was somehow drawn to a *similar mode of thinking*. Analysing this new set of records, I thought my task would be to figure out 'what really happened' in the course. However, I did realize that this might be a difficult if not an impossible task for the simple reason that the participants of my course, the student teachers, *might see things differently*. In other words, the 'constructivist homunculus in me' was interfering with the 'natural scientist homunculus' that had been reigning over my thought processes for quite a long time. These different 'pulls' left me in a state of *confusion*. I did not really know how I should think of my records and how I should deal with them. Reading my journal, for example, I began to wonder *what I was indeed reading*. Should I think of the journal entries – my words – as parts of the 'objective world'? Is what we *say* and *write* 'the way things are', or are our words 'reflections' of some underlying (e.g. cognitive or social) 'structures'? What is given and what is made? Moreover, what is actually the *task* of the social researcher? Keeping in mind that I was supposed to be inquiring into 'my own practice' made me even more confused. Studying cell membranes is a relatively clear-cut task. I was 'here' and the membranes were 'there'. I was studying a thing distanced from my

'inner world'. Studying "one's own practice" one cannot speak like this – can one? One cannot say: I am 'here' and my practice is 'there'; because your practice is a *part of you*, at least if we give 'practice' a broad definition including thoughts and attitudes (as I do). It is easy to think of leaving one's sample of cell membranes in the refrigerator when going home from work but hard to think this way of your 'practice'.

Thoughts of this kind were flashing through my mind during my early struggles with my records. Apparently, I was caught between *opposite poles*, attitudes linked to my past practices as natural scientist on one hand, and attitudes linked to my more recent practices as a teacher educator and an educational researcher on the other hand. Somehow, this dilemma had to be resolved; otherwise I would not be able to deal effectively with my records. Facing this situation, I decided time was ripe for me to figure out *my position* as an educational researcher. As hinted at in the previous section, this search took the form of intense 'conversations' with particular authors whom I named "my guides" – an adequate term, I think, because they helped me out of my confusion and guided my work on my records. I begin with Jerome Bruner.

Bruner's Perspectival Tenet

You know how it is. You are reading a book. Something is *troubling* you, you feel confused. You do not see things clearly, you do not know 'where you are' or 'where you should be going'. Then, all of a sudden, you come across a sentence or a paragraph that makes the fog clear, at least partly. You get a sense of *where you are* and a sense of *direction* to take. Something like this happened to me when I came across the following excerpt in Bruner's (1996) *Culture of Education*:

The meaning of any fact, proposition, or encounter is relative to the perspective or frame of reference in terms of which it is construed ... To understand well what

something 'means' requires some awareness of the alternative meanings that can attached to the matter under scrutiny, whether one agrees with them or not. (p. 13)

This excerpt is one of the several "tenets" that guide Bruner's "psycho-cultural" approach to education. He calls it "the perspectival tenet". It acknowledges that a thing may be understood in different ways and that understanding it one way does not preclude understanding it in other ways, and that, "Understanding in any particular way is only 'right or 'wrong' from the particular perspective in terms of which it is pursued", to quote Bruner (1996, p. 13 –14). This may sound plausible to you and so it does to me *now*. During my graduate studies in Canada, however, things were not that clear, especially in the beginning. Arriving in Vancouver in July 1997 'the natural scientist in me' was still reigning over my mind and caused me to think that there could only be 'one world' and that the role of science was to figure out exactly how that world 'really' was. The structure of cell membranes, for example, should *not* be spoken of as being dependent on the observer. On the contrary, the structure of cell membranes was 'objectively given' and it was the role of biochemistry and associated sciences to figure out that structure in minute details.

However, at the time of my arrival there was another homunculus at work in my brain, namely 'The Confused Constructivist'. His existence links to my efforts to establish a constructivist course in Iceland in my 'pre-Canada' period (chapter 2). I call him 'confused' because I had (when beginning my studies at UBC) only learned to speak of constructivism as a *theory* but not as a *way of knowing and acting*. This explains why the natural scientist in me had been so influential up to this point. It was quite easy for him to reign over my mind because his potential opponent was 'confused' and therefore weak.

During my graduate studies at UBC the confused constructivist gradually gained strength and began to push the natural scientist toward the periphery of my consciousness. As hinted at earlier (chapter 2), reading Belenky, Clinchy, Goldberger, and Tarule's (1986) *Women's Ways of Knowing* I began to understand that constructivism could be spoken of as

an *intellectual vantage point*; that is, as a vantage point in one's inner life journey which makes one see the world not as 'given' but as *created*. Returning to Bruner's excerpt given above with this understanding it began to dawn on me what he was suggesting. He was saying that the world is not 'one' but 'many'. He was saying that each one of us creates his or her own 'inner world'. The meaning of a fact, proposition, or encounter is not given *a priori*. *It is made in accord with the perspective guiding the agent involved.*

In hindsight, what was happening at this point in my life, is that I 'went meta' (Bruner 1996) *with regard to my own ways of thinking*. Encouraged by Belenky and her colleagues, I began to look closely at my beliefs, make them into objects of my own inquiry. In doing so, I began to understand for the first time in my life that I could think of myself as a *knowledge creator*. Surely, I had been speaking of myself as a 'constructivist' for almost a decade, that is since I launched my first constructivist-oriented science-teaching course in the late 1980s. However and as already spoken of in the previous chapter, I had *reserved this constructivist idea of knowledge construction for students grappling with natural phenomena*. In other words, I did not link this notion with my way of thinking nor did I link it with my student teachers' thinking. Nor did they do this, it seems to me.

How could it be so? How could we keep the notion of constructivism at such *distance*? Part of the reason, I argue, links to the way researchers in the field of science education were presenting their findings. Following the tradition, their accounts were 'objective' – reporting things 'out there'. In other words, albeit seeing children as knowledge makers the researchers involved were *acting* in accord with the (positivistic) view that their role was to represent reality 'as such' but not *their constructions* of reality. As I see it, we may here be confronted with a profound intellectual dilemma, a dilemma that has come of age as a result of two major competing world-views, one derived from the Greeks and the Enlightenment philosophers like Descartes and Locke, the other from various more recent

philosophers like William James, Friedrich Nietzsche, Michel Foucault, and John Dewey.

Following Rorty (1999), these latter philosophers are antidualists in that:

they are trying to shake off the influence of the peculiarly metaphysical dualisms which the Western philosophical tradition inherited from the Greeks: those between essence and accident, substance and property, and appearance and reality. They are trying to replace the world pictures constructed with the aid of these Greek oppositions with a picture of continually changing relations. (p. 47)

I now turn to one of these philosophers, namely John Dewey. In retrospect, I feel I can say that he helped me a lot making the 'epistemological transformation' mentioned above by pushing me to think of myself more like an *agent* and less like a *spectator*.

What is intended?

Dewey's Anti-Dualism

Soon after my arrival in Canada, I began to read John Dewey. However, years passed before I understood clearly how different he was from the European philosophers I had become familiar with in the past. In fact, it was not before I (then back in Iceland) read the Icelandic philosopher Gunnarsson's (2000) introduction to his translation of Dewey's (1933) *How we think* that I could say to myself, "Oh, now I see", or something like that, referring by those words to my attempts to come to grips with Dewey's *pragmatic philosophy*. Here Gunnarsson wrote that, "Western philosophy has viewed human beings as *spectators* of the world rather than *participants* in it. Accordingly, Dewey spoke of the prevailing epistemology, that goes back to the Greeks, as the spectator theory of knowledge" (p. 28; my emphasis). In a footnote linked to this sentence, Gunnarsson explained further that, "For the spectator, the environment is an 'outlook', for the agent it is most of all 'a field of action'".

Reading Gunnarsson's words had a similar effect on me as Bruner's 'perspectival tenet' given above: *Things cleared*. Now I began to understand that I had been *habituated* to

be a *spectator* rather than a *participant* or an *agent*. Teaching in the past, for example, whether chemistry or teachers, I tended to think of my students in a similar way, that is, as spectators. On closer view (and with more reading), I found that this way of thinking about my students and myself was coherent with how I tended to think of *inquiry* and *knowledge*. Apparently, my worldview was pretty much in accord with Cartesian dualism: There are two worlds, the 'world out there' (including my body) and an interior space called 'the human mind'. This is a kind of theatre where ideas appear on the scene to the only *spectator* present, that is me or you or, more generally, *the human being*. Despite various attacks, this view of a human mind as distinct from the body and the rest of the world has held sway up to our time and continues, I think, to influence our behaviour. At least it is the case that we (people in Western societies) tend to speak of knowledge as 'chunks' that people accumulate in their minds (from various sources such as books or teachers). As I see it, this view is pretty much 'in operation' in schools today. We *speak this way*, for example when referring to teaching. Teachers 'deliver' knowledge to their students. Following Bruner (1996), what guides most teaching practices, is a model of mind that depicts it as *tabula rasa*, a blank slate. Knowledge in this model is taken to be "cumulative and the role of the teacher is to present the pupils with facts, principles, and rules of actions to be learned, remembered, and then applied" (p. 54 – 55).

My point is that culture provides us with a 'map' to navigate through our lives. This map includes 'common sense', e.g. the view of knowledge outlined above, and *makes it difficult for us to adopt alternative maps or design our own*. This is in a nutshell what I mean when speaking above of 'our profound intellectual dilemma'. Eager as we sometimes are to develop new ways of speaking, we are at least equally disposed to relapse into ways of thinking our culture offers us because cultural forms are always with us, apparent, for instance, in our common sense ways of speaking. When I arrived in Vancouver in July 1997

to begin my graduate studies at UBC, I had been navigating through life and my practice as an educator according to a cultural map that may be spoken of as ‘Icelandic’ but is certainly rooted in Greek philosopher’s thinking (e.g. Plato and Aristotle) and European Enlightenment thinkers like Descartes, Locke, and Kant. According to this map, there is a fundamental distinction between subject and object, between ‘the elements in human knowledge contributed by the mind and those contributed by the world’ (Rorty, 1999, p. 47). No wonder then that it took me some time to make sense of the story Dewey was telling me because that story was a head-on collision with the cultural map I had been using.

Dewey’s philosophy is *anti-dualistic*. This means that he wants us to give up the distinctions invented by the Greeks and further elaborated on by the Enlightenment philosophers and replace them with the notion of *continuity*. Consequently, ‘mind’ should not be seen as a container within the body. Rather, and concretely, it is ‘the power to understand things in terms of the *use* made of them’ (Dewey, 1916/1944, p. 33, my emphasis). Our minds are “organized habits” (Dewey’s term), *developed through use with other people*:

When children go to school they already have ‘minds’ – they have knowledge and dispositions of judgement which may be appealed to through use of language. But these ‘minds’ are the organized habits of intelligent response which they have previously acquired by putting things to use in connection with the way other people use things. (p. 32-33)

If mind is seen this way, i.e. as *continuous* with the body and the world, other terms that we tend to link to mind take on new meanings. In fact, Dewey offers us an *alternative vocabulary* to use when figuring out how we should think – a *pragmatic* vocabulary.

‘Pragmatism’, William James (1948) noted, is derived from a Greek word meaning *action*, from which the words ‘practice’ and ‘practical’ come. The very basic idea in pragmatism is simply ‘give it a try’, that ‘it’ being an idea (a way of speaking) that you think (for good reasons) is worth exploring *in practice*. ‘How it turns out’, its *practical consequences*, is the

‘measure’ of its value, ‘the whole of our conception of the object’ to follow James (1948, p. 143). Herein lies the *anti-foundational* aspect of pragmatism. Following it, we do not see it as our obligation to justify our beliefs with regard to some ‘fundamental issues’ or ‘basic principles’. The reference is quite simply *action*. The value of a belief lies in its *usefulness*, whether it helps us go on with our projects and whether it helps us make the world a better place to live in. How good it is, is a matter of *agreement* among those involved.

When the world becomes ‘a field of action’ and minds ‘organized habits’, knowledge ceases to be a commodity. It becomes *ability* to do things, to cope with the world. Dewey (1916/ 1944) summarizes his *pragmatic theory of knowledge* in the following way:

Its essential feature is to maintain the continuity of knowing with an activity which purposely modifies the environment. It holds that knowledge in its strict sense of something possessed consists of our intellectual resources – *of all habits that render our action intelligent*. Only that which has been organized into our disposition so as to enable us to adapt the environment to our needs and to adapt our aims and desires to the situation in which we live is really knowledge. Knowledge is not just something which we are now conscious of, but consists of the dispositions we consciously use in understanding what now happens. *Knowledge as an act is bringing some of our dispositions to consciousness with a view to straightening out perplexity, by conceiving the connection between ourselves and the world in which we live.* (p. 334; my emphases)

The *function* of knowledge, in this view, is “to make one’s experience freely available in other experiences ... [where] the word ‘freely’ marks the difference between the principle of knowledge and that of habit” (p. 349). Knowledge, for Dewey, is *power* that frees us from habitual behaviour because it allows us *see things as connected* rather than isolated. His example in chapter twenty-five in *Democracy and Education* of savages responding to a flaming comet is illustrative. Accustomed as they are to react to events, which threaten their lives, by shrieks, beating of gongs, and so on, *they do the same* when seeing a comet in the heaven. We, in contrast, says Dewey:

... place it [the comet] in the astronomical system. We respond to its *connections* and not simply to the immediate occurrence. Thus our attitude is much freer. We may approach it, so to speak, from any one of the angles provided by its connections ... we *get a new event indirectly* instead of immediately – by invention, ingenuity, resourcefulness ... In fine, while a habit apart from knowledge supplies us with a single fixed method of attack, knowledge means that *selections* may be made from a much wider range of habits. (p. 340; my emphases)

If you asked me to state briefly why I have chosen Dewey to guide my look when approaching my records, I might respond by saying that it is his *holistic* and *anti-dualistic* view of human beings as *active participants* in the world that attracts me most. This links to my interest in *social* accounts of learning in general (Lave and Wenger 1991) and of learning to teach in particular (Putnam and Borko 2000). Indeed, accounts like these encouraged me to explore Dewey's writings. In doing so, I have come to understand that his pragmatic view of human beings and knowledge align neatly with these recent accounts of learning. In both cases, *continuity* and *interaction* replace a container-like mind separated from the body and a body separated from the environment. This implies that how one thinks and how one acts may *vary* with the environment, that cognition is *contextual* or *situated*. In other words, situation A may lead one to think and act in a different *way* than situation B. A student moving from campus to school might serve as an example. The campus situation offers a surrounding that is in many ways different from the classroom situation. In the latter case there are, for instance, a group of learners and a syllabus to cover. The very issue of adapting to such circumstances may be thought of as learning (social, contextual, and/or situated). Dewey used the word "habituation" to refer to such adaptation processes, defining this word as the "general and persistent balance of organic activities with the surroundings" (p. 52). Indeed, Dewey saw habituation as an aspect of or rather as the *background* of growth. Growing itself, however, was constituted of "active habits ... [that] involve thought, inventions, and initiative in applying capacities to new aims" (p. 52-53). Returning to the

example of the student teacher with these Deweyan notions we may now say of her that *in beginning to teach two kinds of learning processes may be involved, habituation and active readjustment*. Although these processes may be most visibly at work in a school (or practicum) context, it might do well thinking of them as operative in other components of the teacher education program as well, for instance in the various courses offered. In any case, habituation or adjustment of some kind (e.g. toward the types of activities involved) occurs *by necessity*. Whether active readjustment (reflection) is involved, however, is up to the participants, most notably the teacher educator and the school advisor (in a school setting).

I hope it is clear to the reader that these Deweyan notions speak to the position that I am presenting in this thesis, namely that we should see learning to teach both as a personal *and* a social act. Apparently, one possibility of framing this dichotomy is to speak of it simply as *growth*, in the Deweyan meaning of that term – of course.

As mentioned in chapter 1, *language* became an issue for me when working on this thesis. It was Rorty who evoked my interest in this respect, pointing me to the idea that language might be thought of as a *tool* or a *social instrument*. In light of the fact that I was, in my study, working across two national languages and, indeed, often troubled by this situation, I sensed that Rorty's ideas might be useful for me when making sense of my experiences.

Rorty's Neopragmatism

The world does not speak. Only we do. The world can, once we have programmed ourselves with language, cause us to hold beliefs. But it cannot propose a language for us to speak. (Rorty, 1989, p. 6)

During my work on this thesis, I have become drawn to the pragmatists, John Dewey and Richard Rorty in particular. These thinkers have enabled me to take a fresh look at the relationship between human beings and reality. Reading Dewey helped me understand that

we need not think of the world in dualistic terms. Reading Rorty helped me develop this point but also, and very importantly, pushed me toward thinking of language in a way not familiar to me earlier.

There are strong connections between these two authors. Rorty (1999) has written that, "The philosopher whom I most admire, and of whom I should like to think of myself as disciple, is John Dewey" (p. xvi). However, there are two important *differences* between them and, by the same token, between classical and contemporary pragmatism or neopragmatism. First, neopragmatists do not assume that there is something called "the scientific method". Secondly, and more important for this thesis, neopragmatists insist that we should substitute 'language' for 'experience'. Let us see what this latter issue entails.

In my reading of Rorty (1979, 1989, 1999), there are two major paths for us to follow when inquiring into human affairs. The first path departs from "the Cartesian-Lockean picture of a mind seeking to get in touch with a reality outside itself" (Rorty, 1999, p. xxii). Following this path, we find ourselves in the domain of *epistemology* and busy figuring out if our ideas *correspond* to reality. The second path, which I suggest we might call "the pragmatic way":

... starts with a Darwinian account of human beings as animals doing their best to cope with the environment – doing their best to develop tools which enable them to enjoy more pleasure and less pain. Words are among the tools which these clever animals have developed. (Rorty, 1999, p. xxiii)

The major difference between these two paths, as I see it, is that while the first sees human beings (researchers included!) busy *trying to get in touch with reality*, the second persuades us to think that human beings *are already and have always been in touch with reality*:

No organism, human or non-human, is ever more or less in touch with reality than any other organism. The very idea of 'being out of touch with reality' presupposes the un-

Darwinian, Cartesian picture of a mind which somehow swings free of causal forces exerted on the body. The Cartesian mind is an entity whose relations with the rest of the universe are representational rather than causal. So to rid our thinking of the vestiges of Cartesianism, to become fully Darwinian in our thinking, we need to stop thinking of words as representations and to start thinking of them *as nodes in a causal network which binds the organism together with its environment*. (Rorty, 1999, p. xxiii; my emphasis)

As noted earlier, Dewey wanted us to see ourselves as *continuous with* and as *interacting with* our environment. Rorty takes this view a step further, bringing 'language' into this picture, that is language understood as a *tool*. For Rorty, human beings are most of all *tool-users* and *tool-developers*, and 'language' is one of the tools they have developed. It should be emphasized that speaking of language this way is only plausible within a framework that rejects the Cartesian legacy, that is, within an anti-dualistic (including pragmatic) framework. Within the Cartesian framework, 'language' (in modern times) has come to be seen as a veil coming between the self and reality, replacing in part the older notion of 'mind'. In contemporary pragmatism, however, language is seen as *social tool, part of our complex interactions with our environment that make us continuous with it*.

Adopting such a view of language implies a dramatic shift in one's worldview, in particular one's way of thinking of human beings, inquiry and knowledge. Now the world becomes a place where its inhabitants have developed and distributed themselves in different 'language games' or 'vocabularies' that cut across national languages, 'physics' and 'theology' being two examples. *How you see the world depends on which language game you are in or what vocabulary you are using*. Plausibly you may come up with different descriptions of reality, depending on what language games or vocabularies you are most in contact with. These vocabularies (e.g. physics and theology) should be seen as *alternatives*. In fact, there is no *neutral* ground to stand on and judge the 'rightness' of the various descriptions because, in doing so, you will always be invoking some vocabulary or another.

Every statement of the world springs from a particular vocabulary or vocabularies. What matters, following Rorty, is whether the descriptions you come up with are *useful*, that is, if they *serve our purposes*, if they help us go on with our projects, if they bring us more pleasure and less pain. The assumption here is that “The world does not speak. Only we do” (Rorty, 1989, p. 9). Accordingly, what we say about the world cannot be aligned with ‘the world itself’. It follows from this that the value of what we say should not and cannot be judged with reference to some ‘foundation’ or ‘neutral ground’ but only with reference to *whether it is bringing us something good or not*. It also follows that the purpose of inquiry cannot be attaining ‘Truth’ or ‘getting things right’ for the very simple reason that in trying this we will always meet ourselves, our ways of speaking – which, we know, *changes with time*. The world as ‘it really is’ is nothing to worry about, an *empty saying*. What matters is how we speak and whether “each of the descriptions of reality employed in our various cultural activities is the best we can imagine – the best means to the ends served by those activities” (Rorty, 1998, p. 6).

You might at this point have begun to wonder where all this philosophical talk is taking us. Anticipating this let me try to put things straight.

Starting to work on my records I soon found myself in a blind alley. I was not sure what I was doing or what I was trying to do. Grappling with these issues, I was carrying with me a cultural heritage saying that that the issue of inquiry is to figure out (in natural science) ‘how things really are’ or (in social research) ‘what is really going on out there’ or ‘what really happened out there’. During my graduate studies at UBC in Canada, I began to understand that this rigid framework has been dissolving in recent times. In particular, I learned that various scholars were claiming that the world and things in it are open to *interpretation*. Accordingly, the aim of inquiry is not ‘getting things right’ but *understand* them better, for example by bringing in people’s (participants’) different points of view.

From this point of view, there is only a short way to pragmatism. Pragmatism accepts the idea of interpretation. However, it *extends* this idea. It makes it into an *active encounter with the world* by persuading us to see human beings as *participants* and *agents* rather than spectators. *Our interpretations become parts of our purposeful daily struggles to solve earthly problems.* With neopragmatism, *language* enters this picture as one of the *tools* we use in our struggles.

Whatever our beliefs are, few of us would deny that what we call “language” penetrates deeply into every corner of our lives and our social practices. For most people, language is simply ‘language’, not an issue as such. However, when it comes to an *inquiry into human relations* (for example educational research) language may easily become an intriguing issue. This, of course links to the fact that in this case what most frequently meets the eye of the inquirer are *words on paper* – written or transcribed from audiotaped interviews. In such cases, one may come up with the question: “What are words?” Answering that they are *representations* (of something ‘inner’ or ‘outer’), one’s inquiry is likely to take a path different from the one it might take if one says that they are social *tools*. In the former case, one might be persuaded to look for what is *beyond* the words. In the latter case, words are something one takes *at face value*, as something ‘given’. Choosing the latter route (as I have done), one is likely to develop an interest in ‘utterances’ - the way people speak. This brings us to Wertsch and Bakhtin.

Werstch and Bakhtin

I tend to speak of these authors simultaneously for a very simple reason: Developing a sociocultural approach to mediated action, James V Wertsch, a student of psychology, relies heavily on the ideas of Mikhail Bakhtin, a Russian linguist and a contemporary of Vygotsky and intellectually similar to him in many respects. All three are *socioculturalists* which means (to me) that they attempt to see human mental functioning as embedded in cultural, historical, and social processes. In other words, all of them contend that we should not think of mental

processes as disconnected from the social plane but as *shaped by cultural tools*, language in particular.

Speaking the way I do, I am in particular referring to one of Wertsch's (1991) book, *Voices of the Mind*. The title of the book points directly to one of Bakhtin's key idea, namely that human speaking and thinking inherently involve the process of invoking or 'ventriloquating' the voices of other (socio-culturally-situated) speakers. I discovered this book at a point in my studies when I was beginning to understand that my learning to teach story was significantly a 'language story'. During my graduate studies in Canada, I had used every opportunity to reflect on my earlier teaching experiences in Iceland. Back in Iceland, I began to reflect on my own learning experiences at UBC in Vancouver. In both cases, I was struck by the fact that *my memories of these events appeared to vary with the books that I was reading*. Bringing up this issue with Rorty, he explained to me that this was quite plausible. Reading these books, you are *recreating* yourself, he said. You adopt new words and new ways of speaking. When you do that both you and the world changes. In other words, studying other people vocabularies, "We redescribe ourselves, our situation, our past, in those terms and compare the results with alternative redescrptions which use the vocabularies of alternative figures. We ironists hope, by this continual redescrptions, to make the best selves for ourselves that we can" (Rorty, 1989, p. 80).

As I see it, there are close resemblances between Rorty and Bakhtin. For example, both authors want us to see language as a *social tool*. Apparently, 'the common link' here is the later Wittgenstein. Wertsch (1991), in the book mentioned above, notes that there are essential points of similarity between Wittgenstein's 'language game' and Bakhtin's notions of 'social language' and 'speech genres' (see below). On the other side and as noted above, Rorty (1999) sees contemporary pragmatism (neopragmaism) substantially as a linguistic

updating of classical pragmatism (Rorty, 1999) influenced by the Wittgensteinian view of language as a tool.

Bakhtin was interested in *utterances*, the way we speak. His approach to this issue was sociocultural: an utterance is always a 'mix of voices'. If you look carefully at what I say (or write) you will most probably see in it 'fingerprints' of one or another 'way of speaking' shared by a group of people which I have been (or am) in contact with. For Bakhtin, these 'ways of speaking' were mainly of two types, which he referred to with the terms 'social language' and 'speech genre'. A social language is "a discourse peculiar to a specific stratum of society (professional, age group, etc.) within a given system at a given time" (Holquist and Emerson, 1981, p. 430; quoted in Wertsch, 1991, p. 57). Speech genre, on the other hand, "corresponds to typical situations of speech communication, typical themes, and, consequently, also to particular contacts between the meanings of words and actual concrete reality under certain typical circumstances" (Bakhtin, 1986, p. 87; quoted in Wertsch, 1991, p. 61). For illustration, you might think of my colleagues and me in the chemistry department of the secondary school where I teach. In the view described here, our national language (Icelandic), chemistry (a social language), and our particular ways of communicating about daily things of our practices (speech genres) all *mediate* our communication and, by the same token, our thinking. Even a chemist entering our community might experience difficulties communicating with us. Although speaking Icelandic and being familiar with the social language of chemistry, he might not be familiar with the *speech genre* we use to coordinate effectively our daily activities.

Following Wertsch, Bakhtin's interest in utterances links to the latter's emphasis on seeing the way we speak as *mediated actions*. Wertsch (1991) claims:

Bakhtin's insistence on examining the utterance is strikingly consistent with a focus on *mediated action* ... in that it focuses on *situated action* rather than objects that can be derived from analytic abstractions. (p. 50; my emphases)

For Bakhtin then (accepting Wertsch's interpretation), an utterance is a *mediated* action. That it is 'mediated' means that when an individual speaks he or she will always invoke a social language and/or a speech genre that shapes what the individual speaker's voice can say. A speaker's voice, or what Bakhtin also called 'the speaking personality, the speaking consciousness' (Wertsch, 1991, p. 51) is always in a *social milieu*, never isolated from other voices. To take me as an example, when writing about my experiences, I am very well aware of Rorty's pragmatic voice. Trying to understand him, I have even made deliberate efforts to use his words and his way of speaking, hoping that I might through this process learn to speak of my experiences in new ways. While Rorty might have seen this behaviour of mine as a serious effort to expand my personal vocabulary, Bakhtin might have conceived of it as an example of 'ventriloquation', a concept that to him means 'the process whereby one voice speaks through another voice or voice type in a social language' (Wertsch, 1999, p. 59, quoting Bakhtin, 1981, pp. 293 – 294). He might have added that I was doing my best to develop *my own voice*:

The word in language is half someone else's. It becomes "one's own" only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention. (Bakhtin, 1981, p. 293 – 294; quoted in Wertsch, 1991, p. 59)

Assume (as I did above) that we may think of learning (including learning to teach) as a language development. If we do this, Bakhtin's approach may have its value. That is, we may imagine that the learning task for the student teacher is to develop her own voice out of the mix of social voices she tends to invoke when speaking of issues related to education. Bakhtin's approach to utterances, I think, points to an interesting description of the relationship between the personal and the social construction of meaning: *They are together in all of us, in our utterances*. Claiming individuality (self-formation) means choosing appropriate pieces from the social smorgasbord we inherit from our cultural surroundings and

make that selection into a coherent set of beliefs or rules of action. This would be a 'Bakhtinian growth', a sort of linguistic alternative to the Deweyan view of growth articulated earlier in this chapter.

Lave

For Lave (1996) "theories that conceive of learning as a special universal mental process impoverish and misrecognize it" (p. 149). Accordingly, she subscribes to historical, dialectical, and social theory that, "takes learning to be an aspect of participation in socially situated practices" (Lave, 1996, p. 150). She underwrites that her understanding of learning as social practice is rooted in her work with tailor's apprenticeship in Liberia. Asking how this work could be relevant to school settings, she points to the argument developed by Etienne Wenger and herself (Lave and Wenger, 1991), namely "that learning is an aspect of changing participation in changing 'communities and practice' everywhere", continuing:

Wherever people engage for a substantial periods of time, day by day, in doing things in which their ongoing activities are interdependent, learning is part of their changing participation in changing practices. (Lave, 1996, p. 150)

Observing the tailor apprentices, Lave found that they were learning many complex 'lessons' at once:

To name a few: they were learning relations among major social identities and divisions in Liberian society, which they were in the business of dressing. They were learning to make a life, to make a living, to make clothes, to grow old enough, and mature enough to become master tailors, and to see the truth of the respect due to a master of their trade. It seems trivially true that they were never doing one of these things at a time. This recommended serious scepticism about the assumption that the 'informally' educated should not be able to produce knowledge but only reproduce existing practice. Scepticism on this issue basically undermines the other claims of dualist models of education and learning. (p. 151 – 152)

As in most places, a significant part of my student teachers' learning process is constituted by what we call 'practicum' or 'student teaching'. They spend a few weeks teaching their subjects in real school settings. In general they say that this is the time when they "really learn to teach".

What are they saying? Why do they have such a *profound feeling of that they are learning so much?*

Lave's argument above speaks to the case. A student teacher in a practicum situation is participating in activities of various sorts day by day. She is, like Lave's tailor apprentices, learning many complex lessons at once, like establishing a web of relationships with the pupils, the school adviser, other teachers and administrators, learning to write on the blackboard, walking around in the classroom (trying to get closer to the students, maybe), learning to say the 'right thing at the right time', make lesson plans, tests, transparencies, correcting and marking assignments, and so forth. The thing we (teacher educators) may overlook is simply *how complex the totality of this scenario is* and how much is to be learned. Even though we may have been through this process ourselves (like I did) we may never really have noticed how complex it is for the very reason that we were so busy *doing* these things that we did not have time to *reflect* on the changes we were undergoing. We should add to this picture the fact that 'such things' have not been seen as *worth inquiring into*. When I started to teach chemistry twenty years ago I simply walked into the classroom and began 'teaching' and 'learning to teach' simultaneously. Nobody aired the possibility that I should *think* of my actions! It was only (two years) later that I went to 'get the certificate' (as some of my teacher colleagues in Iceland are prone to speak of teacher education programs) and met some educators that got me to start thinking about my practices. Unfortunately, this was too late because at this point in time I had *got used to things* related to my teaching. I knew how I should do my *job*. Positive as I was though, I attended to what the teacher

educators in the programs were preaching. However, this stuff (Piaget and more) was like an icing *on* a cake that was already baked. It did not go *into* the cake. Back in the classroom, I continued to do my teaching in the same manner as before and in accord with the complex but invisible 'rules of the game', a game that was partly handed on to me by the school culture and partly made by myself and my students; once again that good old battle between the self and the other. Piaget became shelved and found 'not appropriate'.

Like Lave I am struggling to get out of the narrow image of learning most accounts of learning bring to us. Her descriptions of her Liberian tailor apprentices evoke my interest because I link them to my student teachers when they go to their practicum. I face the possibility that she may be offering me words that could help me do a better job. She is trying to develop a *language* to describe her experiences. So am I. Her approach to learning is *sociocultural*. I am trying to develop such an approach for my purposes. She thinks that it would be more useful for us to think of learning as 'situated', as 'participatory', and as 'social becoming'. So do I. She wonders:

...what would happen if we took the *collective social nature of our existence* so seriously that we put it first; so that *crafting identities in practice* becomes the fundamental project subjects engage in; *crafting identities is a social process*, and becoming more knowledgeably skilled is an aspect of participation in social practice. By such reasoning, *who you are becoming shapes crucially and fundamentally what you 'know'*. 'What you know' may be better thought of as doing rather than having something – 'knowing' rather than acquiring or accumulating information. 'Knowing' is a relation among communities of practice, participation in practice, and the generation of identities as part of ongoing practice¹. (p. 157; my emphasis)

¹ Donald Davidson, a philosopher of language, has suggested a notion of language that dispenses with the picture of language as a third thing coming between self and reality. Building on what he calls a 'passing theory' of language (an account of how two fellow humans go about predicting each others behaviour) he insists that 'all two people need, if they are to understand one another through speech, is the ability to converge on passing theories from utterance to utterance' (quoted in Rorty, 1989, p. 14). Accepting this idea, implies, according to Davidson, 'eras[ing] the boundary between knowing a language and knowing our way around the world generally' (quoted in Rorty, 1989, p. 15). As I see it, 'Lave's notion of 'knowing' as doing might positively be aligned with this Davidsonian notion of language.

It appears to me that I might do well thinking of my student teachers with terms similar to those in the quote. In fact, you will see me do this to some extent in the chapters that follow. For instance, soon after returning from my Canada studies, I began adding the words 'from within' to the phrase 'learning to teach' thus transforming it to the slogan 'learning to teach from within'. Actually this slogan became a favourite tool of mine, for example when observing my students teach in their practicum periods. This new slogan, I suppose, signifies a new *trend* in my thinking, a trend that I see as closely linked to Lave's words in the quote just given, in particular the sentence '*who you are becoming shapes crucially and fundamentally what you 'know''*'. These words remind me of Dewey's pragmatic theory of knowledge mentioned above, in particular the following sentence quoted earlier (in the section on Dewey) but now repeated for our convenience:

Only that which has been organized into our disposition so as to enable us to adapt the environment to our needs and to adapt our aims and desires to the situation in which we live is really knowledge. (Dewey 1916/1944, p. 334)

Are not these two authors, that is Lave and Dewey, strikingly similar in their views of knowledge?

Epilogue

Writing this chapter I was driven by a desire to clarify my own position as an educational researcher. I was asking "Who do I want to be as a researcher in the field of teacher education?" The answer seems to be on the table: I think of myself in this regard as a pragmatist and as a socioculturalist. Subscribing to the former I see it as my duty to help come up with new and better descriptions for the cause of teacher education. Subscribing to the latter I see it as promising to frame teaching and learning to teach as socially, culturally, and historically situated processes.

Looking for alternative lenses to use when grappling with my records, I have become drawn to particular authors. Collectively I speak of them as 'my guides'. I do this because I feel that they have helped my out of the confusion that I experienced when beginning to grapple with my records and not seeing 'anything particular'. Encouraged by Rorty, I began to understand that this was nothing to worry about. Your role, he said, is to be *creative*. Your responsibility as a researcher is to treat your records in such a way that they *become* interesting, that they point to new possibilities for action. Guided by this view I began to explore the vocabularies of other authors. Exploring these vocabularies and looking at the 'mundane words' constituting my records I began to understand that my task as an inquirer was to weave a promising story from threads originating in my records and threads from other authors. Actually, this is how the thesis presented here came of age. It is significantly a *conversation* with other authors about my records guided by the desire to bring forth some descriptions that might enable me as well as other teacher educators to deal better with our tasks. Before I report on these conversations I would like to tell you about some of the stories that I picked up while studying in Canada and later (when back in Iceland) used for the purpose of creating a new learning environment for my student teachers. Plausibly, these are stories of learning to teach, in particular stories of learning to teach teachers.

Chapter 4

Stories of Learning to Teach

Beginning my graduate studies at UBC in Vancouver in July 1997, I was hoping to 'know better how things were', that is things related to my practice as a teacher and teacher educator. No doubt, while at UBC, I certainly 'learned a lot'. However, included in that learning was the change in my thinking described in the previous chapter, a change that brought me to think differently about the world, for example about the issue of knowledge. In particular, I started to think (with Rorty) that knowledge does not mean 'knowing how things are' but rather 'knowing around in the world'. While the former phrase may be close to *epistemology*, the latter may be close to *hermeneutics*. 'Hermeneutics', Solomon (2001) tells, is an old name for 'interpretation'. Whereas it was originally confined to translations of biblical texts, hermeneutics has been turned into a way of philosophizing through works by authors like Heidegger and Gadamer. Following these authors, life should be considered as a *text* and we should give up the idea of secure *foundations* for our knowledge and concentrate on dialogues, conversations, and story. If there is any 'truth', it lies in the daily struggles of people, our history, and our tradition.

On this background you may understand what I mean when saying that returning to Iceland after two years of graduate studies at UBC I was not sure if I 'knew better' but quite certain that I was carrying with me many 'good stories' of education in general and teacher education in particular. Maybe I should not speak like this. Maybe I should not say, 'I was *carrying with me* many 'good stories'. I might be closer to the point (my stance) by claiming that these stories had become part of 'my text' which means 'my (teacher) life' if we use the vocabulary developed by Heidegger and Gadamer. Speaking this way I may be close to

Connelly and Clandinin (1990) who claim that, “humans are storytelling organisms who individually and socially, lead storied lives” (p. 2).

On this background, the current chapter may be closer to the previous chapter than I originally thought. In that chapter, I told you about my journey toward pragmatism. Aligning with Rorty, I might think of this journey as a *recreation* of myself in the images of the authors whose vocabularies I was exploring. Being at UBC, I was certainly busy exploring authors like Dewey, Bruner, and Lave. No doubt, I began to *use* some of their words. Likewise, turning to the stories various authors in the field of learning to teach were telling, I picked up some of these, wholly or in part, and began to *use* them to ‘throw light on’ my own experiences as we sometimes say. In the process, my experiences took on new shapes, apparently a result of the words I was bringing to them. This, of course, means that *I* was changing – recreating myself. Such things tend to be ‘both ways’.

Following this argument, this chapter may be seen as a further inquiry into myself. This time, however, I am more directed to the question *who I want to be as a teacher educator* or, in accord with the discussion above, what *kinds* of stories of learning to teach teachers I would like to see as a part of *my text*. Note that I say “*more* directed”. Saying this I am referring to the fact that the ‘teacher educator in me’ and the ‘researcher in me’ are almost inseparable. This should not come as a surprise because they have been working quite closely together for some years now. For example, when the researcher in me begins to explore the texts constituting my records, the teacher educator in me immediately leans over his shoulders whispering into his ear stories of learning to teach that he (the teacher educator in me) may feel as a ‘good point’. Also taking into consideration that the researcher often gives a critical comment to things the teacher educator is advocating, we may well say that these two guys are making a good company.

So, returning to Iceland in early August 1999, I was already well underway recreating myself in the images of my guides and the stories of learning to teach I had come to like while at UBC. Beginning to plan my new course, I was aware of the 'new things in me', that is the new words and the new stories. No doubt, they were shaping my thinking, for example my thinking about the new course that I was about to establish. My guides were there and the stories were there; both at work, both penetrating 'my new text', my new life as an educator. Later, when trying to make sense of the texts that I call 'my records', these new words and stories were also highly influential. This is why I am telling you the story of my 'inner journeys'. Sharing it with you, I am hoping to enable you to 'step into my shoes', see how things, for example 'my records', look from *my vantage point*. Part of this sharing is already done with as I – in the previous chapter – told you of my conversation with my guides and my journey to pragmatism. Now, in this chapter, I will be telling you of some of the stories of learning to teach that I heard while studying at UBC, and that became a part of 'my new text'. Doing this I am hoping to provide you with an account sufficient for you to paint your own picture of me as an educator *and* as a researcher. However, the *main issue* in writing this chapter, is for me is to 'sharpen my tools', that is the tools that I will use when grappling with my records. Attending to the stories that will be presented below, I am most of all asking *how they address the issue of learning to teach teachers*. Done with the chapter, I am hoping to have at least a tentative answer to the question: What is good for me to believe when working with my student teachers? Having answered that question, albeit tentatively, I might be in a better position to deal with my records in the imaginative way I am after.

The Notion of 'Learning to Teach'

Until now I have spoken of the issue of learning to teach like a toy I had been playing with for years. This is not the case. Prior to my studies in Canada I did not know there was 'field' called by this name. I had heard of 'teacher education' for sure but was ignorant of the

fact that 'learning to teach' had become an issue for so many educational researchers that a new field had actually been born.

Exploring the literature in this field immediately caught my interest. It spoke to my concerns. Besides, I noted that many of authors in this field were using a constructivist vocabulary. That is, they emphasised that our student teachers do not appear in our classes as 'receptacles waiting to be filled' but as 'meaning makers' that have been active creating and recreating their lives for years, including their emergent teacher identity and that they would certainly continue to do so with their formal education done. Thus Feiman-Nemser and Remillard (1996) stressed that, 'Teacher educators *intervene* in a process that begins long before teachers take their first education course and that continues afterward on the job' (p. 64 – 65).

I may be of the type that gets easily 'hooked' on things, in particular educational ideas that I see as promising. At least is it a fact that I became drawn to the field of learning to teach. Actually, this may not have been a coincidence. As told earlier (chapter 2), beginning to teach teachers in Iceland, I became captured by the notion of constructivism as it appeared in the science education literature. Once in a new 'loop' we become curious of where it might carry us, and eager to explore its promises. One of my new 'loops' when beginning to study at UBC was the literature on learning to teach.

Where did this 'loop' carry me?

Orientations in Teacher Preparation

Feiman-Nemser (1990) identified five 'conceptual orientations' in teacher preparation, using the term 'orientation' to refer to a 'set of ideas about the goals of teacher education and the means of achieving them' (p. 220). She refers to these orientations as academic, practical, technological, personal, and critical. Examining these orientations, Feiman-Nemser found that they differ in terms of views on the teacher's roles, teaching and learning, and learning to

teach. For her, however, these views are by no means something fixed. On the contrary, all the orientations seem to be changing over time, for example through their influences on each other, a point also highlighted by Carter and Anders (1996). These latter authors stress that, “we are currently in the midst of a profound shift in the core conceptions of teaching and teacher education, one that is transforming basic notions in the field” (p. 559). Thus, speaking of the practical (craft) orientation, these authors point to developments in cognitive science where notions such as ‘situated cognition’, ‘communities of practice’, and ‘apprenticeship modes of learning’ have entered the scene and begun to affect how we think of ‘the practical’. The technological orientation, traditionally concerned with skills training, is also undergoing deep changes in response to greater emphasis on thinking, reflection, and decision making in teacher education. The personal orientation that traditionally rested on pedagogies derived from counseling has now incorporated the notion of personal knowledge and become more inclined to reflection, stories, cases, and action research. Such an emphasis on reflective thinking is also apparent in the critical (social) orientation, a fact that should remind us that the orientations overlap substantially and may be doing so increasingly in the years to come.

How do these orientations speak to the issue of learning to teach?

Following Feiman-Nemser (1990), the *academic orientation* used to see teaching as primarily concerned with the transmission of knowledge and the development of understanding of subject matter in the learner. Accordingly the teacher, in this view, was seen as *subject-matter specialist*. However, recent research on subject matter pedagogy and the rise of constructivism seem to be altering how supporters of this orientation see teaching and learning. Broadly speaking the prospective teacher, in this more recent view, should learn to weave together subject-knowledge, knowledge of learners, and knowledge of effective teaching strategies, this unity often referred to as ‘pedagogical content knowledge’ (Shulman,

1986). Of particular importance here, besides good knowledge in the areas mentioned, would be an apprenticeship with a skilled and academically prepared teacher.

The *practical orientation* speaks directly to the classroom situation and gives primacy to *experience*. It links to Schön's (1983) insights about the nature of professional practice, in particular how skilful practitioners learn on the spot, how they learn to cope with ambiguous and uncertain situations of their practice by developing, through their actions and through reflection on those actions, "a repertoire of expectations, images, and technique. [The practitioner] learns what to look for and to respond to what he finds" (Schön 1983, p. 60). Teaching viewed this way, leads to an emphasis in teacher education on "firsthand experience and interaction with peers and mentors about problematic situations", to quote Feiman-Nemser (1990, p. 222). Previously seen as a rather conservative orientation that did not speak to new psychological insights in the field, this conception of learning to teach has been on the rise for several years now. Referring to Schön (1983) and accounts by researchers like Russell and Munby (1992) and Zeihner and Liston (1987), Carter and Anders (1996) maintain that there is "an emergent cognizance of the essential role of teachers' reflective capacities of observation, analysis, interpretation, and decision making in the professional practice" (p. 562). New insights into apprenticeship learning (Lave and Wenger 1991) and situated cognition in the domain of mathematics, science, and technology (Hennessy 1993) may also have served to nurture and reshape this orientation toward a greater emphasis on *interactive processes* in learning to teach (Putnam and Borko 2000).

Coming to the *technological orientation*, learning to teach involves, following Feiman-Nemser (1990), "the acquisition of principles and practices derived from the scientific study of teaching. Competence is defined in terms of performance" (p. 223). However, when it comes to practical uses of this research-based knowledge, proponents of this view tend to divide. While some believe that prospective teachers should be *trained to*

use the knowledge effectively, others tend to think that it should be *taught as principles and procedures* to be used by teachers in making decisions and solving problems in school settings. Even this area of teacher education is, according to Carter and Anders (1996) undergoing substantial changes due to influences from the other orientations, including more emphasis on thinking and reflection.

The *personal orientation* places the teacher's own *personal development* at the centre of the teacher education program. Learning to teach, in this view, says Feiman-Nemser (1990), "is construed as a process of learning to understand, develop, and use oneself effectively ... [and the teacher educator's role should be that of] creating a supportive atmosphere in which preservice students feel safe to take risks and discover personal meaning" (p. 225). Carter and Anders (1996) consider this orientation as "the most vigorous line of work in teacher education today" (p. 560), work that pays particular attention to teachers' biographies and sees them as frames for teaching events. Referring to Connelly and Clandinin (1990) they also stress that, "For an individual teacher, theory and practice are integrated through her or his narrative unity of experience" (Carter and Anders 1996, p. 560). Although building on a long tradition,

... in the reemergence of this viewpoint ... emphasis is being placed on teachers' voice ... An issue in the discussion of voice is the extent to which the conventional language of educational research and teaching skill undermines the authentic expression by teachers (largely women) of their experiences and concerns and serves to subordinate teachers to policy and administrators (typically men). (p. 561)

Proponents for the *critical/social orientation* want us to take considerations on teaching and learning to teach beyond the classroom to remind us that our practices are affected by the *society* wherein we live. The teacher, in this view, is also a political activist (Feiman-Nemser 1990). Learning to teach would inevitably include discussions of political

issues and critical studies of such themes as language, history, culture, and power, eventually with a focus on how school organization and practices are shaped by external forces and cultural myths (Britzman 1986). Linked to such studies would be an emphasis on *teacher empowerment*, teachers' personal understandings of their situation and their own purposes and values (Carter and Anders 1996).

Table 4.1 is meant to give an overview of the orientations described by Feiman-Nemser (1990) and to capture the main differences between them with respect to the notion of learning to teach. In order to remind us of the fact that these orientations change with time I also include a row I call "New trends".

Orientation:	Academic	Practical	Technological	Personal	Critical/social
LTT emphasis:	Integrate academic knowledge	Learn from experience	Learn research based skills and procedures	Develop oneself	Engage in studies of language, culture and power.
New trends:	Focus on the learner	Apprentice learning	Reflection	Teacher's biographies	Reflection, empowerment, action research.

Table 4.1. Conceptual orientations in teacher preparation. LTT = learning to teach.

Studying table 4.1, one may be struck by the plurality of meaning related to learning to teach. Indeed, facing this plurality first time, in the beginning of my graduate studies in Canada, made me perplexed. Prior to my graduate studies at UBC, I had not been exploring the literature on learning to teach. I was, most of all, busy 'doing teaching'. Consequently, Feiman-Nemser's (1990) orientations came as a big surprise to me. Recovering from my surprise I began to figure out what orientation 'I belonged to'. Much to my surprise, I found that I could map myself as teacher educator on most if not all of them. In other words, there seemed to be 'elements' from most of these orientations in my way of thinking about my teaching. Facing this fact, I was not sure if I should see this as a good or bad news. Thinking

positively, I should be happy being so 'broad'. Thinking negatively, I should be miserable due to a lack of coherence in my thinking of teacher preparation. Going deeper into Feiman-Nemser's article made me relax, in particular when reading the following passage:

A plurality of orientations and approaches exists because people hold different expectations for schools and teachers and because, in any complex human endeavour, there are always more goals to strive for than one can achieve at the same time.
(p. 227)

So, the fact that I was holding so many beliefs about teacher education (without being aware of it!) was plausible given the *complexity* of my situation. Besides, Feiman-Nemser (1990) made it clear that the issue for me was not to *select* one of these orientations because:

... collectively they do not represent a set of equally valid alternatives from which to choose. Rather, they constitute a *source of ideas and practices to draw on in deliberating about how to prepare teachers in a particular context*. Each orientation highlights different issues that must be considered, but none of them offers a fully developed framework to guide program development. (p. 227; my emphasis)

However and also noted by Feiman-Nemser, teacher educators cannot swim in all these orientations:

Teacher educators cannot avoid making choices about *what to concentrate on*. Thus deliberation about worthwhile goals and appropriate means must be an ongoing activity in the teacher education community. (p. 227; my emphasis)

Making such choices, Feiman-Nemser continues:

... would be aided by a *conceptual framework* that identifies *central tasks* of teacher preparation, those *core activities* that logically and practically belong to the preservice phase of learning to teach. Examples of central tasks include helping teachers to

examine their preconceptions about teaching and learning; to learn about transforming subject-matter knowledge for purposes of teaching; and to develop a commitment to teach for all children. Such a framework could provide guidance to teacher educators in program development and evaluation by identifying issues or tasks that programs should address, whatever their orientations. In a field like teacher education, which has been shaped by external factors more than by a clear sense of *purpose*, this kind of conceptual clarity is essential. (p. 227; my emphases)

As said at the beginning, writing this chapter one of my goals was to figure out what should be my beliefs regarding teacher education and teacher learning. Following Feiman-Nemser, there is a big smorgasbord 'out there' that I may choose from. Before doing this, however, I should build a 'conceptual framework' that could guide my choices.

Now, *building such a framework* may not be an easy task to accomplish. First, the field is 'messy'. Secondly, it changes continuously. Thirdly, and maybe most importantly, it may be undergoing *deep* changes, signified to some degree by the 'new trends' row in table 4.1. To my understanding, these trends link, at least partially, to *new conceptions of learning* that do not fit particularly well with our (educators') traditional vocabulary. In particular, I am keeping in mind the *sociocultural* views that encourage us to take learning out of our heads and place it between us so that it becomes part of our social and cultural activities (e.g. Lave and Wenger 1991). We should face the fact, I argue, that underlying the diverse orientations Feiman-Nemser identified are *different world-views*. The practical orientation, for instance, is rooted in Schön's (1983) view that knowledge is something that practitioners may develop in their encounters with and conversations about practical issues. The personal orientation, at least as developed in the works of Clandinin and Connelly (e.g. 1990), sees teacher stories as a form of knowledge. Both these views contrast strongly with the epistemology underlying the technical orientation that wants us to think of knowledge as

principles and procedures created through academic research only and then *applied* by practitioners to solve practical problems.

On this background, working toward my stance as teacher educator I see more at stake than simply picking up good ideas ‘here’ and ‘there’. More fundamentally, I need to be clear as to how I should think of learning and knowledge. For example, would it be good for me to think of learning as social? I will return to this theme in a later section. Now I would like to turn to an issue that has been colouring strongly the literature on learning to teach and that many teacher educators see as particularly important. This is the issue of pre-service teacher’s ‘entering beliefs’. Referring to the last quote from Feiman-Nemser (1990) above, helping pre-service teachers examine their beliefs should be one of the central tasks of teacher education programs. Now we may wonder: what are those beliefs and why do people think they are so important?

The Role of Beliefs in Learning to Teach

A core idea of the constructivist movement in education is the idea that people do not see the world as it ‘is’ but rather as ‘they are’. Therefore, a student teacher entering a teacher education program will not necessarily learn ‘what is taught’ but rather build her own ideas *in accord with* the beliefs she is holding already. When teacher education is seen this way, student teachers’ entering beliefs become a plausible starting point for their teacher learning. In fact, many constructivist-oriented practitioners and scholars see it as one of the major goals of teacher education to help student teachers “transform [their] tacit or unexamined beliefs about teaching, learning, and the curriculum into objectively reasonable and evidentiary beliefs” to quote Richardson (1996, p. 105). Fenstermacher (1979) makes a similar claim. Following Wideen et al. (1998) one may even be tempted to think that this way of working with student teachers does hold some promises, at least relative to more traditional approaches. Reviewing the research literature in the field of learning to teach,

these authors found “very little evidence to support an approach to learning to teach which focuses primarily on the provision of propositional knowledge” (p. 160). On the other hand:

What emerged as a more productive approach in learning how to teach was the designing of programs *that built upon the beliefs of the beginning teachers*. In fact the most common recommendation made by researchers in the studies we reviewed was that having beginning teachers examine their prior beliefs was an essential first step in the process. From that point on, learning to teach became a process of negotiating a satisfying teaching role ... within a notion of good practice. At the core of this approach lies the epistemological stance that *learning how to teach is a deeply personal activity* in which the individual concerned has to deal with his or her prior beliefs in the light of expectations from a university, a school, and society, and in the context of teaching. (p. 160 – 161, my emphasis)

No doubt, a view close to the one portrayed in this excerpt guided my efforts when returning from Canada and trying to reconfigure my practice as a teacher educator. I highlight the part saying that, “*learning how to teach is a deeply personal activity*”. Establishing my new course, I was thinking in a similar way. As I saw it, helping my student teachers learn how to teach it would be a prime issue for me to enable them articulate and develop their entering beliefs. Indeed, this may explain the fact that I came up with the slogan ‘learning to teach from within’ that I mentioned in the previous chapter and will return to in the next chapter.

Many studies have examined programs that focus, in part, on the participants’ entering beliefs. Reviewing these studies and focusing on preservice students, Richardson (1996) found that they in general “exhibit optimism and confidence, public service orientation, and a general belief that experience is the best teacher” (p. 108). Besides and in a summary form:

- Preservice students' philosophies of teaching are *loosely formulated*, apparently due to their limited experiences from classrooms.

- They tend to carry with them *strong images of teachers*, positive as well as negative, and these images influence strongly how they approach their teacher education program, some of them holding the associated conception that they already knew how to teach.

- Many student teachers hold a *positivistic view of knowledge*: the teacher hands knowledge to students and learning involves memorizing the content.

Asking how these beliefs may relate to learning to teach, Richardson (1996) points to studies whose findings indicate the importance of understanding the students' points of view so that *effective communication* may result. Holt-Reynolds (1992) study of a content area reading course may serve as an example. In this course, the professor's constructivist view on learning contrasted strongly with the students' views that were more traditional. Analysing the interactions between the professor and the students, Holt-Reynolds found that the students did not change their beliefs even though the course was 'one, extended campaign for the adoption of student-centered, process-focused, constructivist practices in subject-matter classrooms' (Holt-Reynolds, 1992, p. 330). Why? The main reason, Holt-Reynolds holds, was that differing ideologies or assumptions were *not surfaced* so that each part "talked to the other as if there were not differences ... [and] neither side dealt with the argument presented by the other" (p. 341). Observations of this kind bring up questions of the *qualities* of the our create a 'wall' between us and our students by engaging in a 'private' (e.g. constructivist) language game whose 'rules' our students do not know? If we assume that our linguistic practices are shaped by our social practices and that our social practices and those of our students may differ substantially, it seems logical to expect that these two groups, on many occasions, do indeed speak different 'social languages' (Bakthin, see Wertsch 1991) even though the national language (e.g. English) is common to both parts. If this holds it seems

national language (e.g. English) is common to both parts. If this holds it seems reasonable to believe that our talks may not always be as effective as we might expect. If we do consider talk (conversation, dialogue) as an important educational tool, (e.g. for the purpose of helping our students' explore their entering beliefs), it might be wise for us to focus on our way of speaking and our students' ways of speaking and start asking if the two differ significantly and in a way that may hinder meaningful exchange of ideas. As I have noted earlier (chapter 1), 'linguistic deliberations' of this sort will be a recurrent theme in the chapters to come. This links to the fact that I am an Icelandic working in Iceland but doing my doctorate in Canada but also to the fact that I am (as an educator) serving different roles (teacher educator, faculty adviser, chemistry teacher, and researcher) that are associated with different social languages. These frequent 'journeys' of mine between different groups of people speaking different national and/or social languages have made me, it seems, more attuned to problems associated with the language but also aware of the possibility of that we might do well start thinking of 'language' as a 'learning tool' freely available for us to try out and to explore its usefulness.

Richardson (1996) notes that since the mid-1980s there has been a shift in research on teaching and teacher education "from a focus on teacher behaviour and skills to an emphasis on teacher thought processes" (p. 110), including an increasing interest in student teachers' beliefs and a growing number of studies addressing this issue. Surfacing from these studies, she tells, is "the greatest controversy in the teacher change literature" (p.110). To some researchers pre-service students' entering beliefs appear as very difficult or even impossible to change while others are more optimistic, claiming that carefully designed programs have indeed been helpful in this regard. Surveying the literature for the purpose of examining this question Richardson ends up with a contradictory picture: "The results are complex. Some programs effect change and other do not; some programs affect certain types of students and

not others; and some beliefs are more difficult to change than others” (p. 111). In main, it appears that change both in beliefs and practice may be easier with *in-service* teachers than with *preservice* teachers. At least is it so that it is easier to point to convincing results when working with the former than the latter. Richardson connects this fact to lack of *experience* on the part of student teachers:

The complications in preservice teacher education are the lack of practical knowledge on the part of the students and the difficulty, if not impossibility, in helping students to tie their beliefs to teaching practices. The beliefs they hold when they enter their program have not been tested in the classroom, and they are not aware of the role that these beliefs will take in their actions as teachers. Perceived changes in preservice students’ beliefs and conceptions may be transitory or artificial and turn out to drive their actions as when they become teachers. (p. 113)

In a concluding remark in her review, Richardson makes the point that “preservice teacher education seems to be a *weak interaction* [because it is] sandwiched between two powerful forces – previous life history, particularly that related to being a student, and classroom experience as a student teacher and teacher” (p. 113; my emphasis).

So, it appears that Richardson, on the basis of her review of research into attitudes and beliefs in learning to teach, does not leave us (teacher educators) with much hope if our intent is to affect how our students see their roles as teachers and how they think of teaching and related terms. Such tasks appear as a prime issue in programs that subscribe to constructivist philosophy and reflective practices. It so happens that most of the studies on student teachers’ beliefs involve such programs and that many of these have been specially designed to *affect* changes in students’ beliefs. Disappointingly (for the teacher educators involved), the harvest seems poor even in these cases. On the whole, it appears that changing students’ beliefs is a formidable task. Even when educators think changes have been promoted they may turn out

to be transitory and become quickly erased when the student begins to teach in a real school setting (Wideen et al. 1998). However and as noted by Richardson (1996) this does not necessarily indicate that our programs are *useless*. Several studies point to the contrary, Richardson asserts. Besides there are studies indicting that there may be a 'lag time' involved before conceptions acquired in preservice education begin to make impact on practice. In addition, there are a number of studies that point to changes in conceptions and beliefs because of *specific* teacher education classes. However, and back to the bad news, "these changes do not appear to have impact on teaching practice in as powerful a way as life experiences and teaching experience, which leads, perhaps, to the scepticism in the possibilities of changing beliefs expressed by Ball (1989) and McDermid (1990)" (p. 113).

In the end, we are left with the feeling that we (teacher educators) should not be too optimistic when considering the possibilities of changing our students' beliefs. Largely it appears that powerful forces hold us back and limit our efforts, for example the life histories of our students and the culture of the school and particularities of the classroom where they begin to teach. If this holds one might begin to wonder if time might be ripe to start thinking of teacher education in entirely new terms. The so-called 'situative perspective' might be taken as a sign of such rethinking.

The Situative Perspective

In a recent article in *Educational Researcher*, Putnam and Borko (2000) explore research on teacher learning guided by what they call 'the situative perspective'. This term, originally suggested by Greeno, Collins, and Resnick (1996), is meant to weave together three themes that have recently been arriving at the scene of educational research, namely cognition as situated, social, and distributed. Seeing cognition as situated attacks the common notion that learning and knowing are confined to the individual mind and independent of context and intention. Situative theorists posit, instead, that 'physical and social context in

which the activity takes place are an integral part of the activity, and that the activity is an integral part of the learning that takes place within it' (p. 4). Emphasizing cognition as social means recognizing that "the role of others in the learning process goes beyond providing stimulation and encouragement for individual construction of knowledge ... Rather, *interactions with people in one's environment are major determinants of both what is learned and how learning takes place*" (p. 5, my emphasis). For some scholars this view implies a view of learning as coming to know how to *participate* in the discourse and practices of a particular community. The third theme, cognition as distributed, wants us to see knowing and learning as 'stretched over' the group as well as the various artefacts of the situation such as physical and symbolic tools, an example being a group of navigators who, through interactions with each other and with their instruments, manage to pilot their ship successfully (Hutchins, 1990). An underlying concern, it seems to me, in all these themes (the situative perspective), is how 'inauthentic' typical school settings usually are. Pea (1993), for example, stressed that, "Socially scaffolding and externally mediated, artefact-supported cognition is so predominant in out-of-school settings that its disavowal in the classroom is detrimental to the transfer of learning beyond the classroom" (quoted in Putnam and Borko 2000, p. 5).

How would this perspective speak to the notion of learning to teach? At first glance, it would direct our attention to the classroom and the school. If learning is so dependent on physical, social, and cultural context as the situative perspective holds, prospective teachers should learn on the spot, that is, in actual classrooms. Now, as we all know, student teaching and related school experiences have emerged as a widely accepted component of teacher education (Guyton and McIntyre 1990). Facing this, one might wonder if the situative perspective has something to *add*. I think so. It is not simply so that it directs our attention to student teaching. It requires us to *rethink* it. It is an invitation to look at it with fresh eyes. If

we are imaginative enough, a host of things, people as well as physical and cultural artefacts, may become involved in the learning process; even to the degree that it may be difficult for us to decide 'who is doing the learning'.

The best thing with the situative perspective, I think, is that it challenges our deeply held but seldom aired assumptions about learning. If we dare 'face them' it may compel us (teacher educators) start exploring new ways of speaking about learning to teach. Following Rorty (1989), how we speak of things is simply a matter of conventions. We have, in Rorty's view, simply come to speak the way we do by sheer contingency. Linguistic practices, he holds, are as much matters of coincidence as are the species of organisms now living on Earth. Both are a matter of evolution and evolution is blind. Grim as this may sound we should not forget that, "genuine novelty can, after all, occur in a world of blind, contingent, mechanical forces ... [for example a cosmic ray that, by striking a DNA, sends] things off in the direction of the orchids ... [that] when their times came, were no less novel for the sheer contingency of this necessary condition of their existence" (Rorty 1999, p. 17). The value, again, of the situative perspective is, I argue, most of all that it may lead up to new ways of speaking and *thereby* to new forms of teaching practices as well as new forms of educational research. Guided by the views subsumed under the situative perspective we will most likely start seeing things that *were not there before*. Not that they were hidden but because we had not created them yet. This is, of course, the constructivist tenet. Mediated by this perspective and willing to give it time to become part of our ways of speaking we may start *see things new* because things in the world are a function of our linguistic habits. So says Rortyan pragmatism.

Let me provide you with an example from the literature that speaks to the words above. Putnam and Borko (2000), in the article referred to above on teacher learning, tell of Ball (1997) teaching children and finding that:

it was impossible to determine how, and the extent to which the understandings and insights expressed by children during interactions with her were supported by her implicit (unconscious) guiding and structuring ...[Facing this she suggested that] we must *recast the question of what children 'really know', asking instead what they can do and how they think in particular contexts* (Putnam and Borko 2000, p. 13, my emphasis).

To my pragmatic reading, Ball was in the process of *redescribing* her children. She could do this because (a) she *recognized* a particular recurring situation as a problem ("Who is doing the knowing?"), and (b) she was *knowledgeable enough* to start speaking of the problem in a new way, that is, as a *contextual* issue. Speaking more broadly, she was moving from a dualistic (Cartesian) toward an anti-dualistic (Deweyan) way of thinking about her children and what it means to know and learn. Holding on to this new way of speaking she will, I anticipate, figure out new forms of working with her students and these may, in turn, cause her to start see still new possibilities. New ways of speaking point to or may point to new practices. That is the key.

If it is so that our thoughts and actions (or thought-actions) are dependent on the context as the situative perspective holds we might do well beginning to ask what this implies for our teacher educator programs. Taking seriously the idea that cognition and learning may be spoken of contextual (or situated or social), what kinds of programs might follow?

One obvious possibility would be to simply turn things around and let the students begin teaching right away and then help them reconstruct their experiences. Actually, such programs are already exits (Korthagen and Keesels 1999; Munby and Russel 1998; Northfield 1998). Let us have a look into one of them.

'A theory With a Small t'

The title comes from notes I took while listening to Fred Korthagen explaining at AERA 2001 in Seattle what he and his colleagues at Utrecht University in Amsterdam call 'the realistic approach' to teacher education. This is a concept that he and Jos Kessels explain in a recent article in *Educational Researcher* (Korthagen and Kessels, 1999) and in which the phrase 'theory with a small t' also appears. Referring to Aristotle's concepts of *episteme* and *phronesis* the authors explain:

If a teacher educator offers epistemic knowledge, he or she uses general conceptions, applicable to a wide variety of situations; this knowledge is based on research and can be characterized as 'objective' theory, theory with a big T. This is the type of knowledge that plays a central role in the traditional approach and that should certainly not be left out of teacher education programs: Now and then student teachers should be helped to see the larger picture of educational knowledge. More often, however, they need knowledge that is situation specific and related to the context in which they meet a problem and develop a need or concern, *knowledge that brings their already existing, subjective perception of personally relevant classroom situation one step further*. This type of knowledge is called phronesis. We would also call it 'theory with a small t'. (p. 7; my emphasis)

The quote points to a key assumption of the realist model these authors advocate: Cognition is contextual. The student teacher 'reads' the classroom in terms of the concepts *she* brings to it. The role of the teacher educator is to help her *see it differently*, bring her current perception 'one step further'. Learning to teach in this model is seen as a process starting from concrete teaching-learning situation in which the student teacher is situated and helped to develop her perception of it and act accordingly. With the authors' own words, "the emphasis on phronesis is mostly on perceiving more in a particular situation and finding a

helpful course of action on the basis of strengthened awareness” (p. 7). Korthagen and Kessels see themselves building on the work of educators who highlight reflective teaching and researchers addressing teacher’s autonomy and practical knowledge. However, they also draw upon theories on mathematics teaching and learning that assume students can and should themselves develop mathematical notions through interactions with practical experiences and problems (Freudenthal, 1991). Besides, developing their model, Korthagen and Kessels make use of the notion of *Gestalt* to address the *holistic* feature of the typical ‘immediate teaching situation’ (p. 8) in which the teacher apparently (and mostly tacitly, they hold) weaves together a host of feelings, prior experiences, values, and conceptions in a ‘split second response’ to a student’s question or answer. Bringing this notion of Gestalt into a teacher education context the goal now becomes to help the student teacher develop ‘adequate’ Gestalts that - with reflection – may develop further and become a network of relations (‘schema’ or a ‘theory with a little t’) that enable the student to frame her teaching experiences in new ways. At Utrecht University in Netherlands where these authors work, the student teacher begins her fieldwork by teaching *one* student. The episode is audio taped and the student teacher required to analyze it. As a rule, she then notices a *communication gap* between her and the pupil. “At that point, new Gestalts are formed – an auspicious moment for the teacher educator to ask further questions and focus the student teacher’s attentions on important details of the interaction with his or her student” (p. 13). Albeit focusing on *phronesis* in this approach, *episteme* still plays an important part but is now seen as something coming later and eventually ‘feeding’ *phronesis* when it has reached certain stability. Indeed, the authors hold that theoretical notions like constructivism may be *counterproductive* if introduced too early because “the student teacher [may get] blocked by theoretical guidelines that he or she cannot translate into practice” (p. 13). Very interesting, indeed.

I have spent considerable space on Korthagen and Kessels's (1999) article because I find it interesting. What I find particularly interesting is its *descriptive richness*, including details both of the theoretical aspect and practical things. An idea comes of age and attempts are made to inquire into its *practical consequences*. The article leaves the reader with a holistic picture that points to new ways of speaking and acting within the domain of teacher education.

Epilogue

My aim in writing this chapter was exploring 'my look' with regard to beliefs about teacher education and thus continuing the exploration carried out in the previous chapter. In that chapter, I tried to involve you in my journey towards pragmatism, the vantage point that encourages us (inquirers) to think of inquiry as a *creative* act. In *this* chapter, I have been examining the stories of teacher education that captured my attention while studying in Canada. In doing this, I have been guided by the question how I wanted to think of teacher education but also by the hope that these stories might help me deal with my records in the imaginative way I am after. Done with this chapter, I face the fact that I have most of all been drawn to stories of teacher education that pose pre-service teachers as being in the process of 'crafting their identities' (Lave 1996) in a complex interplay with various players and settings and in which learning to teach is pictured as social, situated and/or contextual. Following Lave, I see these notions as an effort to break out of narrow conceptions that limit 'learning' to processes taking place in the people's heads. Lave (1996) encourages us to think of learning as *participatory*, more precisely as "an aspect of participation in socially situated practices" (p. 150). Bringing up memories from my first years as a chemistry teacher described to some extent in chapter 7, I feel the power of this perspective. Bringing up pictures of my student teachers trying to gain ground in school settings (chapter 8) gives it even more weight. In both cases, terms like 'culture' and 'language' demand being linked in

some way to the term 'learning to teach'. Faithful to my neopragmatic stance, I am not saying that making such links might bring us closer to how things 'really' are. Rather, I am expressing the hope that such links might lead to better ways of speaking that in turn may help us develop our programs. With this, I invite you to Iceland and my attempts to rebuild my practice as teacher educator with the new terms and stories I was carrying with me from Canada.

Back Home

This chapter explores the issue of language and the issue of planning a course. The scenario is my returning to Iceland from my graduate studies in Canada. I am a teacher educator student. I am learning how to teach teachers. I have been at campus and been exposed to a variety of ideas addressing the issue of learning to teach, promising stories that I am now eager to make a part of 'my text', my teacher educator life. Now, it is time to act, start teaching again.

Right at the beginning I faced a problem: The ideas I am carrying with me behaved like they were butterflies. They liked to fly around. This made it difficult for me to see what I was indeed carrying with me from Canada and, therefore, to make plans for the new course that I was trying to establish and that I wanted to carry my ideas one step further. Fortunately, I got help in the form of a wonderful book, *The Courage to Teach. Exploring the Inner Landscape of a Teacher's Life*, written by Parker J. Palmer (1998). Teaching, he said to me, is a question of *who you are*. Curiously, with these words said my ideas stopped behaving like they were butterflies and began to arrange neatly into a set of ten statements that I later learned to speak of as 'My Pedagogic Creed', honouring, of course, my good guide, John Dewey. On the top of that list was a statement saying: "Good teaching comes from within, from the identity and integrity of the teacher".

But there was another problem. Plausibly, I turned to my mother tongue, that is, Icelandic, once home again. In doing this, however, my good ideas from Canada tended to disappear from my consciousness or at least become not clearly visible. As a result, I found it difficult to explain to colleagues and friends what I was carrying with me from Canada and, also, what my inquiry was all about.

A dissenter might ask: Why bring up this issue of language? Is not your thesis a study of the process of learning to teach? You are not studying language, are you?

My answer would be something like the following:

I sense that teacher educators might do well attending carefully to the issue of language. My own experiences from learning how to teach teachers indicate to me that one way of unpacking the phrase learning to teach would be to think of it as learning to speak in new ways or develop one's vocabulary. Nobody would deny that language somehow penetrates every corner of our existence. But most people tend to think of language as a sort of neutral medium that carries our thoughts. Rorty, on the other hand, wants us to think of it as a *social tool* that helps us coordinate our actions, create new worlds and recreate our lives. It strikes me as a possibility that if we frame language this way we might start seeing it as integral to most learning processes, including the process of learning to teach, in particular if we think of that process as personal development and/or as social becoming. Accordingly, I find it worth exploring the language issue, my personal experiences in particular.

Many student teachers experience severe difficulties adapting to the school situation, that is, when they move from the terrain of campus to the terrain of the school and the classroom (Wideen et al. 1998). These difficulties are sometimes spoken of as a 'gap between theory and practice'. Thus, Erickson et al. (1994) speak of student teachers under such circumstances as attempting to 'bridge the gap between the theoretical knowledge and perspectives they are taught in their university programme and the 'practical' knowledge and strategies they experience in their school-based practice settings' (p. 586 -7). These authors add a moment later that, 'This persistent dichotomy between the role of theory and practice might be said to define the boundaries between the school and university cultures' (p. 587). The story I tell below may be thought of as a *case* speaking to this 'gap' between different cultures within teacher education programs. I am a student teacher educator trying to adapt

my new ideas from campus (UBC) to the demands of my practical situation. The first task meeting me is planning things in accord with my new mindset, that is making public my new beliefs, my new rules of action.

Worries

It is August 24th 1999 and late summer in Iceland. Our imaginary video camera takes us to a particular place in Reykjavik, the capital. The place is a little office that the author of this study has installed in the backyard-end of a little building that is called 'garage' but is not used as such. The office takes approximately one third of the total space of the building, the rest belonging to the authors' wife who is an artist and an art teacher and therefore needs more space than he does. The man in view is sitting in front of his computer which is located on a two meter long desk that goes from a bookshelf at one side almost to a door on the other side, a door that opens to the backyard with grass, flowers and trees blooming on a beautiful August day. A window that spans about three fourths of the wall in front of the man at the computer offers him a view of a part of the backyard. The man at the computer has recently returned from Vancouver, Canada, where he had been studying for two years – at the University of British Columbia, Faculty of Education, Department of Curriculum Studies. That man in view, you might suspect, is me, the author of this study, secondary school chemistry teacher, teacher educator, and - most recently – a doctoral student.

I look worried. Why?

If I remember right, what made me worry was a feeling that I might be trying to do too many things simultaneously and therefore be unable to do each of them to my satisfaction. Serving several jobs was nothing new to me. However, facing the fact that I had become a doctoral student and that my task would be to examine closely my own practice made me anxious. For how can one examine something *closely* when one is so busy?

Please lean over my shoulder and see what I am writing:

Þá er ballið að byrja fyrir alvöru. Kennsla að hefjast á báðum vígstöðvum. Kennsla í MS byrjar á föstudaginn. Kennslan í HÍ byrjar föstudaginn, 3. september. Mér finnst ég vera í lausu lofti. Ég hef sáralítið hugsað um þessa hluti síðan ég kom heim. Hef lagt á það áherslu að taka lífinu með ró. Reyna að slaka vel á. Safna kröftum. Ljóst að ég þarf að sinna þremur verkefnum.

Of course, you did not understand. This is Icelandic, my native language. I simply wanted to show you how it looks like and, simultaneously, remind you of my 'moving-across-languages' situation. Allow me to teach you a few words from the quote. 'Ballið' in the first sentence means 'the dance'. 'Vígstöðum' in the second means 'battlefields'. 'Mér finnst ég vera í lausu lofti' means literally 'I feel like floating in the air' but might better be translated as 'I feel like having no ground' or something like that. 'The dance', 'battlefield', 'floating in the air'. What is going on? Sounds chaotic! Here is my translation in whole:

The dance is about to begin. Soon I will be teaching in both battlefields. Teaching in MS [that's a short name for the secondary school where I teach chemistry:

'Menntaskólinn við Sund'] starts next Friday. Teaching in HÍ [a short name for the University of Iceland, i.e. Háskóli Íslands] will start Friday, September 3rd. I feel like floating in the air. Have not thought so much about these things since I came back.

Have concentrated on taking it easy. Trying to relax. Build up my energy stores.

Obviously, I need to address the following tasks:

And then I continue elaborating on those tasks, that is my two jobs and the newest element of my professional life, that is my doctoral inquiry. Speaking of my school I write:

I will be teaching three classes, two from grade 11 and one from grade 13 (science line). What I will be doing and how is not clear by now. No doubt though I would like to try out some new things.

Attending to my teaching at the university, the new course, I write:

I need to make a plan during the next days. There I will try to incorporate some ideas from UBC. The emphasis might be on the teaching and learning. This would be the 'great thing' (Palmer, 1998).

Note that Palmer is with me already, helping me see things properly. By 'great things' he is referring to 'the subjects around which the circle of seekers have always gathered' ...[such as] the genes and ecosystems of biology, the symbols and referents of philosophy and theology ... [and] the shapes and colours of music and art, (p. 107). The 'great thing' in my course, I had decided, would become the teaching-learning relationship. Now I envisioned my students and me sitting around this thing inquiring together into its mysteries. A bit romantic, maybe, but possibly a good way of speaking.

The third and last issue on my agenda this morning is my planned thesis. Coming to this item, I ask, 'Where am I?' responding, 'It is clear that I need to elaborate on the research idea, the focus, and the research questions'.

That's it. Now at least you should have an idea of 'my situation' in August 1999 when I was beginning to readapt to the practicalities of my two jobs and also wondering how I should inquire into those. I will return to myself in front of the computer that morning in a few pages. Meanwhile I want to bring your attention to the question heading the following section:

What Did I Learn at UBC?

A plausible question for me to ask at this point, that is, when back home and about to start teaching again. Most student teachers would do the same, I suppose, that is, look back on their studies and wonder what they had been learning. After all, we do not go to such

programs simply to amuse ourselves, do we? We go there *in order to learn*. Back to our practises or beginning to teach we, of course, ask: What did I learn?

There is an additional reason for me to ask the way I do. Back in Iceland I saw it as my task to establish a *good learning environment* for my student teachers. They should be 'learning well'. But what was I indicating when speaking this way? What does 'learning well' mean in a context of a teacher education program? Studying at UBC I was not enrolling in a teacher educator program. I was a graduate student. However and no doubt, I was learning. Moreover, taking my courses, I felt I was experiencing things that I would like to see as parts of my course in Iceland, for example the thing we refer to by the term 'reflective practices'.

Therefore, I think it is good to ask: What did I learn at UBC?

Learning is and has always been a sort of 'problem child' in education. We (educators) teach and we may do so with good intentions. However, when it comes to the other end, 'the learning outcome', we tend to become hesitant. In some cases, for example when the teaching revolves around a particular *discipline*, chemistry for example, we may feel on a secure ground. We give a test, the students answer our questions, and we judge their answers and give them marks. Over and done! A procedure, a game has been followed from a to z and all stakeholders are satisfied (except maybe some student that feel their mark is too low). No more questions, please! Quality of learning? Are you implying that ... ?

This is, in a nutshell, the main story of learning in our Western societies: Learning is over when the test is over and the marks handed out. This relates to what Bruner (1996) sees as the dominant model of learner's minds, namely one that portrays them as receptacles waiting to be filled. Bruner claims that, "Its principal appeal is that it purports to offer a clear specification of just what it is that is to be learned, and equally questionable, that it suggests standards for assessing its achievement" (p. 55).

Should I think of my learning at UBC this way? Would it be *useful* for me to describe my learning there as the 'acquisition of propositional knowledge' as the dominant model of mind suggests? Was I basically there (at UBC) to learn and to remember facts, principles appropriate for the education of student teachers? Did I bring with me home piles of notebooks filled with propositional knowledge from lectures in the courses I had been taken?

No, as a matter of fact, I did not. There were few, if any, lectures in these courses. Most of the time we (the students and the teachers) were busy conversing, reflecting on things, and sharing ideas. Accordingly, I did not take many notes. I was listening and speaking and reading and writing assignments. Actually, speaking about written things, this is what I brought home: *assignments*, lots of assignments that I did in my courses. Why we were doing so many assignments? To learn to *think*, I assume. In these courses (or most of them) we may have been closer to the model of learner's minds that Bruner speaks of as "Seeing [students]¹ as *thinkers*: The development of intersubjective interchange" (p. 56).

From now on I began to understand why it had been difficult to 'see' the things I had been learning while studying at UBC. *They were 'invisible'*. They were not 'clearly distinct ideas' but rather 'new ways of thinking' or a 'new mindset' of mine. Thinking of the assignments I had shelved in my garage-office I began to see them as signposts telling me of my inner journey towards new heights in my 'thinking powers'.

However, there was still a problem. Good as it was to have become a better thinker, I still needed some *content* for my forthcoming course! Thinking deeply (with my new powers!) I sensed strongly that I was carrying something with me from Canada that could be spoken of or clearly related to the word 'content'.

Gradually they surfaced. The *stories*, I mean! The new stories of learning to teach! How could I forget? Stories from Feiman-Nemser (1990), Korthagan and Kessels (1998),

¹ Quoting Bruner here I allowed myself substituting the word 'children' with 'students'.

Putman and Borko (2000), and so forth (chapter 4). Besides, here were all the 'ideas' I thought I had lost sight of, for example the idea of 'learning to teach' itself, the idea of 'reflective practice', of 'inquiry', of 'situated learning', and so on. Good that I found them again. Now I could go on planning my course. What a relief!

And I turned to work again and, by the same token, to my *native tongue*, Icelandic. And then it happened again. I lost sight of them! As soon as I began to use Icelandic, these precious 'ideas' from Canada seemed to hide themselves. It was like they jumped out of my consciousness or did not want to come 'up there' as soon as I began to use my native language.

Strange, was it not?

Time was ripe to consult my good guide Rorty. The following conversation took place:

I: What is happening?

R: What confuses you is that you take ideas to be pre-linguistic entities?

I: What? Pre ... what?

R: Pre-linguistic entities. Our culture predisposes us to think that 'ideas' exist independent of and prior to words. We pragmatists reject that understanding.

I: I see, but ...

R: You are working across languages, right?

I: Right.

R: Fine. Try think of it this way: While you were in Canada you began to collect new words and use them when writing, for example about your past teaching in Iceland.
Right?

I: Right!

R: Do you remember what happened?

I: Yes, my past began to appear to me in new ways. It was strange!

R: And what does that mean to you?

I: Frankly, I am not sure ... that words can do magic? (I smile.)

R: Good, I think that you are on the right track. Let me put things straight. While you were studying in Canada, you managed to build a new *English* personal vocabulary that allowed you to link words together in ways new to you. Following the tradition you referred to those assemblies of words as 'ideas'.

I: I follow you.

R: Returning to Iceland, you felt you were carrying with you many good ideas.

I: Yes!

R: In fact, you were only carrying with you some *English* words that you had picked up and learned to relate in particular ways, for example putting the words 'teaching', 'to', and 'teach' together to make the phrase 'learning to teach'.

I: I see.

R: With time and by exploring the vocabularies of various authors you collected more and more words and learned many new ways of putting them together. In the end, when you left for Iceland, you had managed to build a whole network of English words relevant for your field of inquiry.

I: And that is why I felt I had been learning so much?

R: Exactly. Do you see now why you felt your mother tongue was making life hard for you?

I: Yes, I think so. All the *Icelandic* vocabulary work remained to be done!

R: You are learning quickly, my friend. Back in Iceland, your *Icelandic* vocabulary had not changed substantially since you left for Canada two years earlier. All the time you were studying in Canada, you were doing things of your studies with *English* words – right?

I: Right.

R: So, now it seems that we are approaching a solution to your problem or, at least, an acceptable description: You lost sight of your ‘ideas’ because there were never any ‘ideas’ in the first place but simply English words and particular learned ways of putting them together.

I: So, even though I was translating word and word ...

R: Yes, even though you were translating word and word. You see, moving ideas across cultures is more a matter of establishing a comparable linguistic practice in the ‘receiving’ culture than simply ‘translating’ words. The words that you may come up with must ‘link well’ both internally as well as to other homely words so that the new

ways of speaking you are trying to develop sound well to the culturally formed ear of your countrymen and makes at least some of them think that 'this isn't so bad idea' or something like that. You should look to it, also, that habits of speaking comparable to what you were exercising in Canada were not being established in Iceland prior to your arrival. I mean, you were importing something *new*, right?

I: I think so.

R: Therefore we may say that you were *inventing* or trying to invent ways of speaking within the domain of your native language, ways not familiar to your countrymen.

I: I think it is fair to say so, yes.

R: And it is always harder to build *new* linguistic practices than simply add something to those that already exist, what? Attending a house, say of a friend, you feel better hanging your cloths on readymade hooks instead of being required to take hooks with you and begin the visit by fasten them to a wall somewhere in that house so that you may hang up your cloths.

I : I would think so, *yes!!*

Note my strong 'yes!!' at the end of the conversation with Rorty. The reason why I responded with such eager relates to the fact that listening to Rorty I had come to think of my early experiences with constructivism (chapter 2). Meeting this notion in the late 1980s about to start teaching teacher it struck me that this was a new notion in Icelandic context, at least within the domain of science education. Plausibly, there was no Icelandic name for it. Facing this I made an Icelandic word for the English 'constructivism', calling it 'hugsmíðahyggja' (from *hugur* = mind, *smíða* = construct, and *hyggja* = 'ism'). Nice as this word may be (not

everybody agrees on that) and beautiful (in my opinion) the *concept* it is referring to, it took years for it to come into *common use* in teacher education institutions in Iceland. Indeed, returning to Iceland in 1999 from my studies in Canada, I was surprised to notice that it had become a frequently used term in the social interactions of at least some of the staff at the Icelandic University of Education where I had got a part-time position. I could not avoid saying to myself, "Oh, it has taken that long".

What I am hinting at in the paragraph above and by that imaginary conversation with Rorty is that we might do well *thinking carefully* about the issue of language and how it might be related to the issue of learning, including learning to teach. It appears to me that words affect our ways of thinking more than most of us suspect. We tend to think that we are 'playing' with them. Sometimes we certainly do, for instance, when writing poems. However, it could well be the case that most of the time language is playing with us. Vygotsky thought of language development as an 'internalisation' of social speech. Words, he contended, are the very tools of what we refer to as 'thinking' (Hodson and Hodson 1998).

Back in Iceland I noticed much to my surprise and somewhat to my horror, that I was almost unable to speak of things I had been developing in Canada. Being asked, for example, what I was doing for research, I found myself caught in difficulties articulating things sensibly. I simply could not tell properly (in Icelandic) what I had been doing, what ideas I had become drawn to and so forth. Bringing up this issue with trusted colleagues that had experienced this 'moving between cultures with ideas' I was relieved to hear that I was not alone in this regard. Several of my professional friends had experienced the same and they told me that it had taken them long time, up to a year, before they felt comfortably speaking, say of their research ideas, in Icelandic.

Let me provide an example. Returning to Iceland I was bringing with me the phrase 'learning to teach' that I had become fond of because it had made me more attentive to the

learning aspect of teacher education and compelled me to think of it as a long-term process. Sensing that this phrase might be the flag of my new pedagogy, I felt I should translate the term. So I did and the result was the Icelandic counterpart 'að læra að kenna'. Now, while the English version may 'roll easily on the tongue' as say Feiman-Nemser and Remillard (1996), its Icelandic counterpart does not. Not that it *hurts* the 'Icelandic ear'. Rather, it *irritates* it. Apparently words and phrases must *sound* 'right' in order to become acceptable to our 'culturally formed' ear. Note that the word 'að' (corresponding to the English infinitive particle 'to' as in 'to read') repeats itself in the phrase 'að læra að kenna'. This, I think, gives the phrase a somewhat awkward sound that does not make it particularly 'attractive' to potential users.

However, we should not forget that words or phrases seldom come to us as lonely wanderers. Usually they come to us as parts of particular vocabularies or language games (Rorty 1989). Reading the literature on research into learning to teach we see that this term is most often tied to a constructivist vocabulary. Thus, Feiman-Nemer (1996) emphasises that this phrase is "not synonymous with teacher education ... [and that] Teacher educators intervene in a process that begins long before teachers take their first education course and that continues afterward on the job..." (p. 64-65). Reading further, one meets terms like 'entering beliefs', 'conceptual change', and 'situated learning' and one senses that one is travelling within a constructivist vocabulary.

My point is this: Returning to Iceland with my new 'treasures' from Canada I was not only facing the 'problem of good translation' but also that vocabularies of the type I was developing had not come of age in my country or, at least, not significantly. The 'hooks' Rorty talks about in the imaginary conversation point to this problem. Rorty understood my problem when saying that the task I tended to speak of as 'importing new ideas' might be better spoken of as the problem of 'building new linguistic practices'.

Following this lead, I feel justified to say that it was not only my mother tongue that was making life difficult for me but also, and no less, the fact that language games analogous to those I had been learning to play in Canada were still lacking or immature in Iceland at the time point of my return. There were no 'hooks'. Accordingly (if I wanted to carry things on), my task would be to *make hooks*, for example by getting some people to start speaking in new ways analogous to the English counterparts that I had found so promising. In fact, this is what I tried even though I did not learn to speak of it as a vocabulary thing until a year or two later. I am keeping in mind the course that I built when I came back from Canada and that I was busy planning when we left me sitting in front of my computer that beautiful August day in 1999. We will go back to that place and that time in a short while. Before doing so, I would like to tie things of this section together within a Rortyan frame.

Rorty suggests that we should rather speak of 'words' than 'ideas', for example in the way suggested by the following excerpt:

All human beings carry about a set of words which they employ to justify their actions, their beliefs, and their lives. These are the words in which we formulate praise of our friends and contempt of our enemies, our long-term projects, our deepest self-doubts and our highest hopes. They are the words in which we tell, sometimes prospectively and sometimes retrospectively, the story of our lives. (Rorty 1989, p. 73)

Rorty calls these words a person's "final vocabulary", explaining:

It is 'final' in the sense that if doubt is cast on the worth of these words, their user has no noncircular argumentative recourse. Those words are as far as he can go with language; beyond them there is only helpless passivity or a resort to force. (p. 73)

Rorty adds that a small part of this vocabulary is made up of "thin, flexible, and ubiquitous terms" such as 'true' and 'good' while the larger part "contains thicker, more

rigid, and more parochial terms' like 'Christ', 'professional standards', 'kindness', and 'creative'. The latter 'do most of the work" (p.73).

In my reading of Rorty, a 'final vocabulary'² is not simply a collection of words. It is also a 'power station'. Words *do* work, in particular the 'thick terms'. This relates to Rorty's notion of knowledge. Knowledge for him means power. "[A] claim to know X is a claim to be able *to do something with or to* X, to put X into a relation with something else" (Rorty, 1999, p. 50, my emphasis). In Rorty's version of pragmatism then, the distinction between *knowing* things and *using* them breaks down. Knowing a thing does not mean knowing 'how it is' but the ability to deal with the thing in some ways.

Speaking in Rortyan terms about my learning experiences at UBC I can say that I certainly expanded my final vocabulary during the time I was there. Reasonably, these were *English* words, mostly of the type that Rorty refers to as 'thick terms'. In my case there were terms like 'social constructivism', 'the teacher as researcher', 'the reflective practitioner', 'situated learning', and 'learning to teach'. In retrospect, it appears to me that these thick terms were doing particularly good work for me. Once in my personal vocabulary they started to rearrange part of it so that, when the work was over, a new web of relations had been created with the result that I tended to speak about my practice in a way that was new to me.

As you may have anticipated 'these happenings' were parts of what I called 'my epistemological transformation' in the previous chapter. Rorty prefers to speak of such issues as *redescriptions*. Reading books (or articles) we are looking into other people's vocabularies. If we like the terms these folks are using we may start experimenting with them, trying them out in our own projects. In the process, we may:

² I often use the term 'personal vocabulary' instead of 'final vocabulary'.

redescribe ourselves, our situation, our past, in those terms and compare the results with alternative redescrptions which use the vocabularies of alternative figures. We ironists hope, by these continual redescrptions, to make the best selves for ourselves that we can. (Rorty 1989, p. 80)

Note the word 'ironists' in the passage. For Rorty, an 'ironist' is someone who fulfils three conditions:

[1] ...has radical and continuing doubts about the final vocabulary she currently uses ...

[2] realizes that argument phrased in her present vocabulary can neither underwrite

nor dissolve these doubts ...[and 3] insofar as she philosophizes about her situation,

she does not think that her vocabulary is closer to reality than others.

(Rorty 1989, p. 73)

A moment later, Rorty adds that ironists may be characterized as 'meta-stable' because they are:

never quite able to take themselves seriously because always aware that new terms in

which they describe themselves are subject to change, always aware of the

contingency and fragility of their final vocabularies, and thus of their selves (p. 74).

I would not reject being labelled 'ironist' in this Rortyan sense. In fact, and as you may have become aware of already, I do consider this thesis as an attempt to redescribe myself as teacher educator or, to paraphrase Rorty above, as an attempt "to make the best self for myself that I can".

The picture just provided of my learning at UBC might be labelled as a "linguistic" account of learning. I am, as other human beings, a language user. Words are among the tools that help me deal with my projects. A screwdriver helps me fasten a screw. Words help me deal with my tasks as a teacher and teacher educator, for example building beliefs, making

plans, and describing what happens subsequently. Just as some screwdrivers work better with certain types of screws, so do certain words serve me better than others when coping with my projects. The term “teacher education” now appears to me as rather ‘powerless’ compared to the term “learning to teach”. The latter, as soon as it had found a niche in my personal vocabulary, started immediately to reconfigure parts of it. The result: I began to speak and write in new ways about my practice as a teacher educator; and things I did in the past came to me dressed in new words. With time and more readings, my personal vocabulary continued to expand and rearrange. As I told earlier, doing coursework at UBC, I was always looking back to Iceland and my prior teaching practices there. I guess that these experiences served as a kind of ‘reference’ when learning new things: Meeting a new ‘idea’ I was prone to ‘take it to Iceland’ and map it on my own experiences. To begin with and in accord with the natural scientist element in me, I made this backward look with the hope of finding out ‘what had really happened’. Being at UBC meant to me (in part and to begin with) being in ‘the academic heights’ taking a look at ‘the foggy swamp’ where I had spent most of my career. While in that foggy swamp I could not see clearly. Now, at the heights, I could. However, and much to my surprise, looking over the swamp what surfaced was not ‘how it was’ but different portraits that seemed to be offering themselves as *alternative descriptions* of my past. *It was as if I could choose who I had been in the past.* “How ridiculous”, said the narrow-minded one-world-right/wrong-natural scientist homunculus still creeping around in my mind, shrieking: “You have only one past! Your past!” Although speaking somewhat humorously about this now I was not amused at the time these things were occurring to me. At times I even felt that I was deceiving myself or losing myself in some kind of fantasy. Reading Rorty made me feel better. Now I sensed that my past could be seen as something *created* and (accordingly) as an *object of continuous re-creation*. There was nothing wrong with me. With more readings, a little ‘pragmatic homunculus’ surfaced in my consciousness.

Gradually he took hold on my thinking. In the process, that boisterous little natural scientist homunculus who had been plaguing me for years, stopped interrupting me.

Now back to the past, that nice day in August 1999, to myself planning a new language game but still not very Rortyan in my thinking.

The Phrase 'Learning to Teach *From Within*'

We left me sitting in front of my computer on August 24th 1999. You noticed that I was writing about my future plans and that I was worried because I felt I might be trying to accomplish too many things simultaneously, that is, teaching chemistry, teaching teachers, and doing research on my own practice. But you may remember that I had become fascinated by Parker J. Palmer's (1998) book, *The Courage to Teach – exploring the inner landscape of a teacher's life*. Why?

We should not forget that I was (and still am!) a learner in learning how to teach teachers. Having spent a number of years as a teacher educator studying 'this thing', I should have some ideas how to do this. In light of the discussion in the previous section, however, 'this thing' in this case is not that simple. When the 'thing' is chemistry or some other (natural science) *subject*, the road is usually clear-cut. You learn (build your knowledge) in a linear fashion starting with some basics concepts and then on and on. When the 'thing' is 'teacher education' or 'how to teach teachers', what you enter into is a field where a host of subjects, research genres, discourses, paradigms, philosophies, and 'common sense talk' meet. An incredible 'marketplace' where the student teacher is invited to collect words and phrases and sentences from an array of different *vocabularies* to speak in a Rortyan way. Having spent two years in such a marketplace (at UBC) I had certainly learned many new words and 'how to say things'. However, my collection was heterogeneous, pieces taken from different vocabularies. Meaning, seen from a neopragmatist point of view, is a

vocabulary thing. The meaning of a term, in this view, is given by the way it relates to other words *within a particular vocabulary*. As soon as you take the term to another vocabulary, it becomes something else. This applies in particular to *thick terms* like knowledge, belief, language, inquiry, teaching, and learning. Returning to Iceland in August 1999, I was not aware of this, or, maybe better, *I had not come to talk like this*. It might be adequate to say that my head was at that point in time filled with “butterflies” of all kinds if we take “butterfly” to mean English words and phrases I had picked up during my studies at UBC and were now waiting to be given an adequate place and function in my new emerging personal vocabulary. In fact, this is one of the reasons why I felt it necessary to establish the team that I call “my guides” and whom I introduced to you in the previous chapter. I was asking them to help me bring the new terms into a *congruent* pattern, make a ‘peaceful little collection’ out of the wild ‘butterflies’ that were making me confused. If I succeeded, I could look at it – the collection – and say, “These are my beliefs!” From that point on I would be ready to build my new course. As you know from the previous section, doing this was made even more difficult by the fact that the ‘butterflies’ were of *English* origin. Given the fact that I was now in Iceland and was supposed to speak my native language I would need an *Icelandic* version of my new vocabulary.

In accord with what is said above when we return to me in front of my computer in August 24th 1999, we are justified to think that I am still burdened by the ‘wild Canadian butterflies’ flying around in my head. Only three weeks have passed since my return from Canada and I am just beginning to make plans for my ‘new future’. Rorty and the other ‘guides’ mentioned above have not really entered my story. On the other hand, I have got my ‘bible’, Palmer’s *The Courage to Teach*.

As you may remember, leaning over my shoulder where I sit in front of my computer on that day in August 1999, we had just started to read what I was writing on my computer. Now we continue reading:

During the last days, I have been reading *The Courage to Teach – exploring the inner landscape of a teacher's life* by Parker J. Palmer (1998) and found it interesting.

Commenting on this book (on the front cover), Margaret J. Wheatley makes a good point saying that, "It compassionately and insistently asks us to recognize that our capacity to do a good work springs from our recognition of who we are...Our connectedness to who we are allows us to connect to all others."

This is an unusual book. Recognizing the importance of asking what should be taught, how, and why, the author puts major emphasis on the question, 'Who is the self that teaches?' To explore this inner landscape one must follow three paths, Palmer holds, namely the intellectual, emotional, and spiritual path, the last one being described as "the diverse ways we answer the heart's longing to be connected with the largeness of life – a longing that animates love and work, especially the work called teaching" (p. 5). In chapter one called "The Heart of a Teacher – Identity and Integrity in Teaching", Palmer says:

After three decades of trying to learn my craft, every class comes down to this: my students and I, face to face, engaged in an ancient and exacting exchange called education. The technique I have mastered does not disappear, but neither do they suffice. Face to face with my students, only one resource is at my immediate command: my identity, my selfhood, my sense of this 'I' who teaches - without which I have no sense of the 'Thou' who learns. This book builds on a simple

premise: good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher (p. 10)

I then elaborate on this quote from Palmer, writing:

Palmer supports this claim [about good teaching] by pointing out that stories of good teachers inevitably imply the idea that a good teacher displays strong personal characteristics (“a strong sense of personal identity infuses their work”).

Please remember that I was writing these things in my native language. What appears to you, except where I quote Palmer, is my *translation* of my Icelandic writings. I think it is worth pointing this out because I was, in these writings trying to articulate things in my Icelandic way or developing my new professional Icelandic ‘voice’ to use a Bakhtinian language. An unknown ‘homunculus’ within me whispers that I was, at this point in time, busy practising speaking like Palmer – that is, as he might have done if he was speaking Icelandic. Could be!

Let me continue translating my writings for you:

On the other hand, bad teachers are distant; they “distance themselves from the subject they are teaching – and in the process, from their students” (p. 11). Palmer continues:

Good teachers possess a capacity for connectedness. They are able to weave a complex web of connections among themselves, their subjects, and their students so that the students can learn to weave a world for themselves. The methods used by these weavers vary widely: lectures, Socratic dialogues, laboratory experiments, collaborative problem solving, creative chaos. The connections made by good teachers are held not in their methods but in their hearts - meaning heart in the ancient sense, as the place where intellect and emotion and spirit and will converge in the human self. (p. 11)

I then continue by citing what Palmer means by identity and integrity. Identity is for him “an evolving nexus where all the forces that constitute my life converge in the mystery of self” (p.13) while integrity denotes “whatever wholeness I am able to find within that nexus as its vectors form and reform the pattern of my life” (p.13). I then go on quoting Palmer, including the following passage that still sounds like a nice piece of music to me:

Integrity requires that I discern what is integral to my selfhood, what fits and what does not - and that I choose life-giving ways of relating to the forces that converge within me: Do I welcome them or fear them, embrace them or reject them, move with them or against them? ...

Identity and integrity are not the granite from which fictional heroes are hewn. They are subtle dimensions of the complex, demanding, and lifelong process of self-discovery. Identity lies in the intersection of the diverse forces that make up my life, and integrity lies in relating to those forces in ways that bring me wholeness and life rather than fragmentation and death. (p. 13)

The last thing I write on this day in August is:

Allt þetta verð ég að vinna með og móta á næstu vikum.

Translated to English:

All this I must work on and shape in the next weeks.

I have spent considerable space telling you what I was writing on my computer on August 24th 1999. I do this because this writing helps me make sense of my next moves, including how I managed to bring together the ‘butterfly-like pieces’ I had brought with me from Canada into an orderly pattern. A sign regarding what was about to happen may be seen in the following journal entry three days later:

Friday, August 27th 1999

I am still wondering how my course, *Teaching Science Subjects* [This is the official English name] might look like. Yesterday afternoon, ideas related to some basic principles began to appear in my mind and that I felt might be helpful ... I said to Gerda (my wife) that it appeared to me that I might be taking a new direction ... in the process of building a new foundation for my course.

Something is underway. Next comes a heading – in bold:

Good teaching comes from within

An explication of what this may entail follows:

Nobody can teach well unless s(he) arrives whole and undivided at his/her teaching. The student teacher must know who s(he) is. S(he) must feel security standing in front of the class. Otherwise, things collapse. Security is within oneself, security is something that is rooted in deep self-knowledge: I know who I am. I know what I can do and what I cannot do. I know what I believe in and what I do not believe in. The secure student teacher says to him- or herself: My teaching is in accord with my view. I do not allow others to dictate what or how I should do or think. I use the methods that I consider useful to me and that I believe in. I am ready to learn from others, taking in possession things that I see as valuable to my students and me. The methods I use are continuous with the teacher within me. When I know who I am, I know what suits me. I am coming to this program to know the teacher inside me.

As a rule, I do not remember the ‘situations’ surrounding my journal writings or ‘how I was’ at the time of a particular writing episode. This entry is an exception to the rule. I can almost see the concentration and the determinedness in my face, my eyes in particular. Why? Following Rorty, I was making significant steps in reforming parts of my final vocabulary,

that is the *Icelandic* version of it. With Bakhtin I could say that I was making a good progress developing my own 'voice'. "The word in language is half someone else", he said, adding that, "It becomes 'one's own' only when the speaker populates it with his own intentions, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention" (see Wertsch 1991, p. 59). I had been reading Palmer intensively for some days, playing carefully with his words like I did with new precious toys when I was a little boy. *Gradually they began to make connections with other words I was carrying with me, and this enabled me to start creating a new story of my teaching career.* That story, or at least its contours, is embedded in the portrait given in the excerpt above of an imaginary student teacher whose teaching is in accord with her beliefs. Looking to my past, I saw that I was beginning to *rewrite* the story about me as a chemistry teacher, this time with words and phrases from Parker J. Palmer, with words like connectedness, identity, and integrity. The new story of myself was saying that I could not have survived without feeling *connected* to my students. The new story was saying that 'my teaching' was not a suitcase of techniques I was carrying around but part of my identity.

Accordingly, Palmer was not only bringing me a beautiful story of himself. *He was helping me to redescribe my past, myself as a teacher by bringing me new words. Once that new story began to take shape, I felt I knew what should be the core of my new pedagogy when teaching prospective teachers:*

They would be learning to teach *from within*.

Now we need a little flashback. You remember the 'word-butterflies' I was carrying with me from my studies in Canada. I told you that Palmer helped me catch these butterflies and bring them into a coherent pattern, a sort of action framework for the course I was about to rebuild. Now, some of these butterflies were little stories about what it means to learn to teach. If we go back to my writings in August 27th 1999, we find me quoting two such stories.

The first is from Kagan's (1992) review article of studies on learning to teach. I quote her saying that:

The life stories of teachers ... explain that the practice of classroom teaching remains forever rooted in personality and experience and that learning to teach requires a journey into the deepest recesses of one's self-awareness, where failures, fears, and hopes are hidden. (p. 163 – 164)

The second quote comes from Wideen et al. (1998):

The recommendations from many studies point to the need for prospective teachers to examine their beliefs early in teacher education programs and to negotiate an effective teaching role based on classroom experience and a sensitive rendering of propositional knowledge and new expectations of teaching gained on campus. (p. 156)

My point is this: Adding 'from within' to the phrase 'learning to teach' I was *claiming my stance* and that stance was rooted in part in my experiences as a chemistry teacher and in part in stories of the sort evident in the last two quotes. Reading the literature on learning to teach I had repeatedly seen authors stressing the importance of biographies and entering beliefs in learning to teach. I had 'nodded' with enthusiasm every time I saw such statements. However, these were words in other people's final vocabularies, English words, 'butterflies'. Reading Palmer enabled me to tell a new story of my own practice, a story that pointed to the importance of connectedness, identity, and integrity. *Connecting this new story of my past with the butterfly-stories I was bringing with me from Canada helped me start creating a new story of myself as a teacher educator.*

Allow me to show you a few more examples from the beginning of this new story of myself. Still leaning over my shoulders where I sit in front of my computer in August 24th 1999, we see three 'I will' statements appear in my writing:

a) I will emphasize that each participant looks to the inside asking: Who am I? What are my views on teaching? Do I feel uncertainty? What might be its resources? ... What is teaching? What is learning? ... What are my expectations to this course? Am I looking for something? What?

b) I will emphasize that the participants open their mind, make public their ideas and feelings and I will try to build a good rapport that allows this to be done wholeheartedly. I believe that ideas become clearer when one explains them to others.

c) I will try to provide each participant with as many opportunities as possible to try his teaching ideas. Our knowledge and attitudes are often most clear in our actions. Action, what is done, is of prime importance in teaching. It is what the pupils see. Used in the context of the course it creates opportunities for discussions, critic, and feedback. We – the others in the course – do not only hear you say something, we see what you do. Then we can ask why you did as you did. Being asked this way you must go inside yourself and find an answer. As a consequence, you will come to know better who you are.

Obviously, things were beginning to take form. You may also have noted that the writing gradually turns to an imaginary student teacher: "...do not only hear *you* saying something..." As we continue to read, we see more about student teachers. Reading this now (roughly two years later) I see my 'Canadian word-butterflies' gradually 'slowing down' and begin to find their niche in my final vocabulary, helping me form what we might call "my own voice". A new story of myself as a teacher educator is about to emerge. In my translation:

They [the student teachers] do not know how much work there can be behind a single lesson. They have very scant understanding of what it means to take a particular topic

and fitting it to the characteristics of the students. They do not know how difficult it can be to teach for understanding or evoke interest in the pupils. However, in order to make some progress, learn more and better, the student teacher must start with him or herself and try to figure out his or her starting point. Assume that s(he) has some ideas about what good teaching entails. Good. Provide him or her with an opportunity to explain. Give him or her opportunity to try out his or her ideas, for example by teaching us – the rest of the group. If we thereafter consider critically what (s)he says and does it is almost certain that various questions will emerge...The student will then most probably discover that things are not as simple as s(he) thought. Teaching is a lot more than performance. Teaching is an activity that aims at having people learn well...Pupils often learn things not intended by the teacher because they see and hear what goes on in the class in light of their own prior understandings. We do not see things as they are but rather as we are. This is one of the reasons why teaching is so difficult. The relationship of teaching and learning are by no means simple.

A few sentences later, on student teachers' entering beliefs:

They do have ideas about teaching. However and as a rule, they have not scrutinized them. Accordingly, they do not understand their nature and limitations. They have not been required to defend them or try them out and see what happens. Therefore, they continue to thrive 'in there', often wrapped into a package with the label: *This is how it is*. Ideas of this type are referred to as 'common sense' and may be quite helpful for ordinary daily practices. However, when it comes to schooling and education, such ideas tend to create messiness. They have become so deeply ingrained, have been with people for so long time, that it may be very difficult for them to understand that it may be possible to think differently about the world. Many student teachers, for instance, tend to see teaching as such a simple and self-evident endeavour that they find it

difficult to understand why they are required to learn to teach. Everybody knows how to teach! If we do not make efforts to surface such ideas and scrutinize them, they [the ideas] will most probably become a driving force in the students' minds when they start teaching.

Toward the end of in this 'clearing-house', I make explicit that I am approaching the course from a *constructivist* point of view:

I recognize that my view of teaching, learning, and knowledge are different from common understandings of these issues. I do not say that my view is truer or better than other views. It is simply so that I am arriving at the scene with particular ideas about the world and things in the world...I think that constructivism, the view that people create their knowledge, invites much more thinking about teaching than the traditional transmission-view. Constructivism underscores that the relationship between teaching and learning is complex.

Things were taking shape, it seems. *A new story of me as a teacher educator was emerging.* In the chapters that follow, I will try to provide you with further glimpses from that story, hoping that we may learn something valuable from it, especially something about learning to teach. We are almost through the first part of the story, the part that links to my efforts to figure out who I was when returning from Canada. From the excerpts given above, you may sense my direction and the type of course that I was hoping to create. As it does, I am not happy *now* with everything I say *then*, in these excerpts. This applies in particular to how I speak about my student teachers, most evident in the last excerpt given. From my current point of view, I feel that I was, at this point in time, generalizing too much when trying to build a picture of the typical student teacher filled with misconceptions of teaching and related conceptions. As I see it now, we should avoid creating such pictures and celebrate *diversity* instead. The 'typical student teacher' does not exist in my vocabulary any more.

However, it may have been a necessary ‘conceptual aid’ for me at this point in my development. When we are about to rebuild our vocabularies we need to ‘pin down’ some things. When a pattern has evolved, time is ripe for *diversification*. The story to be told in the chapters to come, I think, echoes such an evolution on my part.

However, this first part of the story has not come to end yet. It remains to see what I came up with in the end in my efforts to calm down my wild butterflies, i.e. the list labelled “My Pedagogic Creed”.

“My Pedagogic Creed”

In essence, what I did was to state as clearly as I could what I felt were my beliefs regarding teacher education. I started to make the list in late August 1999, roughly a week before I met my group of student teachers for the first time. I handed it to them on September 24th 1999 – three weeks after we started. If you asked ‘Why so late?’ I might respond by saying that I was slow making it and if you ask why I was slow at doing this, I might say that I was slow because I had problems formulating things in my native language. As you now know, I was in the process of developing the Icelandic part of my final vocabulary.

I think we should pay careful attention to the list I call “My Pedagogical Creed”. It should be seen as a serious attempt of mine to lay down a kind of platform for my new course, an attempt to tell myself, my students and the rest of the world how I wanted to think of teaching and teacher education. Linking to Bakhtin, Clandinin, and Rorty, the list may respectively and alternatively be seen as ‘my new voice’, ‘the beginning of a new story’, and ‘developments in my final vocabulary’. However, in this context I like to think of it (now making a link to Charles Pierce, the pragmatist) as ‘rules of action’. I made the list to *guide my actions as a teacher educator en route to a new pedagogy*. Returning from Canada I was carry with me a feeling (or a hope) that a new story was in the beginning, that the course I was planning would not be what it used to be, that it would be much more ‘inquiry-oriented’

and more 'reflective'. I use the adjective 'more' because such things were not totally new to me. Discussions, for example, had always been a significant part of my pre-Canada courses, my teaching style being a sort of 'lecturing-with-transparencies-but-happy-being-interrupted'. However, giving time for talks was 'my (liberal) style' rather than as conscious efforts of mine to have my students *participate* so that they might learn better. I explained earlier (chapter 2), prior to my studies in Canada I did not think of my student teachers in constructivist terms. Although embracing the constructivist idea, I still saw it as an 'interesting phenomenon' or a 'theory' rather than a 'way of knowing a'. Now, post-Canada, things had changed. According to my emerging final vocabulary, a 'student teacher' was not simply a 'student teacher' but a person with a history and beliefs. My new role, I understood, would be to *guide* my students, help them develop their beliefs. I had come to see myself as a *helper*. But *how*? How should I help them? How should I *act* in this new role? What should the course look like and what would I be doing in class? I think it was reflections of this kind that pressed me to work out "My Pedagogic Creed", my set of beliefs, my platform of action. I had to know 'where I was' in order to be able to act purposefully and confidently. My prototype in this regard was a list I had found in an article by Gunstone, Slattery, Baird, and Northfield (1993). Building a course for prospective science teachers, these authors figured out what they called "the major principles" of their program, including their views of what it means to be a student teacher, what it means to learn to teach, and what it means to help people learn to teach. Comparing their list to mine I see similarity but also difference. That is healthy I hope, indicating that I was doing something more than simply copying their list. Anyway, here is my list, translated to English from Icelandic as usual:

1. I believe that *good teaching comes from within*, that it is always rooted in personal attributes and the world-view of the one that teaches. Learning to teach means *developing one's own theory of teaching*.

2. I believe that developing one's own theory of teaching is a *long-term project* that begins in the teacher education program and continues as long one teaches.
3. I believe that *professional teaching*, good teaching, is that sort of teaching that not only results in good learning but also in *the students' desire to learn more*.
4. I believe that *the relationship between teaching and learning is very complex*.
5. I believe that my role primarily consists in *helping the participants to develop their ideas on teaching and learning* in their respective teaching subjects keeping in view that their teaching will be effective.
6. I believe that it is of utmost importance in teacher education that the student teachers *reflect on their experiences* related to teaching and learning.
7. I believe that *the change from being a student to become a teacher is both difficult and complicated*.
8. I believe that the *communications within your group and the support you give each other* is of prime importance for the professional growth in each of you.
9. I believe that *the outcome of this course is not one but many*. I suppose that you are different as you enter the course and what you learn from it may differ substantially.
10. I believe that *my course is only a part of a much bigger picture*. You will experience influences from many sources, e.g. other courses, your school advisers and the pupils you come to teach. Your experiences from your schooling will be with you and affect your knowledge making and the shaping of your attitudes.

Running through the list, we see many of my 'Canadian butterflies' that I was carrying with me from Canada. This time, however, you find them in a *pattern*. Order has replaced

chaos. On the top of this list is Palmer's 'good teaching comes from within' in good company with the phrase 'learning to teach' that now has come to mean 'developing one's own theory of teaching'. The rest of the items on the list revolve around this prime issue. Developing one's own theory of teaching is a long-term project (2), a difficult process (7), and includes coming to grips with the complex relationship between teaching and learning, reflecting on one's experiences (6), and work with the rest of the group (8). Because participants are different, what they learn from the course will also be different (9). Reading statement number 10, one can see that the 'situative perspective' described in chapter 3, has entered into the picture I was developing. At least was it so that I had, at this point in time – influenced, I think, from my readings in the learning to teach literature (e.g. Wideen et al. 1998) – begun to pay serious attention to the apparent *complexities* associated with the *variety of contexts* student teachers face. However, in these August days I am telling you about, I may have kept *these* complexities at distance because I was having enough work to do with my 'here and now complexities'!

Anyway, having made that list I was relieved. Now there was a *structure*. I had made something 'concrete', something I could look at, even 'touch', and, maybe most importantly, *present to others*. I had produced what Bruner (1996) refers to as an 'oeuvre' borrowing the term from the French cultural psychologist Ignace Meyerson and meant to convey the idea that "the main function of all collective cultural activity is to produce 'works' ...[that] achieve existence of their own... [and that] give pride, identity, and a sense of continuity to those who participate, however obliquely, in their making" (p. 22). The list gave *me* pride and helped *me* figure out my teacher educator identity. In addition, and particularly important for me, it had been made with *Icelandic words*!

The Course Outline

The course outline included, as usual, descriptions of aims, major topics, and ways of working. There is one major goal and it goes like this:

The major goal of the course is to assist the participants to develop their ideas on teaching and learning in connection with their subjects and with regard to building a varied and effective teaching approaches.

Coming to the next section on "Topics", this major goal is further emphasized:

Teaching and learning science subjects is the main topic of the course, in particular the relationship between the two. My experience has told me that it is complex. What pupils learn is often something not intended by the teacher. Why?

Then comes a section called "Ways of working" saying:

I believe that people learn best by working on things in varied ways, e.g. by reading, writing, discussing, telling, listening, experimenting, observing, researching, reflecting, etc. I will try to arrange things in the course in accord with this view. The participants will be expected to participate extensively in the lessons, e.g. by contributing to discussions, by analysing teaching episodes and by teaching each other. In other words, the course builds heavily on what the participants do in the lessons and I expect them to show up for every lesson.

Next comes a section that may be translated as "Learning Resources":

One may ask: What is a learning resource? One is disposed to think that it is only a question of books and articles. What tends to be forgotten is that our own experience is also a knowledge source, e.g. the experience we have from schooling and the experience that is given us through our own teaching.

As you see, the major emphasis in my plans is on the *teaching-learning relationship*. At the beginning of this chapter, I referred to this issue as the ‘great thing’ of the course. Influenced by Palmer (1998) I envisioned my students and me ‘gathering around’ the issue of teaching-learning relationship. Coming to the section “Ways of working”, you may have noted that I emphasize *variety* and *participation*. I think it is fair to say that guiding my intentions in this respect were my experiences from participating in various courses at UBC and supervising student teaching in some Vancouver secondary schools. Taken together these experiences enabled me to think of learning environments in which student participation, social interactions, and learning through activities were the major components. Finally, reading what I titled “Learning Resources” you see that I stress the idea that one’s own experiences may be seen as a valuable source of knowledge. The link to Schön’s (1983) ‘epistemology of practice’ is evident.

Included in the outline that I would hand out to my students at the beginning of the course was a reminder that their secondary practicum component is seen as a part of the course. In the teacher education program my course is a part of we have two practicum components, two weeks in a primary school during the autumn (usually in the first half of November) and other two weeks in a secondary school during the spring (usually in March). Formally, only the latter part was within the territory of my course. In effect both were. I would be my students’ faculty supervisor in both parts. I think it is important for you to keep this in mind: I was not only responsible for the course that I was about to build but also for student teaching, including finding placements for my students and visiting them during the practicum. This is important because serving both these functions offered me the possibility to gain a ‘closer view’ of my students. I was experiencing them not only as participants in my course but also as *practitioners in the field*. Add to this picture the fact that I was also and simultaneously (with my university teaching), teaching (chemistry) in a secondary school and

you may understand what I mean when I say that, “I was all around in the terrain”. Being in such a position provides the teacher educator with a unique possibility to explore various ‘corners’ or aspects of the ‘learning-to-teach ecosystem’ to borrow a term from Wideen et al. (1998) and understand better “how the system functions”. In fact, the thesis you are reading is an substantially an offspring of this opportunity. The remaining chapters tell of my looking into the various parts of the learning-to-teach ecosystem in which I was participating in and, I suppose, *shaping* as well, for example with the new ‘thick terms’ and stories I was bringing with me from Canada.

Next in the course outline is a section on “Assignments”. Four are intended. The first will require the students to keep a journal of their experiences participating in the course and later assemble this into an assignment called “A Personal model of the relationship between teaching and learning”, an idea that I borrowed from Garry Hoban (1998). The second assignment addressed lesson planning. Here, the students were required to make a plan for one lesson (40 – 60 minutes teaching). In doing this, they were supposed to pay attention to the numerous factors involved (possible students, subject, learning resources, classroom characteristics, etc), produce a lesson plan and present it to the rest of the group. This act (requiring approximately half an hour) was videotaped and the student was required to evaluate his or her performance, using in that process a set of questions provided by me. Handing in the assignment, the video recording followed for me to see how the students evaluated themselves. The third assignment, “Making a test”, was an assignment in which the students were expected to make a ‘good test’ from a part of the subject they would be teaching. To support them in this endeavour I had in advance explained my views on assessment (in science) and presented them with examples of various types of tests I had been making in my own chemistry teaching during the years. They were then supposed to make their own test and argue for its appropriateness. Doing the final assignment, labelled

“Teaching Example from Secondary School Practicum”, the students were supposed to consider critically part of their secondary school practicum teaching. For this purpose they were required to keep a journal and videotape their teaching and then analyze it in view of a set of criteria that I gave them, for example with respect to their pupils’ beliefs and the topic taught. Writing the assignment they were supposed to describe and justify their plans as well as their actual teaching and evaluate how well things had turned out in terms of learning outcomes (established through some kind of assessment).

Was all this new? No. I was not making everything from scratch. There were things from my ‘pre-Canada’ period that I still found valuable, including the assignments “Making a Test” and “Teaching Example from Secondary School Practicum”. I still saw these as useful for my purposes and they had been highly valued by my prior student teachers. The two other assignments were new, at least ‘significantly new’ and carrying the marks of my new pedagogy. As I see it, it is neither easy - nor desirable - to ‘forget the past’, even when you feel that you are ‘new’ or ‘reborn’ or something like that. ‘Old toys’ may serve new purposes and new visions. Besides, teaching prospective teachers is, in my view, a sort of balancing act in which one eye is looking at ‘how things ought to be’ and the other at ‘how they are’. The “Making a test” assignment might serve as an example of such a balancing act, its purpose being to *improve* something practising teachers are required to do all the time, that is, making tests. Making a ‘fair test’ is a delicate matter, fraught with social and psychological implications. Helping student teachers making better tests is therefore an important issue.

As you see then, I was carrying with me diverse things from my past practice, my ‘pre-Canada’ period. Indeed, my task, upon returning from Canada, might be thought of as an attempt to *reconcile* the old and the new, figure out what was still useful, what needed to be ‘repaired’, and what needed to be ‘rebuilt’. From a ‘bird’s eye view’, the course that finally emerged may not have looked that new. Significantly, old patterns still reigned. As before,

we would be meeting 4 hours a week for about twenty weeks. Still, there would be these two two-weeks practicum periods, the same type of assessment and marking, and I would be a doing most of the talking. Besides, the new course would be situated within a teacher education program with its particular traits, including the different and even contradictory orientations toward teacher education mentioned earlier (chapter 4). In brief, social and cultural forces would inevitably shape the 'child' that was about to being born.

Educating Teachers – for What?

Reading this chapter you may have come to wonder about my *vision* as a teacher educator, asking for example what *kind* of teachers I would like my students to become or how I would like them to teach. You might even have asked if the phrase 'learning to teach *from within*' should be taken to indicate that I did not have any vision at all, that it was completely up to them to figure this out. This is not the case. An indication to the contrary may be found in "My Pedagogic Creed". There I say, for instance, that "good teaching is that sort of teaching that not only results in good learning but also *in the students' desire to learn more*" (emphasis in original). You may also have noted that I repeatedly bring up the term *constructivism* on these pages. In fact, constructivism has been the major issue for me as evident from my story in chapter 2. And I still believe that seeing people as 'meaning makers' is a *good* belief, a good rule of action. It encourages the teacher to act in a way that 'gives reason' to the students (Schön 1988), to think of them as "capable of holding beliefs and ideas which, through discussion and interaction, can be moved toward some shared frame of reference", to quote Bruner (1996, p. 56). *This is my vision*. This is what keeps me going as a teacher and teacher educator plus what Howard Gardner (1988, 1999) is always stressing, namely the issue of *understanding*. I share with him, for instance, the belief that a good grasp of some of the major concepts in the natural sciences (e.g. natural selection and

theory of matter) may help people think better and feel less alien in the technological world in which we live. However, I must also face my own scepticism in this regard. Thinking of my own attempts to teach chemistry for understanding (and write chemistry textbooks for the same cause) makes me somewhat pessimistic. It appears to me that the vocabulary of chemistry (and maybe other science subjects) is simply too far from the common sense vocabulary of the day to be *useful* and *meaningful* for people *in general*. Thinking about my own chemistry students, I suspect that only those who continued to study chemistry at university level found it useful and meaningful, not so much for their daily life but for their *professional activities* in chemistry and related subjects. It seems to me that people like me who have been putting so much emphasis on natural science *literacy* for every citizen may have been acting rather idealistically. The issue may be much more complicated and difficult than we have tended to think. I, for example, have been assuming that my chemistry students, at least those who do well, take their 'chemistry knowledge chunks' with them and use them when appropriate, e.g. to understand scientific news or to build an argument in an environmental dispute. From the 'situative perspective' (chapter 3), this may turn out as a rather naive thinking. This perspective holds, remember, that cognition is 'situated' and 'social'. How we think depends on *where* we are and *with whom*, that is, on our physical, social, and cultural surroundings. The space within schools is different in most respects from the space outside schools. The community of practice in a chemistry classroom does not have much in common with social practices other places; and the vocabularies used are very different. Once you are out of the chemistry class you leave the 'learning-chemistry-in-school-discourse' behind you because it does not fit very well with how people talk on the streets and in their homes. Saying things like this I face a new development in my thinking about science subjects in schools and I recognize the impacts of 'my guides' (Dewey and the others) and my own explorations of my learning described earlier in this chapter. However, I

should stress that this is a very recent trend in my thinking. Two years ago, starting my 'Canadian-influenced' subject-oriented course within the teacher education at the University of Iceland, I did not think in terms of 'vocabularies' nor was I, although familiar with some of Lave's writings, looking at things through a socio-cultural-historical lens. But I was, or felt I was, a constructivist – even 'by heart' because now I had come to see that it was not enough to talk about constructivism as 'something interesting out there'; it had to be *practised* within the course I was about to establish. I would be treating my student teachers as meaning makers, hoping that doing so would encourage them to treat their future students in a similar way. Having said this I cannot resist telling you that I was not always arriving at my university class 'filled' with such lofty aspirations. If it could be said that I was 'filled' with something when coming to my university class it might rather have been recent episodes from my own secondary school chemistry class in which things did not always go as intended. In addition, I sometimes told my student teachers stories from my chemistry teaching classes that made them surprised because they had thought that I was an 'expert teacher'. Now I fear, however, that we may be a bit ahead of ourselves because this is something I intend to deal with in chapter 7.

Epilogue

Writing this chapter my original aim was to figure out what my intentions were when planning and rebuilding the course I had been teaching for some years within the teacher education program at the University of Iceland. In particular, I was curious to know why 'learning to teach' in my case turned into 'learning to teach *from within*'. As soon as I started to think about these issues in the current context, that is the context of writing this thesis, however, I felt pressed to look back at my experiences during my graduate studies at the University of British Columbia, wondering what I had been learning over there and what I

had been 'bringing with me' to Iceland. Analysing this last issue I found that I could say with confidence (and with good help from Rorty) that I had been *recreating myself* with help of terms from diverse vocabularies. Accordingly, returning from Canada I was carrying with me new words and new word-relations, that is tools to build a new course and a new future. There were two major problems, however. First, the words I was carrying with me from Canada were still 'butterfly-like'. They needed to be brought into a coherent order. Second, the Icelandic version of my final vocabulary was, upon my returning to Iceland, still immature. My task then was to bring things together in order to be able to tell – *with words of my native language* – my student teachers, my colleagues, and myself, who I was now and what I wanted to accomplish. Doing this I felt great help from Parker J. Palmer who enabled me to *redescribe* my past experiences as chemistry teacher coming to see it as a journey in which the 'I that teaches' is fundamental and a prerequisite for *connectedness* with my students, another major aspect in this Palmerian view. Coming so far things began to fall neatly in place, including the 'butterfly-stories' I was carrying with me from Canada. In the end I was able to create what I call 'My Pedagogic Creed', that list of ten statements that I saw as my 'rules of action' with regard to my practice as teacher educator. On top of that list is a slogan that I borrowed from Palmer (1998) saying that "good teaching comes from within" followed by my claim that, "Learning to teach means developing one's own theory of teaching", which may be seen as rephrasing of the slogan "Learning to teach from within". As evident from the chapter and also from the account to appear in next chapters, this slogan was to become a key-idea in my search for a new pedagogy.

How does the account provided speak to the issue of learning to teach?

I see my studies in Canada and my efforts to build a new course in light of those studies as a *learning act*. I was learning to teach prospective teachers. Wondering how I should describe my learning experiences, it struck me as a powerful idea that I might do well

speaking of them in *linguistic terms*. With Rorty's help, I came down saying that during my graduate studies in Canada I was developing my final vocabulary with terms from diverse authors. Back home, I continued this work. In doing this, I noticed that it was not enough simply to translate terms. Rather, my task now was to create an 'Icelandic version of my final vocabulary', that is to figure out an appropriate set of Icelandic words and word-associations that might do a similar job as their English counterparts. This work resulted, in part, in "My Pedagogical Creed", the list I later handed out to my students in order to inform them about the beliefs that I felt were guiding my efforts to help them learn to teach. Done with it I felt I had made a substantial step forward in my attempts to *relearn* how to teach. Looking back on the process leading up to it I saw a struggle with words, repeated attempts to find good words to *speak for* and *help create* my new teacher educator identity. Interestingly for me, I felt I discovered the roots of that identity by looking back at my chemistry-teaching career. In doing this, I came up with a strong feeling telling me that at the core of my teacher identity was the word 'connectedness' standing for 'feeling connected to my students'. No less interesting for me was the fact that I was first now, after twenty years, saying something that in a sense 'had been with me' all the time. Now we may ask, how could this happen? The answer, I argue, is in the chapter just written: I was searching for a new ground, a new place to stand with regard to my practice as teacher educator, asking myself how I could most clearly tell myself, my students, and my colleagues how I saw my job now when returning from Canada after two years of graduate studies. It was then the 'miracle' happened:

Stories I was carrying with me from Canada enabled me to understand what I saw as the core of my own teaching practice and to tell who I wanted to be as teacher educator. I realized that 'connectedness' was the word and that I was coming to say that, 'good teaching comes from within'.

I cannot but wonder if speaking in linguistic terms as I have done here might help us unpack the phrase learning to teach. Saying this I keep in mind that learning to teach is pretty much a 'language game' on two fronts. For one thing, our students are (during their course work) learning new words from diverse vocabularies. On the other hand, coming to the school classroom our students must somehow cope with this new environment. In doing that they also need words to describe (for themselves, their school adviser, the faculty adviser, and some others) their experiences. Using Bakhtin, this task includes both developing a handy *speech genre* to cope effectively with immediate things during teaching but also developing an appropriate *social language* (or discourse) to be able to communicate fluently with colleagues, parents, friends, and others. When things are framed this way, the teacher educator becomes 'one who helps prospective teachers finding and using words that may serve them well when coping with their tasks'. What that 'serve well' means is ultimately the business of the student teachers because they must learn to speak *from within*, that is in such a way that fits with the emergent 'I' that teaches. On this account, my obligation as a teacher educator is to point out for them that there are *various* ways of talking and acting when it comes to teaching. If I *know* the students I am working with 'well enough' I might even be of help to them in their initial attempts to figure out their paths as teachers by *helping them fashioning their final vocabularies*. That 'well enough' needs of course an ongoing scrutiny in light of changing ways of speaking about teaching and education.

I am aware of that I am using much space on the issue of 'language'. However, I think the issue deserves good place and careful considerations because of the possibility of linking it to the notion of learning to teach and the practices of teacher educators. Of prime interest to me as a teacher educator is that my students 'learn well' and that includes, in my view, that they consider *alternative ways of speaking* about teaching and learning. Certainly, I would like them to adopt a 'constructivist look' at the learner. However, doing this means, in a

pragmatic perspective, rearranging one's final vocabulary, that is, establishing new word relations, for example for thick terms like 'learning' and 'knowledge'. Following the tradition, my students tend to think of knowledge as a 'commodity' or as a 'package' to be delivered their pupils. Such a view of knowledge is incompatible with the constructivist vocabulary. Adopting constructivist thinking implies hooking the word 'knowledge' to other words than usual; learn to say for example that, 'knowledge is constructed by the learner'. Learning to speak this way, however, is by no means a simple matter because it implies going against our habits of language, including what Bakhtin refers to "speech genres". Speech genres, in my reading of Bakhtin, mean the particular ways that people belonging to the same community of practice use when communicating and coordinating their activities. Such speech genres, Bakhtin tells, are "stable typical forms of construction of the whole" adding that, "Our repertoire of oral (and written) speech genres is rich. We use them confidently and skilfully in *practice*, and it is quite possible for us not to suspect their existence in theory" (see Wertsch, 1991, p. 61). When I – as a chemistry teacher – arrive in a classroom I immediately 'switch' to 'my chemistry teaching speech genre' which has become so much a part of me that I do not notice it. Schön (1983, p. 60), speaking of "knowing-in-practice ...[that] tends to become increasingly tacit, spontaneous, and automatic", points to the same thing; as does Korthagen and Kessels's (1999) use of the notion of 'Gestalt' that help us "see objects or situations as an entity and respond to them as such" (p. 9; cf. chapter 4). Directing your attention again to my student teachers, I see it as my task to help them talk about classroom experiences in new (for example, constructivist) ways. While Schön might prefer to talk of this as helping them 'reframing' events related to the classroom situation and Korthagen and Kessels as a matter of enabling 'gestalt formation', Bakhtin might have seen this as the task of helping the student teachers adopt a new speech genre or 'form a new stable typical forms of construction of the whole'. However and regardless of which way we

prefer to talk about this issue, this task is fraught with difficulties. The student teacher not only need to 'fight' against the habits of language that have formed her through life and years of schooling but also against the way other people in her current context talk, for example the school advisor and the pupils. We may even extend her 'battlefield' to the very arrangements of things in the classroom, in particular if we think of them not simply as 'things' but as artefacts 'speaking' a particular social language that affects the course of events in classrooms. For example, in the secondary school I was teaching, the traditional rows of tables together with the 40 minutes lesson time forcefully said to me when I was planning a lesson: 'No group work, please!' For practical reasons, I usually obeyed this voice even though the constructivist in me was protesting. I realized that rearranging the tables would take time and that it would also take time to push them back to their original positions, something I would need to do in respect of a colleague teaching after me. "Coping with...organizational constraints, teachers have invented a practical pedagogy that is tailored to fit their needs and classroom practices", says Larry Cuban (1995, p. 5). I think Cuban is speaking well.

As I see it, establishing what Cuban calls "practical pedagogy" includes developing habits to cope effectively with the rapidly changing circumstances characteristic of the classroom situation. The habits involved include *habits of language*, ways of speaking. Being a trained teacher means being able to use words quickly and effectively to coordinate events within the space of the classroom. A novice is not so good at this. The work of stabilizing his or her practice belongs to the future. Part of that work is 'word-work', the creation of suitable speech genre. This word-work is, I think, particularly important because we build our worlds with the words we carry with us. When I started to teach chemistry in a secondary school twenty years ago I did so without a formal teacher education. Arriving in the classroom first time, I may have been rather 'spoken through' than 'speaking', that is, my teaching behaviour

may have been largely shaped by cultural habits telling me how I should think and act in this domain. I was, it might be said, following a script that had been made by many hands and minds before me, extending far into history. I was using the same words and ways of speaking about teaching and related things as my prior teachers and my current colleagues. Now, twenty years later, I see teaching differently from how I saw it in the first years of my career. However, I also realize that my new way of thinking about teaching is the result of changes in my personal vocabulary that have come about through *years of hard intellectual work* on my part. This makes me wonder what I should expect of the people whom I am supposed to help to learn to teach. These people, remember, are young Icelanders, busy establishing homes and having children, and, most of them probably, concerned about 'doing a good job' in accord with culturally set standards rather than 'imported ideas', Canadian or whatever. When they read articles on education and teaching they usually meet *English* words because Icelandic sources in this regard are sparse. Dependent as they are on translating these words into Icelandic and given the short time span of the teacher education program (9 months) I cannot but wonder if they manage to reconfigure their personal vocabularies to a significant degree and create new and *durable* meanings that might help them cope with their future school environments. Examining what sense my student teachers made of the new learning environment outlined in the previous section might give us a clue on this matter. Indeed, this is what I intend to do in the chapters to follow, that is try figure out 'what was happening out there' to use a non-Rortyan language.

Chapter 6

En Route to a New Pedagogy

...if we decide to change the way we practice our craft, it takes time to make the transition – and while we are in transit, we are not very good at what we are doing. En route to a new pedagogy, there will be days when we serve our students poorly, days when our guilt only deepens. (Palmer 1998, p. 132)

I was on route to a new pedagogy. With Palmer's (1998) help, I had finally managed to calm down my "English Butterflies" and even succeeded to make a neat list of statements telling what my new beliefs were. On the top of it was "good teaching comes from within". Attempting to understand what I was saying with this phrase, I wrote in my journal in August 24th 1999:

... I will emphasize that each participant looks to the inside asking: Who I am?

... I will emphasize that the participants open their mind, make public their ideas and feelings.

... I will try to provide each participant with as many opportunities as possible to try his teaching ideas.

Please keep in mind that these are translation *from Icelandic*. I was beginning to write my new story in my native tongue! But words and slogans and 'creeds', however well they may sound, are not good in themselves. Their *value*, to follow the pragmatic lead (Garrison 1994), can only be judged *with reference to action*. Accordingly we should ask whether my new beliefs were making difference *in practice*.

Meeting my Students

Our first class was on Friday morning, September 3rd 1999. A rather curious beginning, I would say, because we experienced a problem finding a room for our class (a sign?). We were in the science department and, for some reason, people there responsible for allocation of teaching rooms had provided us, this group of a dozen people, with a chemistry laboratory appropriate for approximately a hundred people with lot of space to do experiments but no ordinary tables to sit around and no ordinary chairs to sit on! In the end we managed to find a small physics room with a big table in the middle covered with some strange equipments. Running around looking for a room I had noticed the students appearing, one after one, apparently wondering what was going on but simultaneously surprised when I greeted each of them with their respective name. They did not know that I had been studying photographs of them the night before in order to be able to do exactly this! Something I usually do? No, certainly not, but this time something *new* was in the air and I was already in the process of changing old habits. So I felt.

As usual, I started by having the students introduce themselves. Having read the participants' applications, I was prepared to see a heterogeneous group. Now it was "so real": Two economists, three nutritionists, two geologists, three geographers, an engineer, a dentist, and a physiotherapist; nine women and three men; three of the participants already teaching in schools; certainly a varied group. Then it was my turn to introduce the course, my doctoral thesis and myself. Would they be so kind to allow me audiotape....? Nobody protested, friendly looking faces met my eyes, necessary papers were signed in quick order and then it was time for coffee. Back home, I wrote in my journal:

What was done?

Largely, I followed the plan...Around 10.30 we went to a nearby building for a coffee. There, all of us were sitting in a tight group around a small table and, all of a sudden, we were deeply engaged in a discussion on teachers' self-confidence, security, and self-knowledge. I wish I had had a tape-recorder. Many of us spoke and people seemed to be listening attentively to each other. Cathy [one of the three students already teaching in a secondary school]¹ told us that she had kept a journal (and still did) in which she tried to map herself as teacher, e.g. by writing down what happened in class and how she responded. She felt that she had been learning a great deal doing this and this had helped her build her self-confidence.

How did I feel about the class?

For me this was a comfortable and joyful experience. I was feeling well with these people. Not anxious at all. On the contrary, I had a strong sense of security. I had hardly begun to speak when I noticed that what I said was awakening attentiveness and discussions....

How was the group?

I felt that the people were really engaged in the discussions. Very interested. People seemed to be listening carefully, both to what I said and to one another, and many voices were involved. There was a good rapport. People seemed to connect to each other.

What a wonderful beginning!

¹ Cathy is a pseudonym. The same rule applies to all participants in this thesis.

This was Not Real Teaching – What?

Continuing my journal writing that Friday afternoon and now asking, “How was my teaching?” I reply by saying:

I thought of this first morning as an introduction; accordingly, I did not pay much attention to organizational matters and instruction. This was not real teaching – what?...I was rather well prepared, I think...It strikes me though that I did not write down any goals for this class. I should remember this in the future. I am determined to demonstrate good teaching.

“This was not a real teaching – what?” What a curious question! Apparently, I did not feel quite safe even though I saw us, my students and me, “sailing” well. Sticking to this metaphor, we may think of my course as a sailboat. Let us call it “The New Course”. I am the captain of course and it so happens that I have just been through a particular Canadian “school of navigation”. That school provided me with a map that should help me bring my students (the rest of the crew) to the “Land of Good Teaching Practices”. However, I suspected that some of crewmembers were hiding *alternative* navigation maps. I even felt I saw this in their faces.

Gee and Green (1998) liken culture to “different schools of navigation designed to cope with different terrains and seas” (p. 124, quoting Spradley 1980, p. 9). Words we use, they contend, do not operate in vacuum. They have “situated meanings”. They are associated with cultural models that in turn may be spoken of as “story lines”, that is “families of connected images (like a mental movie) or (informal) “theories” shared by people belonging to specific social or cultural groups” (p. 123). Asking “This is not a real teaching - or what?” points to my awareness of culture as “different schools of navigation”. In fact, underneath the

Canadian map I was carrying with me *there were other maps* telling different stories of teaching. One of them said that “real teaching” was a scenario where the constantly speaking teacher is the norm. And, frankly speaking, I repeatedly caught myself red-handed staring at these alternative or “traditional” maps, wondering if I should rather use them and saying to myself that if I did, I would be closer my students, i.e. *their way* of thinking about teaching. Then all of us would smile because we would feel we were “really traveling together”. Seeing three of the crew jump over-board when we were about to leave the harbour (that is, a few weeks after the course had started) may have pushed me further in this direction. However, the rest of the crewmembers appeared rather happy. Indeed, there was a kind of joyfulness and “expectant attitude” on board, because the crew was expecting “something good” might be waiting us behind the horizon if we used the map I was carrying with me from Canada. Therefore, I decided that we should stick to it.

The Course in Brief

Before I left my students on our first meeting, I handed out to them the course outline. It included an overview of the main topics to be addressed during the first part, the autumn term:

Days	Topics
Sept 3 rd	Introduction
Sept 10 th	Assignment 1. Start Memorable Teachers
Sept 17 th	Teaching science – to what end?
Sept 24 th	Preparing instruction
Oct 1 st	How can we teach for understanding?
Oct 8 th	Assignment 2. Students present.
Oct 15 th	Assignment 2. Students present.
Oct 22 nd	Assignment 2. Students present.
Oct 29 th	Assignment 2. Bringing things together The practicum. Diary and portfolio.
Practicum Nov 1st to 12th.	
Nov 19 th	Discussing practicum
Nov 26 th	Interviews. Handing in assignment 1.

Table 6.1. An overview of the first half of my course.

We have been through September 3rd already, the morning with the good coffee break. On September 10th, the students would start with "Assignment 1" that required them to spend approximately half an hour toward the end of each class to reflect on what they had been learning from the class. As you see from table 6.1, they were expected to hand in this assignment on November 26th - when coming to an interview I was planning to have with them and that addressed how they felt about the course so far. We will revisit this issue later on. Suffice to say now that what some of them wrote in that assignment made me wonder, once more, if my Canadian map was "adequate". Also on September 10th is something I called "Memorable teachers", a little activity that we will look at in a few moments. Then three sessions (September 17th and 24th and October 1st) followed in which I tried to present my view of teaching and learning, taking into account constructivist ideas but also my own experiences from teaching chemistry in a high school. As you know, I had been teaching chemistry for years besides teaching teachers. This time, however, I did something I had never done before: I made records of my chemistry teaching. If you ask me why I was doing this, the best I can say is that I was hoping these memoirs from my chemistry teaching might serve my doctoral work in some way. I was studying my practice as teacher educator. My chemistry teaching was (had always been) closely linked to that job. As simple as that! As these entries accumulated, I started to think that they might be good for my student teachers. Soon I found myself reading aloud to them some of these entries, i.e. stories from my chemistry teaching; "stories of success" as well as "stories of less success". In any case, my students seemed to like them. I remember one of them saying that they (the students) were "sucking these stories like sponges"! Why? I will explore that issue in chapter 7.

Memorable Teachers

This was an activity that my students, or at least some of them, felt instructive. I borrowed the idea from Parker J. Palmer's (1998) book, *The Courage to Teach*, from a chapter called "Mentors Who Evoked Us" that starts with the following words:

If identity and integrity are found at the intersection of the forces that converge in our lives, revisiting some of these convergences that called us toward teaching may allow us to reclaim the selfhood from which good teaching come. (p. 21)

Elaborating on this issue, Palmer reflects on two such convergences, "with the mentors that evoked us and with the subjects of study that chose us" (p. 21). Addressing the former, his point is that when student teachers consider such memories, "not only are the qualities of the mentor revealed, but the qualities of the student are drawn out in a way that is equally revealing" (p. 21). Thinking about my enterprise, that is, having my student teachers learn to teach *from within*, I thought it might be a good idea to do as Palmer suggested. Therefore, before they left after our first meeting I asked them to think of a teacher, which they thought of as memorable and figure out the reason why they felt so. They would write a little piece addressing this issue, bring it to our next meeting, i.e. on September 10th, and share their stories. With that class over and back home, I wrote:

Friday, September 10th

The story-telling hour was really entertaining....

Again, I was not really teaching [!]. However, I think one may regard story-telling as a [worthy] part of a teaching where the aim is to have the students make it clearer to themselves what they think of as good teaching...

I am becoming ever more convinced about the importance that people [student teachers] tell stories. This kind of activity appears to...help people understand. In addition, it is exciting to get this spectrum of experiences.

Listening to the audio-recordings I made of the class gives me the same impression: We were having a good time together. However, I notice when writing this now (in June, 2001) that I am about to *devalue* this point, saying something like: “Yes, *entertaining* – but so what? What were they *learning* from this?” On closer examination, I find that I should rather *celebrate* this joyfulness. We were about to start a journey together, apparently a new type of journey. Now, in the beginning of the journey, we were telling stories; we were listening carefully to each other, we were sharing parts of our lived experiences, each participant allowing the rest of the group to have a little look into a segment of his or her life. What a good thing! What a good thing for our being together, our little community.

I may have been thinking something like this when I went home that Friday. At least was I in good mood, happy once again because of the seemingly good rapport that was evolving in our group. However, reminding myself that I was a *researcher* of my own practice I started to take a “closer look” at the stories the students had been telling. In doing this I noticed most of all striking similarities in their views of what constitutes a good teacher and that these could be assembled into four major categories, shown in 6.2 together with some excerpts or examples from the students’ written work.

Theme /category.	Examples: excerpts form the students’ written work.
Teacher shows interest in and knowledge of teaching subject.	<ul style="list-style-type: none"> • Their interest in the subject was so evident. One could feel that they felt their subject to be of utmost importance. • ...and it happened that he became immersed himself in the subject.
Teacher shows interest in teaching, good preparation and organized instruction.	<ul style="list-style-type: none"> • They were well prepared and used the time efficiently, teaching materials exemplary. • Excellent lesson plans, homework and other things associated to the work in the class. • That teacher was “the contentious type” who always comes well prepared, with good notes and good knowledge. The stuff was organized and presented on well made transparencies.

Teacher is sympathetic / shows lively performance and /or is a special (strong) character.	<ul style="list-style-type: none"> • They were shining. They were so cheerful. Living performance. • He was ruling like a military leader. • They were so good at telling stories...appeared self-confident and clever... • ...such a strong character. • His voice was strong and good to listen to.
Teacher connects to students.	<ul style="list-style-type: none"> • They looked at students or appeared to do so...gave opportunities for questions. • ...she really listened to what we were saying... • This teacher was demanding...kept strong discipline...was in contact with us...was not indifferent about us • Was one of us...interested in us...wanted us to feel good...respected us and was respected. • It was unbelievable how she engaged us...involved us in the most unbelievable things, even learning!..

Table 6.2. Memorable teachers. Each dot (•) in each category represents a new student's utterance.

The categories that emerged from my analysis neither surprised my students nor me. These are images that commonly surface when people in my country begin to talk about teachers and teaching. What surprised us, however, was how *similar* the students' attitudes were. In fact, most students appeared in each of the four categories. I take this to mean that there was a high degree of consensus in the group concerning what it takes to be a good teacher. Most notable are qualities like *interest* and *enthusiasm* toward students and/or subjects. Scanning the stories, what emerges most forcefully and associated with "the memorable good teacher" is a sort of *wholeheartedness* and *strong presence*. The "ideal" teacher is close, caring and enthusiastic.

A useful activity? For me it was. Listening to the stories and doing that little piece of analysis (table 6.2) was quite informative from my point of view. Having done this I felt I was closer to my students' thinking about teaching. Concerning the students, I do think that the activity helped them develop their thinking a bit. My intent, as you already now, was creating a learning environment that would help the participants develop their thinking about

teaching and learning. I think of this particular activity as a part of such an environment. At the core of it is the idea that if you examine what qualities you assign to teachers you like you may be exposing things that *you* see as important for your own development as teacher. Besides, doing such an *inquiry* may in itself be a significant event, at least for my students who, following the tradition, have usually been allocated rather passive roles as learners. My intent is to evoke the *thinker* in my students in the hope that they will treat their future pupils in a similar way. A prerequisite for this to happen is that my students participate in inquiry-oriented activities. Thinking about my own way of teaching in the past, I recognize this as a new trend in my way of teaching. "Before Canada" I tended to restrict my teaching to *talks*, thinking that they were (together with a good intent) sufficient to launch new modes of teaching. "After Canada" I was convinced that student teachers must *do* things and *reflect* on their actions.

Did this activity make any *impacts* on my students? A difficult question to answer. No doubt, while we were doing this activity there was seemed to be a general enthusiasm in the group like the participants were really enjoying these stories. What is of importance, of course, is that they find in them something valuable for their own learning to teach project. In a particular assignment the student did some weeks later and in which they were required to reflect on the course, only two of them mentioned this particular activity. One of them wrote:

One of the things I found most interesting was the session in which the students told about memorable teachers. I felt I was learning a lot by listening to the students and we agreed substantially what characterizes good teachers, e.g. discipline, organization, ambition and interest in students.

The other student wrote:

In the beginning of the class, each one of us told about this day's assignment, i.e. memorable teacher. It certainly took two hours doing it all. Maybe it was too long, maybe not.

Such is contingency of life. Sometimes things we say and do as educators are embraced and carried to new situations, sometimes not. Apparently, the former student was *actively picking up these stories* and aligning them with her emerging teaching story while the latter was not so taken by them. We may link this to what Dewey (1916/1944) speaks of as "active habits" (p. 52) that for him is the active part of "growth", the part that *constitutes* "growing" in involve "thought, invention, and initiative in applying capacities to new aims" (p. 52 – 53). This is in contrast to the more 'passive adjustment' of the individual to the environment, the part or form that Dewey speaks of as "habituation". The challenge for us teacher educators, it seems to me, is to create learning environments that affect our students in such a way that "active habits" replace the passive ones. Apparently, I was experiencing some success in this regard in the "Memorable Teachers" activity. The question for me is how this activity may be improved so as to engage more students. Listening to the audio-tapings of the session where "Memorable Teachers" was on the agenda it strikes me that we tend to 'rush' from one story to another. When the rest of the class responds to the teller the comment tends to be a 'counter-story'. It is as though what X says evokes in Y certain memories, which Y 'can't wait to tell'. Many "good points" appear in the stories told but few are given attentive though, it seems. They do not, as a rule, become an issue of *inquiry*. This is my responsibility and I may not be doing a good job in this regard. Indeed, I was also 'carried away' with the stories being told. My 'excuse' may be that I am a beginner - en route to a new pedagogy. I need time to learn and that is precisely what I am trying to do in this current writing. This is my "reflection-on-action" to borrow a term from Donald Schön (1983), my inquiry into my "swampy lowland where situations are confusing "messes"

incapable of technical solutions” (p. 42). Doing this reflection, I am hoping to become somewhat better at doing such things in the future.

On the other hand we (teacher educators) should face the fact that we are not in *control* of everything. Following the constructivist lead we should be prepared for different ‘outcomes’ of our efforts (MacKinnon and Erickson 1992). In other words, we should expect our student teachers to follow different “learning routes”, each one choosing a route that is in accord with his or her beliefs or dispositions. Indeed, the slogan “learning to teach from within” that I think of as an appropriate flag for my course aligns with this type of understanding.

Evaluating my Students’ Performances

One of the things I have always found difficult when it comes to my practice as teacher educator is evaluating my student’s performances, that is, figuring out what to say or how to respond when observing them teaching. I will revisit this theme later when describing in some detail a visit to one of my students during her practicum (chapter 8). Here I want to do draw your attention to a little episode that speaks to the same issue but from a somewhat different angle.

I am sitting in my home observing video recordings made in connection with the thing called “Assignment 2”. As may be seen from table 6.1, this assignment was given a prominent place in our agenda during the autumn term. Briefly, the students were supposed, individually, to make a lesson plan. In doing so they were required to elaborate on a set of criteria or “things to consider” such as connections to the state curriculum, characteristics of students and learning sources (the textbook in particular), their own understanding of the content, conditions in class, and teaching methods. In our class, they presented their plan and gave the rest of the group an idea of how they would teach. The presentation and the discussion that followed were videotaped and, as a part of the assignment, the participants

were required to observe and reflect on the video and their colleague's responses. Handing in Assignment 2, these video-recordings followed. Now I was looking at two of these recordings. While doing this I wrote in my journal:

Tuesday, November 16th

I was looking at the video-recordings that follow Assignment 2. As before, I do not find it easy to evaluate the students' performances. I looked at Ricky and then Cathy. I felt both of them were doing quite well; they are well organized and appear confident. I give each of them 4 points (out of maximum 5). However, they are very different.

For an outsider this activity of mine may not appear as a "big issue". For me it was. As usual when observing my students I found it difficult to judge if what I was looking at should be labelled as "excellent", "good", "satisfactory" or whatever. As usual, I was uneasy, confused, insecure, looking in vain for "adequate criteria" or some kind of "grid" to hold on, even a bit ashamed of myself feeling like this. After all, I had been doing such things for years, i.e. observing student teachers. In most cases, I did not feel confident. That was "before Canada". Now it is "after Canada" and with "all my new learning", I should be more confident. I was not. On the contrary, I felt even *less* confident than before. Why?

No doubt, my dilemma is linked to my new pedagogy. I had started to say in public that "good teaching comes from within". I was saying to myself that I would try my best to help each of my students to figure out their own theory of teaching, their teacher identity. In doing this, I would certainly push away or forget altogether the checklist I used to carry with me when visiting my students doing their practicum teaching. Sitting there, in front of my TV, watching Ricky and Cathy, I was certainly not using a checklist. I was turning to these individuals as *persons* in the process of "crafting their teacher identity" to borrow words from Lave (1996). I was trying to see them "as they were" rather than relative to the universal "principles-of-teaching-criteria" apparent in most checklists. In other words, I was trying to

see Cathy and Ricky (like the rest of my students) as being in the process of learning to teach *from within* and now I was offered a little “window” into that process – a half hour video recording from each of them showing their performance. Doing this looking I feel that both of them are doing “quite well”, and that they are “well organized and appear confident”. Accordingly, “I give each of them 4 points” even though recognizing that “they are very different”.

While working on this chapter, I came to read Pinar (1995) quoting Tetsuo Aoki saying that, “what matters deeply in the situated world of the classroom is how the teachers’ ‘doing’ flows from who they are ... Teaching is fundamentally a mode of being” (Aoki 1986, p. 8). I felt relieved. I was happy to find Aoki saying this and I felt comfortable seeing him speak of teaching in a similar way as does Palmer (1998): “good teaching comes from the identity and integrity of the teacher” (p. 10). And I said to myself: My confusion when observing my students and my reluctance in using a checklist, connects to this issue of ‘doing’ that flows from the ‘I’ that is teaching or presenting. I – the teacher - must be allowed to do things *the way I am* instead of “suffer the pain of having my peculiar gift as a teacher crammed into the Procrustean bed of someone else’s method and the standards prescribed by it” to quote Palmer (1998, p. 11-12) again.

I was learning to teach teachers. I had started saying in public that “good teaching comes from within”. Maybe that voice had been with me for a long time. Maybe Palmer helped me say this thing. However, I was and I am living in a world of standards and checklists. I remember hours and days of work with my colleagues producing “new and better” checklists but, when coming to observe a student of mine teaching, either I did not bring these lists on the table or – if I did so – tended to push them aside like they were disturbing me.

I was experiencing a *tension*. I had come to speak openly (with Palmer's help) that good teachers are able to connect with themselves, their subjects and their students. Methods, modes of teaching can vary widely but they must flow from the "I" that teaches. Coming so far and following your students' teaching you begin to look for something "different" – the way the student is, the way she is in that particular situation, her "being" with her students, how she acts in this particular learning community. However, describing what you see from this new vantage point is not that simple. You lack words. Your new "vocabulary" is still immature. You want to bring what you read in your books and articles into your way of being with your students but you run into difficulties because that sphere is crowded with words and habitual ways of speaking from the vocabulary of "technical rationality" (Schön, 1983). This creates tension.

William James (1948) once remarked that, "New truth is always a go-between, a smoother-over of transitions. It marries old opinion to new fact as ever to show a minimum of jolt, a maximum of continuity" (p. 149). Applying this wisdom to my case, I might say that in my efforts to think and act differently I could not simply "wall off" my past beliefs and my past practices.

Cathy got 4 points out of the maximum 5. Why that "minus one"? I explained:

Clear presentation. The voice was good. Explains well. Good preparation. I realize that this was a lecture / presentation; however I would have liked to see you interact more with the students [us] in the part where you were teaching. You were responding professionally to the critic given.

A sort of "smoothing -over"?

Little Miracles

As the weeks passed, I felt increasingly comfortable with how things were going in my new course and I am convinced that this good feeling linked to the particular assignment I have been describing, that is, assignment 2. Continuing watching the video recordings accompanying this assignment, I wrote some days later:

Thursday, November 25th

I am watching the video recording with Gisela...She is doing so well. A very interesting discussion follows that I feel casts light on a particular development in the group. Ricky, for example, tells that he feels he is always experiencing “little miracles” [in the course], [saying that] “all of us are somewhat delighted by the fact that we are approaching things in new ways”... I find it very interesting what is happening and important for me to grasp better how this has been developing. Does this link to the way assignment 2 was constructed?

Later the same day:

I am looking at Peggy. All of a sudden, I see so clearly, how important the person is. What you [the teacher] bring to the classroom is primarily yourself.

Please, note this: “... how important the person is ... What you ... bring to the classroom is primarily yourself”. No doubt, a new story is in the beginning, a new story of myself as a teacher educator, a story in which I am learning to think of my student teachers with new words, with words from people like Palmer and Aoki. “Peggy - such a strong presence!” I say to myself. Indeed, thinking of her with Aoki’s words I can still see how her performance was “flowing from who [she is]”.

The Miner

As may be seen from the course outline in table 6.1, my student's first practicum period (in a primary school) was scheduled to November 1st to 12th. I was quite concerned about this event, asking for instance, "How will they be doing?" Lurking behind this question was something like, "Well, we have been approaching things differently this term and, indeed, things have been running quite well, I think, so maybe..."

Such questions and thoughts are to be expected of a teacher educator who thinks he has been doing a good job preparing his students. I, at least, was hopeful feeling that "something good" was happening in the course. The problem for me, however, was to figure out why I was feeling this way. Frankly, I was not sure what I should expect nor was I sure what I should be looking for, for example when observing me students teaching. What should be my criteria of "something good", for example?

The excerpt from my journal given below is dated November 13th. Obviously then, the first practicum this year is over. Now, it is time to relax – or what?

Saturday, November 13th 1999

Should be relaxing because it is Saturday, late afternoon, and I had said [to my wife] that I was going to have a little nap. When I saw my laptop [beside the bed], I could not resist [start writing on it]. I had been walking in Öskjuhlíð [my favourite outdoor area] and then lot of thoughts and ideas began to rush into my consciousness, some of them worth deliberation...

The practicum. I felt that I was experiencing it differently this time. Indeed, I went to the practicum schools with a different attitude. Whereas before I had been a sort of inspector or a judge ... I was now more like a researcher determined to figure out what was happening. In the post-teaching conferences I was not so much asking what had

been happening in the lesson just finished, but rather attending to how the student teachers had experienced the practicum as a whole, what they thought of their actions, what they felt interesting and what they felt they had been learning.

For some reason I cannot explain, the next section of this journal entry is in parenthesis:

[When I say this it is not clear to me what I was emphasizing in those interviews...These were open interviews where the interviewees [the student teacher and the school adviser] shaped the course as much as I did. My impact was mainly that I asked the student teacher to describe better what I felt was unclear and/or curious. In every case though, I think I tried to have the student to tell how they saw the relationship between the practicum and the study at campus. As I told Hafdis [my colleague at the University] that I was rather surprised to hear how decisive the students saying that the time spent on campus had been very important.]

At the end of this journal entry, appearing like out of nowhere:

Another thing that surfaced [in my head] during my walk [in that outdoor area] was the question what I mean by the question: What am I learning? What do my students learn from my course? What do I mean by "learn" when I ask this way?

Now, I do not intend make further comments on these words because I think they stand for themselves and serve well to illustrate my situation - my anxiety and my confusion at this point in time. Apparently, establishing a new pedagogy may not be the simplest thing one does.

Here is an additional piece from that Saturday writing:

It strikes me what a broad spectrum [of classroom cultures] I have seen. The mathematics classroom ... everything so straightforward. Following the book in every

detail. The lesson begins with a short teacher-talk and so the students start on their math problems and the teacher walks between them. The biology lesson ... like a conversation. The geography lesson ... almost an examination.

Why was I writing things like this? Was I trying to discern some sort of a pattern? I do not know. Going through my journal, I see that I was quite often writing things like this. It appears that I was trying to ‘capture’ something. I am a researcher. I should be figuring out ‘what is happening’; in my course, in practicum, as well as in my own chemistry teaching. At this point in time, I tended to think of the goal of my research as figuring out “how things really were” or “what was really happening”. Interviewing my students I tended to behave like “a miner who unearths the valuable metal” to use a metaphor from Kvale (1996, p. 3). To refresh our memory (cf. chapter 3), Kvale thinks researchers may be grouped into “miners” and “travellers”, the former label pointing to those that think knowledge as a buried metal and, consequently, busy unearthing it. The traveler, on the other hand, “wanders through the landscape and enters conversations with the people encountered ... asks questions that leads the subjects to tell their own stories of their lived world” (p. 4). Knowledge for the traveller is a matter of *conversation* in the sense that those who participate (the researchers as well as those being visited) in it may *build new understandings* of the world and their lives. At this point in time (1999), I was not thinking of knowledge as a matter of conversation. That came later – when starting to explore some readings of Rorty. However, I think I may say that I was, in this period, becoming somewhat uncomfortable with thinking of knowledge as “chunks accumulating in the head” or something like that, maybe because of my readings of socioculturalist authors like Lave and Wenger (Lave and Wenger 1991; Lave 1996). However, there were still enough of the personal constructivist in me to make me wonder if my student teachers were not carrying with them some “good constructs” that might be ascribed to things we were doing together in my course. These would be “the impacts from

my course". "Unearthing" these would help me justify the course I was building with so much care and enthusiasm.

These concerns are evident in the transcript that follows below and was taken from an interview I had with one of my student teachers right after a class (in a primary school) where she had been teaching mathematics. I call her Gisele, shortened to "G" below. Reading the transcript now (several months later), I feel like reading a *miner's report* rather than a *traveller's*. Just before the audiotape was started, Gisele's school adviser had just told me that she (Gisele) had been doing a very good job. I then respond:

(I:) Yes, this must be some kind of sensitivity that...

[Noise, unclear. The school adviser is coming. I ask her to come closer because I am audio taping this ...]

(I:) I am sort of trying these things out. I like to explore these things a bit so that I may understand the student better ... and, yes, I am, you know, collecting data...you, see, I am teaching them how to teach. Seriously, I feel like I am doing this first time; although I have been in this business for ten years. I went to America, Canada, you know, I am sort of trying new ways ... I would like to ask you, I mean, maybe it is a bit difficult for me to say this, to speak frankly because I am your teacher, but I would really like to know ... [disturbance, a woman I know passes by and greets me] ... Do you see any relationship...?

(G:) To your class?

(I:) Yeah, I mean, generally.

(G:) Generally ... aah, I do not think so. Not what I am doing in the general didactics course ... I am only taking it and your course. In your course it is all this discussion

about ... the individual [student], attend to him, that people differ and all that, of course I knew ... it is just that when things are highlighted like this that they fasten in one's mind, they come in.

(I:) They come in.

A few moments later:

(I:) It's a difficult thing to do ... to prepare you folks, it's simply so that people [students] do not see any relationships...

(G:) You see, isn't it so, as I am saying, what we have been talking about, we know of these things but when they have been pumped into us so strongly they sit there, maybe we do not realize fully that they came from you.

(I:) Good to know from where good things come from!

(G:) (Laughs) Yes.

Laughing. Gisele does a great deal of that – cheerful as she is. Earlier in the interview she told me that she “knew” she would like to teach before she tried to do so, adding that “it’s my problem and I have to face it ... that I find everything so fun”. Then she laughed. Trying out new things with people like her makes one worry less and to do more of smiling.

Interviewing her, I am a miner. I make efforts to unearth some “gold bits” from her, figure out if she was carrying some “good bits of knowledge” from my course and/or the teacher education program. From her responses, one is tempted to believe that this was indeed the case. It appears to her that things we did in our group, the talks in particular, somehow “follow” her. *She feels this way*. However, this is not something easy to articulate. In fact, Gisele’s responses to my questions are typical for the responses I got when asking my students (in practicum settings) to reflect on possible links to our work at campus. Most of

them felt so but... To begin with, these responses made me somewhat anxious because I was worrying that my new course *might not make any difference in practice*. However, with time I have come to think how difficult if not impossible it is to uncover such “impacts” in case they occur. It may be easy to figure out the impacts of teaching your students some chemical formulas. You arrange a test to figure out if the formulas (the ‘gold bits’) have been “received”. On the other hand, how should I figure out if ‘things I was teaching’ in my teacher education course were ‘received’. What does ‘received’ mean in this case? Should it be thought about as a ‘precious mineral to be unearthed’ through observation and a post-teaching conference? Or should we (teacher educators) drop the miner and stick to the traveller? If we do that, how should we act? What does it entail acting like a traveller when observing our students teach and talking to them afterwards?

Further complicating the issue of “impacts from campus work” is the fact that moving from campus to a practicum setting inevitably involves some kind of “adjustment” to new surroundings. What that “adjustment” entails will depend on the analytical lens used. Using a sociocultural lens, this implies adapting to a new *culture* that has designed its own “maps” (Gee and Green 1998) for its members to navigate in the terrain called “teaching”. This may result in student teachers not knowing how to behave or “not able to integrate their experiences in ways that would help them learn to teach” (Wideen et al. 1998, p. 160) because the maps of the new culture are different from the ones that were handed to them at campus. Inexperienced as they usually are and still struggling with their teacher identities, they do not *know which maps to choose*. In many cases, this results in individual student teachers trying to *mix* maps. That, however, may not be a good solution because trying to adapt to *contrasting rules of actions* often makes people confused and, consequently, unable to act with poise.

Gisele was not confused. She was happy as usual. She was enjoying teaching like she was enjoying most other things, according to her own words. Not carrying different maps? – I hear you asking. I do not know. Gisele is, I think, a person of the type that is good at *making maps*. Entering our teacher educator program, she was (I assume) already busy making maps because she is so curious about life and eager to explore different seas and terrains. Contrary to many other students, she is particularly good at picking up “useful stories” from her surroundings and *for* her own purposes. Besides, she is carrying a strong story of herself, including an image of the teacher she wants to be (as a child, she told me, she ‘knew’ she would become a teacher in the future). Much to my pleasure, she found ‘all this discussion’ in our group useful. She said, “Of course [she] knew [it all] ... it is just that when things are highlighted like this that they fasten in one’s mind, they come in”.

That is what Gisela said during our post-teaching conference and her words sound like good music to me. After all, it seems that she was experiencing our talks at campus as useful or as she put it, as helping her to “fasten [things] in [her] mind”. Thinking about Rorty makes me wonder if I was, through the “learning-from-within-environment” I initiated with my new course, *enabling her to develop her final vocabulary*. Could be!

And We Were All Happy Toward the End of That Term

The group appeared enthusiastic, not least during the sessions where the students were presenting assignment 2. The discussions went high and the rapport in our group was good. When we met again after the students’ first practicum period and then coming close to the end of term one, we discussed the course. Here are some pieces from my journal on this occasion:

Wednesday, November 19th 1999

The discussion on the course, that is, the autumn [part] was very encouraging for me.

In particular, the students felt satisfied with:

- * Assignment 2. It appears that the students found this assignment particularly satisfying. They found it well organized and demanding. You could not escape justifying your actions. I reminded them that the main goal of the course was to help the participants to develop their own theory of teaching. However, one may ask what this means. What counts most in this regard? This launched considerable discussions. Some of the students felt that technical things such as how to use the overhead projector or the blackboard properly was most important while others meant that thinking was the major issue.

- * My lectures, in particular the examples from [my school].

- * The discussions. I pointed to the fact that a considerable part of our time together had been spent on talks; that we were always taking together. I could hear from this discussion that students seemed to be satisfied with having had so good opportunities to express their ideas. In addition, it was good to listen to others, hear how they thought about things that they had been struggling with. On the other hand, they felt it was important to hear more from me and, in fact, encouraged me to tell them more about the things I was doing in [my school] and what I had learnt from my studies in Canada.

I told them that I was trying to change my own chemistry teaching, e.g. by putting more emphasis on the pupils' own work, that I was getting tired using my [old] transparencies and was eager to figure out new ways. Early on in my career, I had

started to write textbooks and create material related to it, such as a bank of transparencies. When all this was done, I found it natural to use those materials. However, with time this may have led me to be following the textbook and the associated transparencies in a slavish way.... Always standing beside the overhead with a pile of transparencies one may risks being seen as remote and that the students feel that their presence does not matter.

After this discussion I had the feeling that the people in my course were moving forward. The thesis that 'good teaching comes from within' ... appears to be gaining increasing understanding.

Evaluating the Course

My university follows the practice of giving students the opportunity to evaluate the courses they enrol in. The evaluation comes in two parts, a survey part in which the student responds on a 1 to 5 (Likert-type) scale to various statements and an open-format sheet where the student is supposed to describe what she feels about the teacher and the organization of the course. Usually, the students do this on the last day of the course. My students, however, did this two times during the course, first toward the end of the autumn term and then again toward the end of the spring term. What did they say after the first part was over?

As you may know, 3 on a Likert -scale means that you are “neutral” with regard to the statement given whereas 1 indicates that you “disagree strongly” and 5 that you “agree strongly” with the statement. Inspecting what my students said “on the average” about my teaching and the course (when it was half-way through), I find them on the positive side (above 3) on all but one item: They did not feel it was easy to take notes in the course (score: 2,8). Frankly, this did not come as a surprise to me! Close by (but above 3) were things like “evokes interest” (3,3) and “the course was well organized” (3,3). The highest score were on

“teacher is interested about the teaching” (4,3), “teacher encourages questioning and discussion” (4,3), and “teacher is positive to the students’ ideas about the course content” (4,2) and “content and assignments enhance understanding” (4,4). Comparing my course to other courses in the Faculty of Social Science (in which the teacher education program is located) I find “my averages” for the most part close to the average for all courses in the faculty except when it comes to note taking and organization where my course is significantly below the overall average score. Believing that the survey was constructed within a language game different from my pedagogical beliefs, this outcome did not cause me much concern. However, I was curious about what my student said in the open format part where they are allowed to express themselves freely and, not to forget, *anonymously*. Inspecting this part, I found on the positive side that they tended to describe me as “enthusiastic”, “open”, “critical”, and “encouraging” and that many of them found our discussions “interesting” and “illuminating”. When it comes to things that they felt might be improved, they advised me to be more firm controlling the discussions and provide them with more stuff from my experience and “knowledge reserves”.

Examples:

Student 1: Teacher is interested in what he is doing and enchants people. Gets us to think ... Teacher should control better the discussions and see to that all students get a share.

Student 2: The teacher is very interested and active in class...encourages critical thinking ... the only thing one might criticize is that we, the students, are talking too much...the teacher should talk more, give more presentations.

Student 3: The teacher is interested, enthusiastic and joyful...the lessons are running well ... teacher is maybe too liberal. Might stop discussions when they are taking up too much time from other things. But this is also one of his major strengths!

Student 4: You are very enthusiastic about the course, our opinion and us. You should give more presentations. One with so much experience and knowledge might share more things with us.

I should stress once again that these student responses came when our course was halfway through. We should also note that I did not receive them until late February when we were a good way into the latter part of our course. Accordingly, the survey as such did not affect my plan for the second half of our course. However, beginning the spring term I was already aware of the criticism implied in these responses. As you saw in the section preceding this one, these things surfaced in our discussion in class toward the end of the autumn term. Then I noticed in particular that a substantial part of my students were becoming increasingly sceptical to "all this talk". The discussions, even though they were interesting, were taking too much time from other things, e.g. things that I had – my students suspected – been "holding back". You have been teaching chemistry for twenty years and, besides, studying "these issues" in Canada for two years. Why not tell us, Hafthor?

Clouds Over the Horizon?

This was the message I got from my students when the first part of our journey was over. Was I happy with it? No, not really, at least not to begin with. Now, when it comes to happiness or unhappiness the discussion comes close to so-called 'personal things' and, maybe for some, too far from 'the cognitive' that many feel should be the main if not the exclusive content of a doctoral dissertation. However, this is a self-study and I feel obligated

to bring forth my feelings too. Indeed, I do subscribe to Palmer (1998) on this point; I agree with him that “if we want to grow as teachers – we must do some thing alien to the academic culture: we must talk to each other about our inner lives...” (p. 12).

For some reason I felt miserable at this point in time – that is, during the last week of November and first week of December 1999. As evident from the course outline (table 6.1), last thing I did was to conduct interviews with my students (on November 26th). On that occasion, they handed in “Assignment 1”. This assignment was thought of as a summary of their own “reflective journal entries” they had been making in class up till this point. Providing them with a set of questions concerning how they felt about “this particular lesson”, the group, and my teaching, they were given approximately half an hour toward the end of each class to write their responses. In order to facilitate their summary, I provided them with a framework adapted from Hoban (1998), materialized in a table where they could assemble their entries into a set of four predetermined categories: (1) Personal factors (me-the student), (2) teaching factors (the teacher; Hafthor), (3) social factors (the group; other students), and (4) situational factors (e.g. adequate resources). Each category (row) was divided into (columns of) “positive” and “negative” influences resulting in a matrix of eight cells. Below is an example from one of my students:

Influences	Positive / enhancing factors	Negative /inhibiting factors
Personal factors (I as a student) <input type="checkbox"/> Pre-knowledge <input type="checkbox"/> Feeling <input type="checkbox"/> Interest	5 Good Positive, optimism, well-being in a good group Considerable	1 Anxiety, feel pressed to express myself even if I feel I have nothing to say.
Teaching – (the teacher) <input type="checkbox"/> Preparation <input type="checkbox"/> Goals <input type="checkbox"/> Teaching methods	10 Teacher full of wisdom. Was well prepared when speaking. Clear Unusual, i.e. mostly discussions.	5 Did not always have the best resources – they were on the way from Canada. Not followed Monotonous, usually discussions. Few presentations. Group work two times. Student presentation once.

<input type="checkbox"/> Learning resources <input type="checkbox"/> Management <input type="checkbox"/> Instructions <input type="checkbox"/> Guidance	Our journal, good. Articles Hafthor selected were fine. Clear Very good with respect to assignments, homework and during practicum.	Not goal-directed enough. Discussions often went into stupidity. Teacher sometimes forgot as when....
Social factors – (the other students) <input type="checkbox"/> The group	1 Diverse with respect to experience.	1 Diverse with respect to educational background.
Situational factors <input type="checkbox"/> Physical environment <input type="checkbox"/> Time management	1 The room was not too big and not too small. All teaching equipment available.	1 Coffee break usually not on time. In the beginning we were wandering between rooms and that was disturbing.
Sum	18	9

Table 6.3. Goldie's table from Assignment 1.

The author of this table is a student I call Goldie. You will come to know her better in chapter 8 in which I describe my visit to her during her practicum in a secondary school. To me Goldie appears as an “accurate person”. She wants to do things thoroughly. The table she made points to this thoroughness or care. She extends my guidelines, adding various subcategories to the categories I gave her and she also counts how many “positives” and “negatives” she comes up with, resulting as you see in 18 of the former and 9 of the latter. Goldie:

According to points given the positive factors are twice as many as the negative ones. I found that acceptable but it would have been better if the negative factors had been fewer or even absent. (Goldie, Assignment 1, p.4).

The table Goldie generated in this assignment mirrors what she wrote in general in that document. Some things were good, some bad, the former exceeding the latter. Seeing what the other students came up with I recognize a similar pattern. Taking into account that I

was trying new things, change my practice, this “outcome” halfway through with much more “positives” than “negatives” might have been taken as indicating that the course was, by and large, going well. Consequently, I should be happy.

However, I was not. In fact, I felt somewhat miserable. I connect this unhappy feeling to accounts of the type given by Goldie and some others participants who had been rather silent in our group in this first part, during the autumn. As you may have noted, I was quite happy with the course most of the time during the autumn. I felt our boat, “The New Course” was sailing well. We were telling stories that often made us laugh and we were having lot of little “show and tell” events that warmed our hearts. I, the captain, was becoming increasingly convinced that the map I was carrying with me from Canada was a good map and that it was leading us the Land of Our Promises. Now, halfway, in the middle of the big ocean, I noticed that not all of us had been feeling well. Nor had they felt the discussions as informing and enlightening as I did. Goldie, for example, felt that they often “went into stupidity” as she says in the table above (table 6.3).

En route to a new pedagogy, there will be days when we serve our students poorly, days when our guilt only deepens. (Palmer 1998, p. 132).

I was miserable because I felt that I had been serving some of my students poorly, in particular those who did not have any teaching experience behind them. You may remember the heterogeneity of our group. Of the eleven participants that stayed “on board” (three escaped when we were sailing out of the harbour, remember), two were already teaching while two others were working in the labour market. Only the remaining six students could be said to be “ordinary” (full-time) student teachers; and, as a matter of fact, these students did not speak so much, at least not as much as the others. In fact, it was not until now – in this particular assignment - that I really heard those voices. Ruth, one of the silent students wrote:

The discussions were often lively...especially in the beginning. It was often so that those with teaching experience had most to say while we who had not been teaching did not have much to say. What affected me most negatively with respect to the group were the discussions that...tended to go astray with respect to the topic that we had originally planned to talk about. (Ruth, Assignment 1, p. 2-3)

I felt sad. Obviously, not all the participants were that impressed by the lively discussions we had been though so far. They were expecting something else, waiting for more “concrete” stuff, information, facts, and principles. Once aware of this I looked for more examples of such “disturbances”. They were not difficult to find:

The journal writing created in me a feeling of insecurity that had somewhat disturbing impact on me in class. Because I had never before kept a journal I felt it difficult to analyse our lessons in this form; and when I looked over what I had written in my journal, I found that there was not much useful information in it. (Ruth, Assignment 1, p. 2)

Reading this passage, I was reminded of a little episode in one of our classes earlier that term. I wrote about it in my journal, after class on October 1st 1997:

Ruth came to talk with me [after class] and told me that she was experiencing difficulties with her journal keeping, there was so little coming out of this. She was worrying about this because Assignment 1 would be building on this [the journal entries]. She said that maybe this was difficult for her because she was a rather closed personality.

Commenting on this I continued:

This gives me reason to reconsider how useful a journal is for people like her and what might be done to help them forward... I should look for some research on this thing.

Maybe it would be better for some of them to use some kind of portfolio.

Moving our “camera” closer to the present, i.e. to December 17th, we still find me grappling with this issue. I am sitting in front of my computer writing a lengthy piece, beginning:

It came over me when I was working on my plan for my course in the spring. There was something that did not fit. I had been making a draft of the course outline...Then I went to a meeting. It was around noon. On my way back I began to think about what Goldie had said in Assignment 1:

In my thinking, theory of teaching means theory that individuals who are planning to teach should learn in order to become professionals because the theories show us the best possible ways to present the topics in an effective way to serve the pupils.
(Goldie, Assignment 1, p. 6)

I thought: Maybe this is precisely what my students are hoping for! It is not unlikely that some of them think that we who teach these subject courses know what the best approaches are and even that we have them at our disposal and are able to use them effectively in our own teaching [in schools]. At least it must be known what works: “the theories show us the best possible ways to present the syllabus in an effective way”, Goldie said.

I go on:

Was I not driven forward by a similar view of theories, before I went to Canada? Was I not constantly looking for the “best way”? Was I not pretty convinced that the “best way” had already been found?

What follows is a lengthy dialogue with myself about teaching, in particular my own chemistry teaching. I reflect on the time when I was trying out “constructivist ideas” in my own teaching, believing that I was beginning “to develop modern methods of teaching science in a way that would make sense”. As you may remember from chapter 2, I did not experience much success with that adventure. These memories of my own unsuccessful attempts to live up to my own expectations, surface with force when I recognize that some of my student teachers seem to believe that I am the expert who knows “what works”. Sitting in my office at home reading what those student teachers expect of me, my thoughts go to my own chemistry teaching. You may even hear me whisper to myself, “This is not that simple”. Bringing together my own experiences as a “change agent” in my old school and what I learned from Walter Werner in his course on educational change at UBC in Vancouver I feel the burden of the immense contextual complexity involved when trying to ‘teach well’ or, if you like, ‘for understanding’. I went to Canada to learn “what the best ways are” in this respect. I returned with the attitude that “we have a long way to go”. Things are not that simple. How could I share this view of mine with Goldie and the other students? How could I describe to them how things appeared to me? How could I be of help to them? How could I help them learn to teach? How could we communicate effectively? Our worlds seemed wide apart.

We will continue grappling with these issues in the chapters to come. Before we round this one off, let us take a short look into the “future”, that is, the second part of the course I was running.

The Spring Term

My focus in this chapter is on the *first part* of my course, the autumn term. Accordingly, I will restrict my discussion on the latter part, the spring term, to a few brief comments.

I can say that as we continued our sailing to the Land of Our Promises, I looked a bit more often at “my old map”, the one I had been using prior to my graduate studies in Canada. I was, for instance, doing more lecturing. This resulted in higher scores on the university driven survey mentioned above and that was repeated toward the end of the spring term. Now, for example I was scoring 3,9 on “easy to take notes” item, whereas the autumn score was only 2,8, i.e. up 1,1 points – apparently a significant “improvement”! The same applies to the items “enthusiastic about the teaching” (4,9), “encourages questioning” (4,9), and “positive toward the students’ ideas” (5,0). Top scores! Not on all items though. As before my students did not find the course particularly demanding (3,3; down 0,5) nor well organized (3,6; up though 0,6!). Looking to what they write I see that my students continue to praise me for being “friendly”, “involved”, and “patient” but still reminding me that I might do better “controlling things”, the discussions in particular. Some complain that I am “pedantic” when evaluating their assignments. Lastly, some of them suggest that there should have been given more time for explications of teaching methods. This last point did not come as a surprise to me. I simply admit that this issue continues to cause me trouble. Coming to this part (labelled “Teaching methods”) in my course, I still feel somewhat “guilty” not being able to tell my students “what works”. Part of my trouble may be a more “diversified” attitude of mine toward the issue of “things that work” after my studies at UBC. I am thinking, for example, about “the complexity issue” touched upon in the foregoing section. Besides, it appears to me that I am being quite good at “problematizing things”. Instead of telling my student right away about all the wonderful “little teaching tips” out there I tend to

tell them anecdotes from my own practice, stories that convey the message that “things are not that simple”. As mentioned earlier, my students (or at least some of them) tended to “suck these stories as sponges” as one of them said. Still though I hear them – some of them – saying, “How should we *teach*, Hafthor”?

What a burden!

Epilogue

My intent in writing this chapter was to provide you with some glimpses from the course I tried to create in light of ideas I had come to like while studying in Canada. My idea was that it might be informative for us to “have a look at things from inside” and try figure out the “cash-value” of the ideas I was carrying with me from Canada. Were they leading to something “good”?

Obvious to me, *good things happened*. Right from the beginning, most of the participants seemed to welcome the idea of learning to teach from within. In other words, they seemed to accept the belief that learning to teach was, partially at least, a question of examining and building on their own entering beliefs. In retrospect, it appears to me that this idea helped evoke in my students (at least some of them) a *feeling of agency and responsibility*. Faithful to the idea of learning to teach from within, I was saying to them: Learning to teach is your task. I am expecting you that to take things into your own hands and that you start figuring out who you want to be as teachers. There are plenty of resources available to you to carry out that task, for example your life history, your schooling, your own teaching experiences, a whole bunch of literature, and so on. My role is helping you with this task; support your own attempts to develop your abilities as teacher.

I think I may say that I tried to conduct the course in this spirit. I made efforts to give room for the participant’s ideas, feelings, and concerns. There were lengthy discussions and stories were exchanged. The participants were given possibilities to develop teaching plans,

present them to the rest of the group, defend them, and respond to critique. They were encouraged to reflect on each session and collect their entries into a particular assignment that would facilitate them to explore the complex relationship between teaching and learning. Coming toward the end of the first part of the course I was becoming increasingly convinced that things were, for the most part, going well, and that the participants were indeed “moving forward”. The participants seemed to support me in this – most of them.

Most of them. Some of my students did not say so much. They did not participate actively in our discussions. I noticed this but said to myself that some people tend to talk less than others or may not want to talk so much. One should respect that. However, as time passed I realized that the issue was more complicated. I had failed to note that there were “clouds over the horizon”.

This became clear to me on November 26th 1999, the day I had interviews with my students. Now the silent students broke the silence. Now they told me how they saw the course. Now I realized with full force that there were “different versions” of the course. Now it came right up to my face that the stories of teaching and the lively discussions were experienced quite differently. There were individuals in the group that could not make much sense of these stories and those discussions. These were in particular individuals with no teaching experiences and therefore without the possibility of linking the talks to their own lived experiences. For them, much of the discussions were simply a flow of words disconnected from “active concern with the world” to quote Dewey (1916 / 1944, p. 144).

Frankly, this was rather shocking for me. In the days that followed, I was overwhelmed with uncertainty – and guilt. After all, my intention was to serve *all* my students well. Apparently, some of them felt they were being “betrayed”. They expected me to explain to them how to teach their subjects. What they got instead were stories of teaching, mostly of the type pointing to the complexities of the teaching – learning relationship. Telling

stories from my own chemistry classes, for example, I tended to emphasize these complexities. In fact, during my studies at UBC in Canada, it had become clear to me “how complicated things are”. Besides, I had learned to “problematize things”, my own chemistry teaching included. Without doubt, I carried these new understandings to my class at the university. I wanted to convince my student teachers that teaching is not a simple affair. This rang bells in the minds of those who could link my words to their own teaching experiences. For the rest of the group my words did not have much value. “Understanding one another means that objects, including sounds, have the same value for both with respect to carrying on a common pursuit”, says Dewey (1916/1944, p. 15).

In retrospect, experiencing these problems was a good thing. Most of all, I am happy that the silent students finally spoke of their difficulties and dissatisfactions. In a way, things had been going “too smoothly”. Once the silent students had spoken I understood better the diversity of learning experiences that was unfolding. The students were experiencing the course and the various activities in it in widely different ways! Besides, the voices of those students made me come down to earth and look with a more critical eye toward the course. The stories that were told of memorable teachers, for example. We were having a good time with those stories although I may not have been good at helping my students to see them as *cases* speaking to or illustrating particular problems. Another issue were the students’ reflections toward the end of each session. Gradually I sensed that some of them were having difficulties doing this but found myself somewhat helpless doing something about the matter. I could bring up more examples of such unresolved perplexities but those already provided should suffice to underscore my point, namely that *once my silent students had helped me penetrate the “happy surface” of my course various problematic issues surfaced.* Understandably! This is to be expected. Approaching things in new ways will always bring

up some difficulties. The important thing is to bring those difficulties into the *open*.

Otherwise, we keep on smiling and learn nothing.

As hinted at above, writing this chapter, I saw it as my task to start exploring the “cash-value” of the ideas I was carrying with me from Canada, reflected in the ten statements (“my pedagogical creed”) I managed to put together when organizing my new course. Thinking pragmatically, their value depends on if they help make difference in practice or if they help us go on with our projects, for example becoming better teachers or creating a better future. As Rorty (1999) has noted, pragmatists tend to become rather vague when pressed to articulate clearly what they mean by such statements, for example when asked what “better” in the sentences just written might entail:

Pragmatists can only say something as vague as: Better in the sense of containing more of what we consider good and less of what we consider bad. When asked, “And what exactly do you consider good?” pragmatists can only say, with Whitman, “variety and freedom”, or, with Dewey, “growth”. “Growth itself”, Dewey said, “is the only moral end”. (p. 28)

Sticking to Dewey’s (1916 /1944) notion of *growth*, we may ask: Did the course I established nurture growth in the participants? As told (chapter 2), Dewey’s notion of growth includes both *habituation*, the “general and persistent balance of organic activities with the surroundings” and “*active capacities* to readjust to meet new conditions” (p. 53, my emphases). Returning from my graduate studies in Canada and wondering how I could be of help to my student teachers I came up with the idea that my role was helping them *develop their ideas and their thinking* related to education and teaching. They would be learning to teach *from within*. As I see it, this phrase comes close to Dewey’s notion of growth, in particular the “active capacities” part of it, which, for Dewey – we should remember – *constitutes* growth (while habituation should be seen as its background). Making these links enables me say that my idea is simply helping my students grow intellectually or become *more*

thoughtful about their doings. This explains my emphasis on reflection and dialogue. The glimpses you have got from my course reading this chapter may help illuminate this point. However, if you asked if my students “really changed” or if they “managed to develop their ideas significantly” or something like that, you might be pressing me too hard. As told, I do believe good things were happening in my course. I sensed more enthusiasm and joy than before. I think I may say that my new beliefs helped me see and “treat” my student teachers differently, more like *thinkers* and less like containers, more like *agents* and less like spectators.

A good course?

Yes, I think so if we take “good” to mean something like “He or she was feeling well most of the time, enjoying most of the talks, getting somewhat more confident about his or her teacher self, and getting insights into the complexities of teaching and learning”. Even Goldie – the silent but critical voice, found double so many “positives” than “negatives” when exploring her experiences from the course (table 6.3). She felt that the negatives should have been fewer. I feel happy about her judgement *now* – that is, having recovered from the initial depressive feeling that caught me when I first saw her table. After all, I was en route to a new pedagogy. Indeed, I still feel so – like a novice, I mean - albeit somewhat more confident now than I was during that first year with my new stories from Canada. The difference, I think, is mainly that I am gradually threading those stories into my own teacher educator “text”. This gives me a feeling of integrity.

Chapter 7

Teaching Chemistry and Teaching Teachers

If freedom is, in part, a capacity to look at things as if they could be otherwise, it may be endangered less by external constraints than by acquiescence to the given, a submission to what is. (Greene 1986, p. 75)

Returning to Iceland I was not only returning to my job as teacher educator at the university but also to the secondary school where I had been teaching chemistry for about two decades. The latter position has always been my main job. Indeed, I was hired to establish the course I teach at the university because of my school experiences. It was thought – or so I assume – that my experiences teaching chemistry would enable me to help prospective science teachers learn how to teach. Admittedly, I took this for granted; sure, *my* school experiences would be of help to *them*. Returning from Canada in 1999 after two years of graduate studies I was still guided by this idea. Now, however, I felt time was ripe to take a closer look at the issue: How do these two worlds connect? How do my school experiences affect the way I work with my student teachers? As I see it, these questions are highly relevant for this thesis. After all, my aim is to figure out better ways of working with my student teachers. For more than a decade now have I ‘grounded’ this work in my own school experiences, saying to myself “this is how it should be”.

Now I wonder: Should it? If so - for what reasons?

A second aspect of this chapter is my return to my old school. This was not an easy task. For some reasons I felt difficulties adapting to the environment that had been my “intellectual home” for two decades. Why? As a matter of fact, I had been away for two years ‘studying things’, science education included. Coming back, I felt I was bringing with me

new beliefs about science teaching and was hopeful these might somehow turn out as useful. However, as soon as the school started I found myself falling back on teaching behaviours that contradicted my newly acquired beliefs. Why?

I argue that exploring this issue of returning to my old teaching context is worthwhile for our main theme, that is, with reference to the issue of learning to teach. Doing this exploration, it may be helpful to think of me as a student teacher. I had been studying at 'campus'. I was carrying with me new beliefs about teaching in general and about teaching science in particular. Now the time had come to try them *in practice*, that is in my school. Once in the school, however, things became damn difficult. Somehow, this thing I call "my school" intervened, brought me down to my knees. Sounds familiar? Of course it does. The literature on learning to teach is filled with stories of this kind (e.g. Wideen et al. 1998). Student teachers everywhere tell us of difficulties they experience when trying to use things they thought they had been learning in their courses. Like me, they have seen their precious ideas 'evaporate'. As in my case, what they thought they had 'learned' during their course work did not seem to 'fit' so well with the place called "school". Why?

Note the frequent use of the quotation mark in the last sentences in preceding paragraph. I do this on purpose. It is my idea that we are somewhat at a loss when speaking of experiences of the sort brought up here, that is, experiences beginning teachers have when moving from the university to the school and finding it problematic to gain ground with things learned in the teacher education program. Following my pragmatic stance, I see the possibility that we may be in need of better descriptions of such encounters, that is descriptions that help us *deal better* with the issue. The 'situative perspective' described earlier (chapter 3) may be a step forward in this regard. In this perspective, learning is no longer confined to the individual head; it is *social* and *contextual*. It lets us focus our attention on *interactions*, the interplay between the various "actors" (Latour 1987), whether

individuals, cultures, institutions, or physical objects. A student teacher entering a school is, in this view, not simply entering a place or a building. She is entering a *new environment*. The immediate task for her is to *adapt* to this new environment, *finding a way of functioning within it*. That, of course, includes 'aligning' with the *culture* of the school. If the school in question is a secondary school, this may imply adapting to a particular ways of behaviour within a particular department, for example the chemistry department. The story that follows will be told in the spirit hinted at in this paragraph, that is, in a frame that highlights interactions. I begin with a short description of my school. My rationale for doing that is simply that you should have some idea of the school where I was teaching. My actions can only be understood in *relation* to this place and its associated forms of life.

My School

It is among the biggest secondary schools in Iceland, enrolling around 800 students and 50 – 60 teachers. It was established around 1970 as an outgrowth of the oldest secondary school in Iceland, once called "The Latin School", when the latter could not accommodate the increasing number of students applying for it. Its organization is fairly typical; the basic instructional unit is 'the class' with approximately 25 students that, once inside the classroom, most often sit in an orderly pattern, facing the teacher, listening to her and ready to take notes.

The school takes four years to finish. The first year (grade 11) is common to all. Coming to the second year, however, the students divide into three lines, i.e. a mathematics-natural science line, a language line, and a social science line. These lines are divided further, e.g. the natural science line into a physics line and biology line. The subjects taught are traditional. During the first year, for example, the students study Icelandic, English, Danish, German or French (optional), mathematics, chemistry, geology, history and sociology. The

teaching is organized around 40 minute lessons and this means, in effect, that the typical school day, from the student's perspective, is quite packed: up to seven subjects to deal with in one day. Not having a particular 'base' or a homeroom, the students move from one classroom to another during the school day. Logically, this means a quite heavy student-traffic in the school every 40 minutes with the students carrying with them all their things, including their books and overcoats. When it comes to teaching, I think it is fair to use the term 'traditional' again. The major aim in most subjects is to 'cover the content'. Reaching this goal three main working styles are followed: lecturing, seatwork, and a blend of these. Group-work is rather unusual, a fact that may partly be ascribed to the short lessons, partly to the emphasis on covering the content, and partly to views on teaching (and learning) that do not see student talk as particularly important.

Now you should have some idea of what I tend to call "my school", the place in which I have spent most of my teacher life and that has, without doubt, shaped my teacher identity. Returning from my studies in Canada, I began to teach chemistry in this school again, part-time as usual because I was also teaching teachers at the university. As hinted at above, returning to place where you have spent approximately twenty years of your teaching life is more than simply returning to a building or an institution. I was, in a sense, *returning to my past*, a world that I managed to build together with my colleagues in the 'good old days'. In other words, returning to "Menntaskólinn við Sund", as my school is called in my native language, I was re-entering a world or a culture that I had been complicit in making. As soon I was there, I saw signs from my past activities, especially in the chemistry department where I had been in charge for many years and been quite active, for example making various teaching materials such as assignments and lab activities. Not surprisingly, it was all there when I came back – waiting to mediate my actions in the form of organizational features such

as the time table, the 40 minutes lessons, the 5 minutes breaks between them, the packed curriculum, the students and the teachers rushing from one classroom to another.

Pink Floyd's *The Wall*! Why did it come to my mind in this moment?

Before soon, I had become part of this heavy traffic; besides, I tried my best to make sense of it by keeping a journal. Opening "The Red Book", as I call the journal that contains these entries, I discover that I started to make field-notes a week before the school started. Facing me is a short memo that I made on the first meeting we had in the chemistry department that school year. At first glance, I did not find it attractive – it appeared to me as a very ordinary note from a very ordinary meeting in a very ordinary secondary school department. However, when I began to bring to it new words that I had been learning from the literature, it began to take the form of a story that I found interesting.

A First Meeting in the Chemistry Department

We (the chemistry teachers) met in a classroom. Having arranged some of the pupil's desks and chairs to our purposes we sat down. Now we were facing each other: five, middle-aged men, teachers with years and years of experience. Few young people enter the teaching profession, the statistics says. While taking my things out of my bag, I looked with a curious eye around the room that I knew so well. For some reason, it awakened my interest and I found my look traversing the room:

There are the desks and the chairs and the blackboard and the overhead projector...How familiar...And soon I will be there writing on the blackboard and using my transparencies and explaining and the students will be taking notes and I will ask some questions and they will answer my questions and I will explain more and they will take more notes and then, booms, the lesson is over! 40 minute – too short!

I was the only one making notes from the meeting. Field notes. I had become a researcher. Such people make notes, field-notes. Translated to English, the 'memo' I made takes the following shape:

Chemistry teachers' meeting 26.08.99

MS [the short name for my school, Menntaskólinn við Sund] is becoming more popular. This year we will have more [new] students with high scores [on the national standardized test given at the end of the primary school]. Time of prosperity.

Grade 11: Start with a survey, also in grade 12 and 13.

It is suggested that we should begin with an English textbook in organic chemistry.

The syllabus will be ready next week.

Safety issues [in lab] should be improved.

Should hand out a packet with the periodic table etc. in grade 12 and 13 next week already.

Should make transparencies of the periodic table.

Covering / grade 11: Cover the entire book. Select [certain] chapters [for exclusion].

Covering/ grade 13: Finish the book before Christmas.

So, what is so interesting about this memo? Does it speak to our object of inquiry, the issue of learning to teach, in some way? I think it does and I will try to explain why I think so. In order to make my point a bit more 'vivid' I suggest we think of me as a *beginning* teacher entering one of the school's "departmental cubbyholes" as Hargreaves (1994) calls the departments in the secondary school. Using this labelling, he is spelling out his view that the modern secondary school has "balkanized" its teachers into departmental groups that, although sustaining to some degree an internal collaboration, tend to hinder collaboration

across subject boundaries. The result, he contends, is “pedagogical inconsistency, competitive territoriality and lack of opportunities for teacher to learn from and support each other” (p. 18) in the school as a whole. Now, thinking of me as a new teacher may seem absurd in light of the fact that I was returning to a place where I had been teaching for almost two decades. However, I was ‘new’ in the sense that I had been quite busy expanding and reorganizing my “final vocabulary” (Rorty, 1989) during my two years of graduate studies in Canada, not least the part of it I use when talking about teaching. In a more ordinary language, this meant that I was in the process of rethinking my teaching, seeing it now as the act of creating favourable learning environments with good opportunities for the students to interact with equipment, the teacher as well as with each other. While I went to Canada as ‘constructivist in theory’, I was now returning as ‘constructivist by heart’, and, on top of that, a *social* constructivist ready to live up to my values.

Was I? Was I actually ‘ready’?

On that meeting, comfortable as it was, with a nice August day outside and the classroom so clean and “inviting” I did not say a word about my new ideas, the things I felt I had been learning in Canada. Nor did my colleagues ask me. Not this time nor in the months to come. I felt that they did not want to hear about it. Was I wrong? Was it me that did not want to bring up ‘the new things’? Could it be that my ‘pre-Canada experiences’ were sitting with me, e.g. the failed attempts to teach in a constructivist spirit described in chapter 2? Or was it the case that I did not want to speak about ‘the new things’ because I could not really speak properly of them in Icelandic? Sure, I could easily speak of practical things like this or that kind of activity in my native language. However, the words I use for these practical things are, in my final vocabulary, linked in a web-like fashion to a set of other terms that I use to *justify* the practical things, for instance, the thick term “social constructivism” and associated ways of talking. As you may remember from chapter 5, I was

at this time point busy rebuilding the Icelandic part of my personal vocabulary, or more precisely, that part of it that has to do with all the 'new things' I had been learning in Canada. In other words, I was learning to speak about the 'new things' in my own native language, and, being a beginner in this sense, I was somewhat hesitant talking about 'the new things'. Besides, having been in the place I call "my school", for two decades, I knew that my colleagues preferred to talk about *things to do* rather than the 'whys' and 'hows' so popular in academy. I also knew that my colleagues tended to talk about the practicalities of teaching in their own ways, the "departmental way". In short, there are, in this community, certain 'allowed things' to talk about and there are certain 'allowed ways' of talking about them. It is in *this light* that a memo like the one shown above becomes interesting. It points to how things may be conceived of in a department of a modern secondary school:

More student with high scores this year. Good! Survey – the one I made? An English textbook in organic chemistry? How interesting! Syllabus... yes. Cover the book... yes. Make transparencies of the periodic table... yes. Yes, yes, yes.

How familiar everything was coming to be. Except for more students with high scores and, maybe, a new textbook in organic chemistry, things were going to be as usual. Following the pattern, we would start with the surveys I had made years ago. Officially, these were a sort of diagnostic devices meant to identify weak and strong sides of the students' current status with respect to their knowledge of chemistry so that our teaching might be better tuned to their needs. In effect, the surveys were 'something good to start with', and maybe, 'something that gets the students see how much they have forgotten since last year'. Anyway, we gave these to our students in the first lesson, corrected them and then returned them to the students. By then it was time to turn to 'the real thing', that is the textbook. Much to cover this year! In grade 11 it would be the entire book ... no, not exactly, maybe not chapter 17 and/or 18 and/or 20. We would discuss that – as usual. What book? My book, of

course!; the first chemistry textbook I wrote, first published in 1988; now used in most secondary schools in Iceland. For grade 12 and 13 we would be using the other two books I wrote – as before. The content would be familiar, it seemed. *Things would be as usual.*

On closer look, that little memo was carrying with it a story pointing to the ‘forms of life’ (Wittgenstein, 1972) characteristic of my school, forms of life that soon would ‘engulf’ me and make me act in accord with its rules rather than the ‘ideas’ I was carrying with me from Canada.

Teaching Chemistry Again

Returning to my chemistry teaching in September 1999 I may have been somewhat anxious. Leaving it two years earlier, I had become somewhat tired of it. My encounters with constructivism (chapter 2) had not led me to the Promised Land. On the contrary, it had made things difficult for me. Having appropriated the constructivist idea, it began to mediate my thinking about teaching. Looking at my own teaching with this new ‘lens’, made me feel disappointed, even sad. This was not how it should be. I was not teaching the way I should. However, the ‘system’ of my school was somehow pressing me to act in ways that contradicted my new vision.

Having met my colleagues in the chemistry department a week before the new school year would start, my anguish did not diminish. As indicated by the description above of our first meeting, things had not changed. ‘Covering the content’ was still the issue. ‘The more, the better’ was still the prevalent slogan of this community of practice. Facing these realities brought me down to the earth. Everything would be the same. Studying at UBC I had found new and interesting words. Now it appeared to me they would not be appropriate. Accordingly, I kept them to my private sphere. I did not speak of Canada and, God knows, I did not want to speak of social constructivism, my new thick term. I did not fit the agenda of that first meeting. It was not adequate for the culture of my school.

Returning to my chemistry teaching, I was not really carrying with me 'particular ideas' that I would like to see implemented. Studying science education in Canada I had noted a 'gap' existing between ideas held to be good in the academy and the actual practices in schools (Coble and Koballa 1996). In particular, science educators were facing the fact that constructivist ideas were not shaping the activities of the science classroom as many of them had hoped. Reading the literature, one could feel growing frustrations among those people who had been taken by the notion of constructivism. Clearly, the issue of changing current science teaching practices to accommodate constructivist ideas was much more complicated than previously believed (Solomon 1994). Returning to Iceland then I was aware of this problematic side of constructivism, that is, the apparent difficulties accompanying efforts to have it *direct* teaching practices in schools. Accordingly, I was not expecting 'miracles' to happen. My 'pre-Canada' encounters with constructivism and my studies had taught me to be less expectant than I was a decade ago. However, when you have spent considerable time and efforts on 'understanding things better' and feel that you have found new and better terms for your project it is plausible to expect 'something good' to happen, at least in that little world called "your classroom". Therefore, even though I was not expecting 'miracles' to happen I was hoping that 'something good' would happen, at least within the boundaries of 'my kingdom', i.e. my own classes. There, at least, some of my new terms might be useful, including 'social constructivism'.

In what follows, I provide you with some glimpses from my journal that address events occurring during the first week of my returning. How you read them is of course yours to decide. However, I would advise you to let my introductory words in this section guide your look. That is, I am encouraging you to think of me as trying to readapt to the 'story line' (Gee and Green 1998) of the school culture without denying my own constructivist-oriented story of teaching. Monday, August 30th 1999, was my first day of teaching chemistry after

my studies in Canada. My first class started at 8.15. Less than an hour later, I had begun to write of my classroom experiences.

Monday, August 30th 1999

Things have started. Right now (9.03) the students...are struggling with the survey I made some years ago and is meant to reveal the students' status at the beginning of the school year. This is lesson two [the second part of 2 times 40 minutes with 5 min between]. The first lesson was somewhat strange. Maybe I was somewhat 'stiff'. I used the time mostly to chat with the students about the purpose of studying chemistry. Few of them seemed to have considered why they were learning those subjects in school. "Collecting credits", one of them said. "A good question", another, a girl, said.

Later that day, with the teaching done

This was a strange experience... Standing there in front of my students it was like I was 'falling' into the world I left two years ago. UBC, Vancouver, was so far away. I simply did as I used to do before I left. The fact that most things are as I left them enables me to walk into this world; e.g. the course outlines and the surveys we start with...I thought I would be clumsy when helping the students in grade 13 with this [refresher tasks belonging to the prior year's syllabus] but I wasn't. As soon as I began to help them, things came by themselves.

I am very curious how things will develop in the weeks to come. Will I succeed pushing things forward? Will I succeed bringing in some of the things I was learning about in Vancouver?

One thing I notice: My colleagues do not ask me what I am doing for research? It appears to me that they want to keep me at some distance, that they are a bit shy of me. Is this the fear Palmer talks about?

Tuesday, August 31st

Late in the day, tired after a long day. The time is 8:55 pm and soon I will be going to the swimming pool with my wife and my children.

The first 'real' teaching lessons are over, i.e. now I was in action, started on chapter two in "Almenn efnafræði 1" [the title of my first chemistry textbook: "General chemistry 1"]. Managed to find some transparencies, diverse exemplars of chemical substances, made a lesson plan and, before I knew, I was there on full speed, first with 1.E and then 1.G [the two grade 11 classes I taught; the number '1' signifies that these are first year classes in our school]. Found this rather difficult, in particular the lesson with 1.E. They were somewhat restless. And I found myself somewhat 'clumsy' with all these chemicals, holding them in the air, asking what 'this' was and, of course, nobody knew the answer. Lot of suggestions though. Responses anyway, and with things over, I am not that unhappy. However, I ask myself: Who are these kids? How do they really feel about this? How do these things appear to them? And I ask myself: Am I a bit out-dated? How do I reach them? Does this serve some purpose? And I am a bit surprised how I simply rush into this world, grabbing transparencies and chemicals and there I am following the same route that I left two years ago. Feeling that I am doing not that bad, must appear well organized and determinate. However, underneath there is an annoying feeling that tells me that something is not as it should be. There is a lack of joy, of pleasure, of enthusiasm. One finds oneself simply in some system where things proceed in a particular way and everybody is busy

surviving! ... Am I about to fall off this chemistry wagon?... As before I feel a strong desire to look for new ways, find something that turns these kids on.

Monday, September 6th

Lab in MS

I am having lab with 1.E. I have divided the class in two groups, with the girls in one and the boys in the other. The girls are doing the lab exercise; the boys are elsewhere working on a particular assignment they will deliver to me after class. The girls appear very interested...

It strikes me how well this particular lab exercise captures the girls' interest and this convinces me once again about the value of working with concrete things and, in particular, create an environment which encourages the pupils to link symbols, names, and real chemicals. It strikes me how different this is from just sitting and listening to the teacher... Toward the end of the lesson I use the opportunity to ask the pupils for their opinion, e.g. "did you feel this useful?" and "did you learn much from this?" There were few answers...

In Café Paris around two o'clock [later that day]

I am reading Palmer [1998], page 45:

Students are marginalized people in our society. The silence that we face in the classroom is the silence that has always been adopted by people on the margin – people who have reason to fear those in power and have learned that there is a safety in not speaking...Implicitly and explicitly, young people are told that they have no experience worth having, no voice worth speaking, no future of any note, no significant role to play.

Monday, September 15th – in MS [in class, at 10 o'clock]

I am working with the boys in 3.X [the symbol for the grade 13 class; the number '3' indicating that this is a third year class]. Feel better now. Feel that I am getting into this again and feeling comfortable teaching. I realize that I have not been doing things right with 3.X. In particular, I have not made efforts enough to figure out how things look to them; found that I was giving them too much stuff (too many concepts) in a too short time. Now I have changed gear and arranged things in such a way that they will have opportunity to get some training with things I have presented and they read about in the textbook.

I have been thinking: Could it be that we [the teachers] in the secondary school are to the degree occupied with teaching and covering the content that the aims become forgotten?

After the class in MS (3.X)

I really feel how my security is growing...

A meeting with the chemistry teachers

We should have a test without a prior notice (10 min) [in grade 11].

Lab exercise 1: Needs to be revised

Station 2: We should add more questions...

Prepare a new lab in grade 11 [for next week]

John [pseudonym] will make copies

Grade 13: Should have a test on chapters 1 and 2.

Reflections

You have got glimpses from the first week of my teaching chemistry again. Before attending to them, I encouraged you to think of me as one trying to find a balance between the story line of the community I was re-entering and the new story of teaching I was trying to build. This tension is already evident in the excerpt from my first day of teaching. With the teaching done, I am taken by what I describe as “falling into the world I left two years ago”, adding that, “UBC, Vancouver, was so far away. I simply did as I used to do before I left”. Looking for an explanation, I note that “most things are as I left them” and that this fact “enables me to walk into this world”. Retrospectively, and guided by the “situated perspective” (chapter 3), I find this description interesting. Actually, I am saying that things I made in the past such as my textbooks, transparencies, and lab-descriptions, are enabling me “to walk into this world”. It is as the things I made in the past are cairns marking off the road for me to follow when teaching in this school landscape. I once helped build an environment. Now, when returning to it, it ‘kicked me back’, made me relapse into ways of speaking and acting that characterized this school and the chemistry department in it - and that I had adopted before I left for Canada.

Asking how beliefs and aspirations can be communicated, Dewey (1914/1916) contends that, “The answer, in general formulation, is: By means of the action of the environment in calling out certain responses”, adding for further clarification that:

... the particular medium in which an individual exists *leads him to see and feel one thing rather than other*; it leads him to have certain plans in order that he may act successfully with others; it strengthens some beliefs and weakens others as a condition of winning the approval of others. Thus it produces in him a certain system of behaviour, a certain disposition of action. (p. 11; my emphasis)

Dewey was an anti-dualist. He wanted us to replace dualism with the principle of *continuity*. This implies dropping the Cartesian legacy of a mind seeking to get in touch with the external world and replacing it with the Darwinian idea that we are – as living creatures – *already in touch with reality*. In other words, we are *continuous* with our environments. This is one side of the coin. The other side is *interaction*. For Dewey, these two terms are inseparable: We are continuous with our environment *through* our interactions with it. It follows that the word environment, in this vocabulary, should not be seen as a container surrounding the individual. Rather, “The things with which a man *varies* are his genuine environment” (p. 11). This definition implies that things remote in time or space may form a man’s environment as well as things close to him. The activities of an astronomer, for example vary both with the stars and his telescope. A *social environment* is constituted as soon as man’s activities are associated with others, Dewey contends. In this case:

...what he does and what he can do *depends upon the expectations, demands, approvals, and condemnation of others*. A being connected with other beings cannot perform his own activities without taking the activities of others in account. For they are the indispensable conditions of the realization of his tendencies. (p. 12; my emphasis)

It follows from this, Dewey contends, that “Thinking and feeling that have to do with action in association with others is *as much a social mode of behaviour* as is the most overt cooperative or hostile act” (p. 12; my emphasis).

Returning to my school, I was taken by the fact how easily I ‘glided’ into the world I had left two years ago. Framing this event in the Deweyan terms articulated above, the story might now be retold as follows:

I am a human being. I am continuous with my environment. My environment is the specific continuity of the surroundings with my own active tendencies. Returning to my

school I began immediately to *vary* with people and things in it. The people and the things *called out certain responses in me*. Meeting my colleagues and feeling the need to join them so that we might act successfully together, I kept back certain words while uttering others. In particular, I kept back thick terms that I had learned to use while in Canada. Meeting things I had made in the past such as the chemistry textbooks, the transparencies and the lab-handouts, they immediately began to direct my thinking and my acting through their very existence and by virtue of the fact that we had been close ‘collaborators’ in the past. Now these things called out certain responses in me. I began to say, for example, “Here is the textbook I wrote”, “Tomorrow I will begin with chapter four”, “Maybe I should use this transparency – not that bad, indeed”, “This lab would be appropriate”, and so forth. Before I knew it these things of my past (through their names and my constructions / memories of them) *had become parts of my thinking and my way of speaking*. Moreover, I felt this was ‘good’ because now I had begun to use words and ways of saying that helped my colleagues and me coordinate our actions in accord with the storyline of the culture of which we were parts.

Davis and Sumara (1997) describe school experiences similar to mine. Acting as teachers in an elementary school, they noted their tendency to “fall into conventional patterns of acting” (p. 113). Subscribing to what they call an ‘enactivist theory of cognition’, these authors emphasize what might be called “the authority of the collective”, saying for example that they “were drawn into *collective* patterns of expectation and behaviour” (p. 114, emphasis in the original). They conclude that, “it is clear from the records of the research that our teaching was as much shaped and controlled by its context as by our conscious intent. It was not primarily the individual teacher but the collective that set the standard for good teaching in the setting” (p. 114). The enactivist theory of cognition that guided these authors’ descriptions of their experiences holds that cognition is relative to the environment, that it is

not a 'fixed' entity in the head of the individual but rather a unity that *emerges* as people interact with each other and with phenomena (Kass and MacDonald 1995). As I see it, these ideas are fairly similar to Dewey's anti-dualistic ideas of the relationships between human beings and their environments articulated briefly above.

Learning to Teach

How does the story above of my returning to my school connect to the issue of learning to teach? In short, it says that a student teacher entering a school may expect being *mediated by the particular environment of the school*. Entering the school she will be *joining* a community and that means gliding into a particular collective behaviour, including saying things and doing things in particular ways and in accord with the linguistic and non-linguistic rules of the community. As in my case, this may imply leaving behind or pushing aside 'ideas' she had come to like during the teacher education program. I put the word 'ideas' into parenthesis. Following my 'linguistic bend' I think it may be better to talk of 'words', 'ways of saying', and 'linguistic practices' rather than 'ideas'. From this (neopragmatic) point of view, words are parts of our interactions with our environments and how we say things flows from and intermingles with our non-linguistic acts (such as using an overhead projector). Words, in this view, are tools and are, as other tools, judged by the community for their usefulness or appropriateness. Words that are found useful become parts of the community; words that are not found useful disappear from the scene. In other words, linguistic practices that are found effective sustain. I argue that a student teacher has to 'align' with these patterns. Indeed, this very act of '*aligning*' with the practices of the community should be seen as basic to the process of learning to teach, *a first thing to learn*. Given that we accept such an understanding of the practicum part of learning to teach we may wonder what the campus part might entail or how it might be linked to practicum. From my (neopragmatic)

point of view, academic coursework should be thought of as a process of *self-formation*.

Reading books and articles one is figuring out how different authors have come to think of education, teaching, knowledge, and learning. In doing this, one acquires new words to deal with these issues. The 'problem' is to figure out a place for oneself to stand: What is *my story* of education and teaching? How do *I* like to think of these issues? In fact, building my new course within the teacher education program I must have been thinking in this manner. The slogan 'learning to teach from within' points to terms like 'self-formation', 'my story' and 'my voice'. This emphasis on 'voice' may also explain why I found it so important 'to bring my chemistry teaching to my student teachers', an issue that I will describe below.

Establishing the new course, I felt that my role was helping my student teachers to develop their thinking with regard to teaching. 'Thinking well' about teaching one could not, in my opinion, avoid facing the *complexities* involved, in particular the numerous 'factors' that shape what and how the students learn. The student teacher, I thought, must have adequate words to deal with these complexities. If she does not have such terms, she is likely to sustain or adopt the idea of the teacher as an individual working in a social vacuum, that is, as one who is free of the organizational and cultural constraints of the school and the wider society (Britzman 1986). In what follows I will present to you some attempts of mine to bring the complexities of my chemistry teaching to my student teachers. Doing this I was guided by the idea that my story might enable them to build their stories, help them create themselves as teachers aware of the importance of the environment that inevitably interacts with our way of thinking and acting.

Bringing the Complexity of Teaching to My Student Teachers

We are now arriving at a class of mine at the University of Iceland. I am inviting you to follow my student teachers and me during a part of a class where the main theme is

‘preparing instruction’. My aim is to illustrate to you how I, in my attempts to learn to teach teachers, introduced them to some of the *complexities* I often encounter in my own chemistry teaching, even when simply following the routine ‘covering the content’ procedure characteristic of the secondary school.

The date is September 24th 1999 – Friday morning, as usual. The schedule for the morning was as follows:

8.15 to 9.40: General discussion

- a) The lesson last Friday – responses / evaluation: What did you learn?
- b) Memorable teachers – analysis
- c) School visits
- d) Other courses / connections
- e) Other issues (practicum,)
- f) Next class/ plan/ reading

9.40 to 10.00: Coffee

10.00 to 11.30: The theme of the day: Preparing instruction. Introduction: HG [that is me].

Discussion.

11.30 to 12.00: Journal [students reflecting on the class this morning and writing in their journal]

When you enter, we have just had the coffee break and I am about to begin my introduction to the day’s theme: ‘preparing instruction’. At home, earlier this morning, I wrote in my journal: “Have prepared myself quite thoroughly, I think”. Curiously, I did not write more about the day’s theme that morning. However, I think I may say that I was indeed well prepared. For example, I had been writing extensively about my chemistry classes

during the week. Now, the key-idea was to present to my student my lesson plans and contrast that issue to what ‘actually happened’. Underlying this idea was, of course, the old legacy saying that our dreams do not always come true. Planning things is one thing; ‘bringing them to life’ is something different. Usually, there are things that interact with our plans, things that we have little or no control of – contextual factors. This creates complexity, and it was complexity I wanted to show them, in this case, the complexities of teaching.

Recreating this episode, I am drawing upon an audio taping that I made of the lesson and my journal writing, not least entries I made in connection with my chemistry teaching in my secondary school. In fact, implied in my lesson plan with my students teachers on ‘preparing teaching’ is to bring them into this particular week of my teaching. For this purpose I have made a transparency of my weekly teaching schedule and here, at the beginning of my introduction, the overhead projector is casting it on the white screen on the wall. In translation it looks like this:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8.10 – 8.50	1 E 8				
8.55 – 9.35	1 E 8				
9.45 – 10.25	1 G 8		3 X 8		
10.30 – 11.10	1 G 8		3 X 8	Meeting	
11.15 – 11.55	3 X 8		1 G 7		
12.10 – 12.50			Meeting		
12.55 – 13.35		3 X 13			
13.45 – 14.25					
14.30 – 15.10		1 E 1	Meeting		
15.20 – 16.00		1 G 1	Meeting		

Table 7.1. My timetable in my secondary school.

‘1 E’, you may remember, means a particular first year class. The number appearing behind this symbol in the table refers to the number of the classroom used. ‘8’, the most

common one, refers to the room that houses the chemistry laboratory. Obviously most of my teaching was located in this room.

In the next minutes to come in my introduction, I presented the lesson plans I had made for my chemistry classes during the week we were passing. From now on, the discussion centres on the issue of 'what really happened' in these various classes during the week. I begin by telling them about the lab with 1.E on Monday, September 20th and I enjoy doing so because here is an example of a well-planned lesson that seemed to evoke enthusiasm in the pupils. Besides, I was proud telling them that here I was using a particular idea from the science education literature, what has been called "the prediction-observation-explanation technique" (White, 1988). I even use the opportunity to involve the student teachers in the activity, that is, having them grapple with some of the problems my chemistry students were dealing with, e.g. by predicting what would happen if This evokes considerable discussion in our group and we almost forget ourselves in this little chemistry game. I say:

I could spend a whole day talking with you folks about these things. This is so funny
(laughter in background).

To my experience examples of this type, that is problems from the classroom that evoke interest in the pupils, are likely to create considerable interest in the student teachers too. Besides, they seem to like being given the chance of trying for themselves, 'get into' the problems the pupils were engaged in. As you may remember, my group of student teachers was a heterogeneous one, including people from diverse subject fields. However, even the non-science people showed interest and wanted to predict say, how much air in a syringe could be compressed by hand force alone. The fact that I was using fairly simple and ordinary tools like a syringe and a balloon when working with my students may have helped creating interest in my student teachers. I was showing them how much we (teachers) can do with

quite ordinary things like a syringe or a balloon when we want to illustrate scientific ideas. At this point I use the opportunity to bring them into things 'behind the scene', the preparation work, saying:

To do such things demands a lot from the teacher if things are to proceed smoothly.

For example, an important thing in this experiment [with the air in the syringe] that I have found – by trying - is to let the pupils have a syringe like this and try push in the plunger themselves. That is a must.

There is, I think, a little 'psychological trick' in doing things this way. When you succeed *engaging* your student teachers in a particular activity you did with our pupils in your classroom you have *set the stage for the next act*, that is the question of what is needed in order to create such an learning environment. Note that I say, "...that I have found – by trying..." in the passage above. Speaking this way, I think, points to an influence from my graduate studies in Canada. Lurking behind these words is the notion of 'the teacher as learner' or 'the teacher researcher'. In a way, I am saying to my students: We must *inquire* into things, learn from our experiences and from our students. However, I did not use these words or speak this way. I only pointed out to my students that behind 'little success stories' like the one I was bringing to them there might be a lot of 'learning by doing' on the part of the teacher.

We now jump a bit, into a part of my presentation in which I have come to the next day of 'my week', i.e. Tuesday, September 21st:

On that Tuesday... I teach three classes... That room number 13 is miserable. It is so noisy because of some air-conditioning equipment and the window turns to a play area with lot of children playing...an example of when situational things that hamper schoolwork; obstruct teaching.

I think this talk about physical conditions is not a coincidence. I was determined to take my students with me into my world and the complexities of teaching, showing them the various factors that may shape the teaching-learning relationship. We should also take into consideration that my students were already working on 'Assignment 1' in which they were encouraged to build a personal model of the teaching-learning relationship. Among the influences they were asked to look for were 'situational factors'. Here I was giving them an example of such factors from my own teaching. In retrospect, I cannot but wonder *how* I was bringing 'my teaching world' to them. Going into such 'details' in the conscious manner I did was something quite new to me and I see this as one more example of how I was changing as a teacher educator as a result of my graduate studies at UBC in Canada.

I then bring my students' attention to the next classes this day, i.e. 1.E and 1.G., saying:

Still there is a sort of pain in my stomach when I go to these lessons. Having been in the school since early morning, they [the pupils] have become tired. In addition, in this week, these lessons did not go as well as the lessons on Monday. And I want you to know – you folks who are heading for this job – that we, people who have been teaching for years, experience good days and bad days and that is just natural, perfectly normal. I have told you that this first month of mine after returning from abroad and having not taught [chemistry] for two years has been rather difficult time for me. I am trying to put myself into my prior existence. That has not been easy. As you may hear now from my journal, how things were going. I tried, as you see from this document [pointing, I think, to a transparency that shows a lesson plan] ... what was I trying to do there, for example with 1.E? ... I had planned a sort of refresher work and had collected some very, very, very, very nice transparencies.

I then show them an example of those 'hyper good' transparencies because I want "to show you the technique I use when presenting things on transparencies". What I am referring to is the simple act of hiding most of the transparency to provide an opportunity for my pupils to wonder 'what comes next on it', i.e. have them think while taking notes. Stressing the importance of using transparencies mindfully I tell them a story a young Canadian friend of mine told me about his chemistry teacher (in grade 9 if I remember right) who practiced the technique of putting a transparency on the overhead and then go away to appear a bit later to put on a new one. According to my Canadian friend, this scenario affected him in such a way that he decided to give up his plan to become a doctor. Doctors must learn a whole lot in this subject, he reasoned, and now as he had lost interest in this subject, he should simply start to think about something else to do in the future.

I tell my student teachers this story and then I add:

Here you see how such things can affect young people when they are thinking about their future jobs ... how the way the teacher works can have strong influences on them...

Having shown my students the transparency and explained to them how I use it, then I ask them if the whole thing is worth the effort:

This is a nice transparency, isn't it? ... [A pause]. However, it may be a controversial issue if the time that was spent on it was well used...Would it have been better just giving them a copy?

After this question, a rather long silence followed. Then:

[A student:] Copy it afterwards.

[I:] Afterwards, yes.

[A second student:] No, I do not agree. I think that some... most [pupils] ... [unclear but she says something about students that may learn well from taking notes]

[I:] Yes, that's a point of view too...This needs to be weighed...

[A third student:] What do you do?

[I:] What? What did you say? [I do think I heard what she was asking, I just needed some time to form an answer.]

[The third student repeats:] What do you do? You do this in between [she is referring, I think, to the act of copying transparencies for the students]

[I, feeling 'rescued':] Yes, in between.

I continue talking about my 'transparency-technique', including some remarks on advice I give my pupils who are in the process of taking notes and the habit of mine of carrying with me a tray with things and chemicals to show my pupils actual examples of things that are portrayed on the transparencies, saying for example:

This is an extremely important thing. I am not only telling them. I am showing them things. Even though they have had multiple...thousand encounters with water. Here is water! Here is a ball. Holding things like this up for them to see...

I continue by going into further details that need not concern here. My point is that I think I was doing something *useful*, that I was actually helping my students understand better what it means to teach. I feel strongly that scenarios like the one described, that is, the detailed descriptions of my own teaching, really affected my student teachers. Goldie, in her 'Assignment 1' said:

I also felt that the lesson on December 24th [obviously a mistake; read: September!] came out well; here the teacher was in good control of the lesson [note this!] and many interesting things came up. In particular, the teacher's presentation in which he allowed us to have a look into 'the world of the teacher'. This suited me very well because here I got some concrete teaching experience and could better understand what it means to teach. (Goldie, Assignment 1, p. 6).

Note that Goldie at this point is still without teaching experience. In spite of this, she feels she could now 'understand what it means to teach'. I take her comment as pointing to the potential usefulness of cases in learning to teach, aligning in this regard with Carter and Anders (1996) who point out that, "the case idea is consistent with a large body of literature on situated learning" (p. 581). However, they also point out that "[f]ew attempts have been made to examine or verify systematically the consequence of studying cases" (p. 581). My experience, portrayed to some extent on these pages, tells me that, one promising way of using cases, is of the type given above, that is, in which the teacher educator brings her *personal story* to her class; telling, showing, and reasoning on the basis of his or her own intentions and experiences. As Carter and Anders also point out, cases (in the context of teacher education) may be used for different purposes, for example to exemplify promising practices and illustrating problematic situations. The examples given above belong to the former type. In the presentation I was giving and which you have been following, I was soon to arrive at the latter type. Leading into it is a discussion that centres on how difficult some lessons can be, e.g. a 'Friday lesson' or a lesson in a day when a 'big event' like a school dance is on the agenda. A student asks:

And what do you do in such situations?

[I:] You see, yesterday... [I am referring to the fact that yesterday, September 23rd 1999, there was indeed a dance in my school]

[Same student:] You just let them work on something or do something else?

[I:] I realize, for example, that if I do not have at my hands a really striking demonstration or something, it may be really difficult to catch their attention then I prefer to have them work [do seatwork] ... I am seriously thinking about having a different kind of student work in late hours lessons like those on Tuesday [now referring to my time table, Table XX]. Then [in those late lessons] it is much more difficult for them to take things from me ... [pause] my speech... Wait, wait, there are so many things I would like to address here. This week, I concentrated on, keeping you in mind, and also my thesis ... to examine carefully what I was doing and how it works, and not sparing myself. You see...

A rather long pause follows. Listening to the audiotape one can hear the rustle from pages being flicked over. I am looking for things in my journal, things I was writing during the week we are in, things associated with my classroom experiences. Then, at last, I begin to read from my journal. In doing so I often interrupt myself, apparently feeling it necessary to add comments to what I wrote. In what follows, these comments to the text I was reading aloud are embedded in parentheses and written in *Italics*.

Tuesday, September 21st

In MS/ after class with 1.E and 1.G

Very difficult lessons. Everything helped to make the situation intolerable.

Fantastically nice weather [*the temperature was 17 degrees [Celsius] I looked outside, this was around 3 [pm]*], I was poorly prepared [*I said that, I thought this was good*]

enough, I am so good at this, I just pick this transparency, I expect everything will go as it did in the good old days, it didn't]... [pause] ... the students restless, did not connect to them. [So bad because I am so dependent on being connected to people ... I just, just 'fall down' [become weak] when I do not feel connected to them ... I nervously rush with all these nice transparencies ... [goes into an indiscernible whisper] and I become impatient, my self-confidence falls off even though I have been teaching for twenty years.]

Now a student makes a comment in such a low voice that one can hardly discern what she is saying, I can hear though 'why this must be so' and then my voice comes in again:

[I:] One loses power.

[Same student:] Loses power.

[I, almost whispering:] *[Loses power. That's it! ... [pause] ... Then at home, a short time later.]* [Now again reading aloud:] I was reading Palmer in the meantime.

[Wonderful book. The Courage to Teach. I am always carrying it with me on the bus

[laughter]. This is a quote from it.] [I continue reading:] Teaching, like any truly

human activity, emerges from one's inwardness, for better or worse. As I teach, I project the condition of my soul onto my students, my subject, and our way of being

together. The entanglements I experience in the classroom *[entanglement means*

something like response or, indeed I am not quite sure] [I go back to the beginning of

the sentence and continue to read, very slowly, I sound like a priest:] The

entanglements I experience in the classroom are often no more or less than the

convolutions of my inner life. *[If I am restless, it easily spreads to my students. I can*

tell, to be completely honest with you, when I arrived at my school that day I was sad.

I did not feel well, I do not know why. I was simply somewhat sad. And that did not

help. They recognized this. And my preparation was not what it should have been, and

the weather was nice, late in the day, everything coming together to make this difficult.] [I continue to read:] These lessons [I am referring to the lessons with 1.E and 1.G on Tuesday that week, cf. table 7.1] were somehow absurd. I did not get any contact with the kids, and I was rushing around the school to find some handout that should have been ready and another teacher was supposed to make but had not. I was running and running [from the tape one can hear rapid footsteps, obviously I am playing myself running] around the school looking for this thing. So, the cooperation was no good. And there were some boys there [in class] who were, frankly speaking, dreadfully boring with their feet upon the desks, rocking their chairs, and then one [of them] all of a sudden wanted to go to the washroom, just coming from the break! I was simply offended. [Laughter] And people [the students] did not care taking things out from their bags. [*Just sitting there with the bag, like this* [I was now imitating a student of the type just described]]...

[A student teacher, one of the two already working as teacher:] Waiting for you to tell them!

[I:] You recognize this? [Laughter]

[There is a lot of talk in the room but it is indiscernible. Until I say, obviously imitating myself teaching these unruly students – with a grim face if I remember right:] Are you going to take your things out of your bag? [Laughter] Now, what about taking your things out of your bag?

[Then addressing my student teachers:] Do you see?

I then continue to read from my journal:

Did not care about taking things out of their bags [yes]. When I began to distribute the handouts with the solutions...few of them showed sign of interest in it. Gradually I became increasingly restless, irritated, my self-confidence about to crush. [*I know it*

must be strange for you to hear this.] Then I at last began with the day's topic, a recapitulation of chapter 2. Wrote on the blackboard things I had recently been teaching them. [*They knew this all!*] This was as little interesting as it could be. Somehow, I felt the absurdity in all this shrieking to me with every word I was writing on the blackboard. This is not my style, I thought and felt increasingly bad. Once again I was reminded of the fact how dependent I was on good preparation. It also strikes me now that this was the first time I did not bring with me any chemicals [on a tray]. [*Do you see? I am such a teacher. I am very dependent on having such things with me. Otherwise things do not work. I even doubt that would have helped so much this day, had I brought with me some things...*]

[Some indiscernible comments from some students].

[I:] Do you see?

I go on reading. Lesson after lesson is portrayed. What my students hear does not indicate that I was having much success. Most of all I was experiencing problems, serious difficulties. Things did not work, at least not the way I wanted. It was like we (my pupils and me) were worlds apart, disconnected. What was happening? I felt bad and I was looking feverously for a way out of this dilemma. On Wednesday, September 22nd I wrote:

I was coming from a lesson with 1.G. Things went better than yesterday. I felt better, was better organized, my self-confidence OK. I am beginning to think that the ways of teaching that I felt comfortable with before now are thorns in my flesh...

Was this a part of my dilemma? Could it be that I was seeing my teaching with new eyes? Could it be that my experiences during my graduate studies in Canada had been changing my look in such a way that things I used to be comfortable with were no longer acceptable? Reviewing the records I made of my chemistry teaching that week and in the weeks to come makes me think that this was indeed the case. I had changed and that made me

construct my experiences in ways different from how I did in the past. This may explain the fact that I now began to look with a critical eye at things I did not pay much attention to in the past and ask new questions. The following part (and please do remember that I was reading these things to my student teachers) may illustrate this point:

...[Working with the pupils] I noticed their 'textbook-problem-disease', i.e. they do not read the text or read it poorly but start immediately to work on the problems [that follow each chapter in the book]. When I arrive to help them they may be asking about things that 'glow' in the book. I ask myself: Do they read [the book]? *If so, how?*

I highlight the last sentence of the quote. Asking this way was something new to me. In retrospect, I link this with my graduate studies in Canada. Through them, I had become familiar with the work of Ference Marton and colleagues in Sweden (e.g. Marton and Booth 1997). These scholars have noted that people reading the same text may *experience* it very differently and therefore build from it different 'conceptions'. Having been a teacher for two decades and written several chemistry textbooks, I had not really thought about this possibility. Curiously, even becoming familiar with constructivism did not affect this attitude of mine and this may underscore what I have said earlier (chapter 3), namely that constructivism was for me, to begin with, a sort of curiosity, an idea to play with rather than something affecting my way of knowing. Basically and prior to my studies in Canada, I took it for granted that, 'a text was a text'. Sure, I had noted that some of my students were 'good' at reading my books while others were 'not as good'. Noticing this, however, I subscribed to a view common in my school culture saying that some students are bright, some not and that some students are energetic, some not. Reading the reports from Marton affected my way of thinking of this issue. Returning to my chemistry teaching I had begun to wonder what was happening to my students when they were reading my books, what they were indeed learning from them, asking as I did above: Do they read [the book]. *If so, how?*

Apparently, the concerns depicted above made me change my practice a bit. On the following day, that is Thursday, September 23rd, I wrote in my journal right after class with 1.G:

I started this lesson by telling the pupils that I was going to read with them chapter 4 (on atmosphere), i.e. that I was concerned if they really read [the textbook] at home... Now, I read [the text aloud] with them the first 3 – 4 pages of the chapter and pointed out to them things that I saw as the main points (they underlined these). I used the last minutes to ask how they felt [about this way of working]. Their responses were very determinate. They liked it. One of the students said I should have explained better the things I asked them to highlight.

I remember that I walked out of this class somewhat relieved, feeling that I was taking a step forward, a step toward something meaningful. In retrospect, I was desperately trying to find meaning in my work. Returning to my school, I was shocked by what I saw with my 'refreshed eyes', my new look. Things I had become *used to* were now shrieking at me as 'mindless' or 'miseducative'. I felt there was almost no room for reflection, dialogue, and negotiations of meaning, that is, modes of acting compatible with the constructivist idea. 'Cover the content' was still the reigning slogan, the major rule of action. Guided by my early encounters with constructivist ideas I had, prior to my graduate studies in Canada, come to dislike how we did things in my school, how we were rushing all the time. Now I was finding this behaviour almost intolerable. It did not help that I was experiencing serious difficulties controlling one of my classes. It did not help either, that I had returned to my chemistry teaching with some hopes of doing 'good things' but was now feeling like being caught by a strong river that was carrying me away from doing meaningful things. Only from time to time did I experience events that made me feel I was doing something that really mattered or made sense to my students. That little episode with 1.G is an example of such an event. Here I

succeeded to crawl from the heavy river that had taken me. However, it was only for a while. Before long, the next day or the next week, the strong river had got hold on me again; as it did more than a decade ago when I was trying to teach in a 'constructivist spirit' (chapter 2). Carry on! Hurry! So much to cover! No time for pedagogical adventures! That was the message, now as before.

As told, I brought parts of this story to my students; my intentions, plans, things I did, things that went well and things that went wrong, my feelings, my frustrations – in person, in minute detail. They were surprised. I, the 'expert', was experiencing so many problems – even disciplinary ones! What they learned from this? I am not sure. Goldie felt she "got some concrete teaching experience and could better understand what it means to teach". Deborah, writing about this lesson I have been portraying:

After the break, Haftor was giving a lecture. I liked it, maybe because this is a form one knows, i.e. lectures... He gave us a checklist ...we were supposed to give him + or – for his teaching... Soon I forgot this because he was flying and it was so interesting to listen to him and follow him. I felt I was learning so much and I found myself making links with my own teaching from ... I understand now how good it was for me to go to the North ... [and have that teaching experience]. I feel that I am thinking so much in these classes, that I am really activating my mind. What it is that matters when it comes to teaching. There are so many questions coming to one's mind which one continues to work on all the week, at least me. That I feel very important.

In contrast to Goldie, Deborah had some teaching experiences. She had been teaching for some months in a secondary school in the northern part of Iceland. Listening to my story she makes links to these experiences and she "understand[s] how good it was for [her] to go to the North". Things happening in our class are "activating [her] mind" and "many questions [are] coming to [her] mind". Reading her account makes me feel good. I say to myself: "She

was learning!” She was learning in a *sociocultural* sense. She was enriching and rethinking her past experiences *with* the story I was telling. Having been a classroom teacher enabled her to bring in ‘answering words’ to my words to speak a Bakhtinian language; or should we rather talk about ‘answering images’ or ‘memory pictures’ from her classroom experiences? With Lave (1996) we could say that I was, with my story, helping her “crafting her identity in practice”, albeit afterwards; helping her to come closer to who she wanted to be as teacher. With Palmer (1998), I could say that this lesson was a good example of *connectedness*. Deborah was so engaged in my story that she forgot the checklist I had given her for the purpose of evaluating my teaching. Listening to my story she began to *reweave* her own teaching experiences. With Munby and Russell (1995), I could say that I was helping Deborah realize what they call “the authority of experience”. She felt my story was powerful because she could link it to her own experiences, make better sense of them and, reflexively, use them to make sense of my story. So many descriptions possible, but all, I argue, pointing to *learning in a sociocultural and constructivist sense*. Deborah is on a journey. She is creating herself, including herself as teacher. In the process, she picks up “bits of life” (Gee and Green 1998) and carries them from one context to another. In this lesson and through her reflections on it afterwards, she brings up ‘bits’ from her teaching life and maps them on my story; or the other way around: she takes my story and maps it on her prior navigation map. The outcome may well be a new ‘map’. Following Frake (1977), culture may be seen as a cognitive map that is being constantly redrawn. However, people do not simply acquire the map in whole or in part. “People are not just map-readers; they are map-makers” (Frake, cited in Gee and Green 1998, p. 124).

I would like you to think of the last paragraph as a glimpse of my efforts to recreate myself as teacher educator. Here you see me struggling with the notion of *learning*. As Lave (1996), I do not like learning being seen as an epistemological problem. I am thinking that we

(educators) might do better linking this 'thick term' (Rorty, 1989) to words that take it to the social and participatory domain rather than the individual and cognitive domain. I am trying to say that thinking socially about learning is more likely to lead to *activities* that help people *grow* in a Deweyan sense than the traditional 'inside-the-head' model may do. Guided by a social/participatory/enactivist view of learning might help us focus on *conditions of growth* and build learning environments that may "call out favourable responses in our students" to use a Deweyan language. Drawing upon what my students said about the lesson described above and linking their accounts to social accounts of learning, as I have done above, makes me think that I am, indeed, *learning well*. I am weaving a web for myself that may serve well my future student teachers. Now I am learning to say to myself, for example:

As you work with your student teachers, think of their learning not as some processes going on in their brains and that may result in different 'outcomes' but rather as their attempts to craft their identities, to figure out who they are and who they want to be as teachers. Think of your class at the university as a meeting where you and your students sit around the 'great thing' (Palmer, 1998) called teaching and share stories about it.

Now, in this writing moment, I reread this last description and I say to myself: "That's how I willed it". However, as soon I have done this, I feel the shadow of my culture falling on my pleasure. Apparently, this culture wants us to see teaching, including teaching of teachers, as *transmission* of knowledge. As you saw in the previous chapter, it made me ask myself if what I was doing in my new course was "real teaching". Among the 'bits of life' (Gee and Green 1998) my student teachers are carrying with them are stories of this sort. Assuming that people live by stories (Connelly and Clandinin 1990) these students may feel betrayed if not 'taught properly'. Goldie felt that "discussions often went into stupidity" and Deborah felt somewhat relieved when I began lecturing, "because this is a form one knows"

to repeat a part from the excerpt given above. However, such is life. We see things differently – and thank God for that! Indeed, even ‘shadows’ may be thought of as good things. The very fact that Goldie and Deborah write such things may be taken as good signs, signs of turmoil associated with the process of their self-formation. At least was it good that they articulated their beliefs and thus gave *me* the opportunity to learn, to grow as teacher educator. Grappling with *variety* is essential in this business.

Epilogue

This chapter includes two stories. One addresses my return to the school where I had been teaching chemistry for a number of years. The other story addresses my attempts to bring some of the complexities I was experiencing in my chemistry teaching to my student teachers that were participating in my course. Both stories, I argue, bring with them some important ‘messages’ to the teacher education community. Both of them touch some ‘deeper issue’ worth exploring for those who are responsible for educating teachers.

What do they tell that is so important for teacher educators?

We know that student teachers often experience difficulties when moving from campus to school (Erickson et al. 1994; Wideen et al. 1998). They often find it difficult to align what they have been learning at campus with the culture of the school and the practicalities of the classroom. These two settings often appear to them as two distinct worlds with few, if any links between them. Why?

The story about my return to my school may be recast as a story of a student teacher. I had been at ‘campus’, that is, at UBC. I had been learning many new things. I had become enlightened by new ideas. I was hopeful I might be bringing something good to my old school. On the very first meeting with my colleagues in the chemistry department I sensed very strongly that this would not be the case. For some reasons I could not even ‘air’ my

ideas. *Part* of the reason, no doubt, was simply that I was not carrying with me ‘ideas’ but *words* – English words arranged in particular ways in my personal vocabulary, ‘thick terms’ like ‘social constructivism’ linked in a complex way to various other words. Returning to my school I had not yet learned how to say these things properly in my native language.

However, *even if I had* I do doubt I would have brought them up for discussion with my colleagues. Mindful of my earlier failed attempts (chapter 2) to bring ‘personal constructivism’ into this school culture had turned me into a sceptic. Studying in Canada that ‘old burden’ had become even clearer to me as I learned to bring to it new words, words that made me see how complex school cultures are and how difficult it is to change them. In this respect I was not a newcomer. Contrary to the beginning teacher I knew the place I was entering and was therefore not expecting ‘great things’ to happen as enlightened beginning teachers sometimes do when they start teaching in schools. Logically they do not carry with them ‘old burdens’ from prior teaching in the past.

However, there was something more. And that ‘more’ was old forms, old ways of thinking, old habits. Somehow I sensed at the very first meeting that *things would be as usual*. As the school year began, as the weeks and months passed, this feeling only deepened. *Things would be as usual* – except may for the new textbook in organic chemistry. Even that plan was discarded. We used the book from last year...

And so the school began and I was busy teaching and busy looking at my watch asking, “Will this day never come to an end?” Toward the end of that school year I quit.

I tell this story because I am concerned about our student teachers, in particular those who enter schools hoping for ‘something good’ to happen, even expectant to see their ideas from campus ‘coming alive’ in their students’ faces and modes of speaking and acting. I am keeping in mind student teachers that have become ‘enlightened’ by constructivist ideas

during their campus day but feel, when entering their new school, that “one should not think like this”.

They may start to think like I did: Keep your mouth shut and stick to old forms.

I will return to this story in the final chapter of this thesis and recast it there as a case story addressing the ‘situatedness of teaching’ in relation to the notions community, communication, and connectedness. Now I turn to the other story of this chapter.

As said, that story addresses my attempts to involve my student teachers at campus in what I call “the complexities of my teaching”. I was telling them about my *teaching*, my chemistry teaching. I was bringing to them anecdotes from my own classroom teaching. I was bringing with me my journal with notes I had made both *in* class and *after* class, including ‘good stories’ as well as ‘bad stories’. I was reading things aloud from my journal.

And they “sucked my stories as sponges” as one of the students said.

Why?

When do people start to listen attentively? Is it not when they hear something ‘different’, something ‘unusual’, something they had not expected?

Indeed, they could hardly believe their ears. I, the ‘expert himself’ was experiencing all kinds of problems in my teaching. After twenty years of teaching I was still experiencing difficulties managing classes and connecting to students. I was even experiencing ‘mindless’ teaching on my part. Bad results from a test came as big surprise to me because I had thought things were going so smoothly in that small class with only six boys.

I, the expert! They were surprised, they could hardly believe this, at least those who had never been in charge of a classroom before.

Was I acting appropriately?

Yes, I think so. I am deeply convinced that I was doing right. I was bringing to them, first hand, some of the complexities facing teachers in their daily work. I was providing them

with an insight into the *situatedness of teaching*. The theme of the class, you may remember, was 'Preparing instruction'. Planning this class, my first idea was to simply teach them some 'basics' about the necessity of good preparation.

However, planning things at home the night before this class I began to think about the 'realities' of my own teaching in that particular week. I looked at the table in front of me. There were my transparencies explicating the 'basics of good planning' and there was my journal with stories from my own teaching, including stories of plans that did not go as intended, portraying how things went wrong. And I said to myself something like: "Damn it, this is how it is! Why not tell them of things that go astray? Why not provide them with the realities of the classroom? Why not, as least, try to balance the 'rosy' picture we tend to draw of the school classroom?"

Questions of this kind flashed through my head that night before that Friday class. And, as you now know, I did things this way. I brought 'it all' to them, my experiences that particular week, in minute details.

And they "sucked my stories like sponges".

Was I doing right? Is this not 'dangerous'? Was I not blowing their hopes into pieces?

No. I was not blowing anything to pieces. I was doing a *good work*. Just let me say that. My students' responses, documented in this chapter, tell me that I was doing right and that I was doing things quite well. Besides, and that is also fairly important: I told them the 'whole story' and that means that I also told them of the *good things* that happened in my classes this week. My account was a *balanced account*. Actually, it is easy for me to give such a balanced account of my teaching because I often experience good things with my students.

But my student teachers *should know*. They are on the way to the place called “the school” and the place called “the classroom”. They should have the right to know that things do not always go as planned.

One more question: Why did I do things this way?

My answer is, in brief: *I was building a new story of myself as a teacher educator*. I was saying, ‘Good teaching comes from within’. I was coming to believe that it was my job helping my student teachers *grow*, in particular helping them develop their ideas and their thinking about the teaching – learning relationship. Not using this opportunity to illustrate the problematic ‘real-life’ aspect of that relationship would have been a serious mistake.

I did right.

Chapter 8

Visiting Goldie

Can the requirement of language for fixed meaning be yoked together with the no less urgent need of language users for meanings that can be various in the countless different contexts created by the flux of everyday life? (Bakhtin, quoted in Wertsch, 1991, p. 50)

During my graduate studies in Canada I was constantly looking back on my past practices as a teacher and teacher educator in Iceland in an attempt, it seems, to come to grips with them. One of the issues that continued to puzzle me was the issue of practicum or student teaching. In particular, I was puzzled by how little connection there seemed to be between my course at the university and the classroom activities conducted by my student teachers during their practicum. Indeed, these two segments of reality seemed to be worlds apart. During my graduate studies in Canada, I learned that what I was observing was a general phenomenon. Many places people engaged in teacher preparation seemed to be experiencing a “gap” between things taught in teacher education programs and actual school classroom activities. As noted by Wideen et al. (1998) this “gap” tends to be conceived of differently by teacher educators and prospective students, the former complaining that schools are conservative institutions forcing beginning teachers to adopt traditional teaching practices while the latter tend to complain teacher education programs for not preparing them adequately for the realities of the classroom.

My purpose in writing this chapter is to explore the issue of practicum. I am wondering how I should think about this component. What “happens” to my students when they begin teaching? What and how do they learn? How does this component relate to the rest

of the teacher education program, my course included? Assuming that my students are indeed learning something during their practicum and that this learning may be described in various ways, what would be the most useful description? After all, it is my job to help them learn. How I do this must depend on how I think about practicum and how I think about learning in this context. My aim then, writing this chapter, is to describe my experiences in such a way that may help me do a better job when working with my future student teachers. I am looking for “good rules of action” in this regard to speak like a pragmatist.

As the title of this chapter indicates I will explore the issue of practicum by describing a visit I made to one of my student teachers. However, the focus will not be solely on her. I am part of the game. After all this is a self-study. I am looking for better practices when working with my students. Therefore, I am no less interested to figure out how I was acting during the visit, in particular how I went about “observing” her and helping her to reflect on her teaching.

Consulting My Guides

As before, while visiting Goldie I made field-notes. I followed her teaching and wrote down in my journal things I found worth noting. Besides, Goldie and her school adviser (I will call her Jane) permitted me to audio record the conversations we had and that related to Goldie’s teaching. In addition, I had access to Goldie’s practicum diary and some assignments she had made so far in our course at campus. The account given in this chapter addresses these records. It is an attempt to make “good sense” of them. As before, I have been consulting my guides, in particular Bakhtin and Wertsch (I see these two as associated) and Dewey and Rorty (whom I also tend to associate together). As you may have noted, much of what I have written so far in this thesis bears the marks of these authors. In other words, dealing with my data so far I have been inclined to link them with sociocultural and

pragmatic terms. In particular, I have been drawn to the pragmatic idea that human beings are continuous with and interact with our (socioculturally made) environment in accord with our own “active tendencies” to borrow a term from Dewey (1916/ 1944). Invoking Rorty (and Wittgenstein) I tend to see language as integral to this interplay, that is as a tool we use to coordinate our actions. Coming so far there is only a short way to the Russian socioculturalists Vygotsky and Bakhtin, both of whom (according to Wertsch, 1991) saw human action as mediated by cultural tools, language in particular. This view implies that, “the answer to who is carrying out the action will inevitably identify the individual(s) in the concrete situation and the mediational means employed” to quote Wertsch (1991, p. 12). Note that “action”, in this treatment, includes utterances. Following Bakhtin, utterance is a mediated action, mediated in the sense that we will, when we speak, inevitably invoke some “voices out there” (e.g. a particular professional language or a speech genre characteristic of the work place). In other words, attending to an utterance we are permitted to ask, “who is doing the speaking?” as Bakhtin liked to do when dealing with pieces of literary work.

Seeing Actions as Mediated

Reconstructing my visit to Goldie I have been guided by beliefs of the kind described above. This implies that I am focusing on Goldie’s *actions* and my *actions* and trying to see both as *socially and culturally mediated*. Teaching chemistry, Goldie was “not alone”. Observing her, I was “not alone” either. Using the term, “not alone” I am not simply addressing the fact that we were surrounded by other people, for example Goldie’s students. I am also keeping in mind that we were in a *classroom* that is located in a *secondary school* in a place called *Iceland* where the inhabitants speak a national *language* called “Icelandic”. Besides, I keep firmly in mind that Goldie is not only teaching but also teaching a particular *subject* called “chemistry”. No doubt, this subject with its long-held traditions will be among

the “mediational means” (Wertsch 1991) guiding her actions. Writing the foregoing chapter, I invoked Dewey when grappling with the issue how strongly my old secondary school seemed to “engulf” me when I returned to teaching chemistry after my two years of graduate studies in Canada. Having referred to Dewey (1916/1944, p. 11) speaking of how the environment acts by “calling out certain responses” in us and that “the particular medium in which an individual exists leads him to see and feel one thing rather than other”, I continued: “Returning to my school I immediately began to *vary with people and things in it*” (p.185 – 186).

I emphasize the last part of the sentence because it may help clarify the point I am trying to make here, namely that we might do well thinking of agents in a social setting as “individuals-acting-with-mediational-means” instead of thinking about them as “individuals” (Wertsch 1991). When I say “might do well” I am thinking pragmatically: approaching things (e.g. practicum) this way may enable us to figure out better ways of helping our student teachers gain ground in this complex territory called teaching. From my point of view, this territory is filled with mediational means that our student teachers and their advisors as well “grab” for when knowing around. Unfortunately, we may not be so much aware of this. Our Western culture has emphasized “the individual” very strongly for almost 500 years (since the Reformation period; Solomon 2001). The Enlightenment philosophers then invented the notion of “mind” as a private and independent sphere within the individual and directing his actions. Accordingly, dualistic thinking has become the norm up till our present times. Being guided by that norm, one is likely to see people as “free” (isolated) individuals being directed by their “knowledge reservoirs” and various (associated) “mental abilities” (Bruner, 1996). This, I would think, is the “image” behind what Schön (1983) refers to as “technical rationality” and what Korthagen and Kessels (1999) label as the “application of theory model” in the domain of teacher education. The image I am recommending here, on the other hand, comes close to what scholars speak of as “situated” or “social cognition”. Putman and

Borko (2000), for example, claim that emphasizing cognition as social means recognizing that the “interactions with people in one’s environment are major determinants of both what is learned and how learning takes place” (p. 5). However, good as such descriptions may look, they may need more “flesh”. What does the term “learning” in this frame entail? How should we (practitioners) *use it in practice*? After all, working with our student teachers, things need to be said one way or another.

By now, I have provided you with a part of the beliefs that have been guiding my work when trying to build an imaginative account of my visit to Goldie in March 2000. Before we enter the school where Goldie and Jane are waiting for us, however, I might do well spending some space on the rest of the picture I have been drawing when framing this visit, a part we may label as “Learning from experience”.

Learning From Experience

Most people involved in teacher education seem to think that practicum is important because it provides the students with a first hand experience of teaching. Goldie, for example, reflecting on her first [primary school] practicum experiences, reported that:

I felt that it was impossible for me to develop my theory of teaching before I had been in the field and taught myself. Having done that I felt I understood what was behind the stories my fellow students and my teacher were telling because often I could not imagine how this and that might work within the classroom. (Goldie, Assignment 1, p. 6).

No doubt, many scholars in the field of teacher education would have nodded at these words, for example Fenstermacher (1992) who has claimed that, “The overwhelming evidence of a decade of research on teacher knowledge is that knowledge of teaching is

acquired and developed by personal experience of teaching” (quoted in Munby and Russel 1998, p. 659). In fact, many scholars in this field think that time has come to take such evidence seriously, some of them even arguing that teacher education programs should be turned around so that the work of the universities can build productively upon what is learned in schools (Korthagen and Kessels 1999; Munby and Russel 1998 and Northfield 1998). Plausible as this may sound, such a shift may not be straightforward because students entering teacher education programs may not be prepared for the task. Carter and Anders (1996) have pointed out that:

Students arrive in teacher education with finely polished skills, developed over their many years in schools, for navigating the traditional academic rituals of reading textbooks, writing term papers, and cramming for exams... Soon after their arrival, however, candidates for teaching are immersed in the field settings and thus confronted with the *alien task* of learning from their own experiences. This *transition from an academic to an experiential base for learning* presents special challenges for field-based teaching. (p. 570, my emphases)

Thinking about my own experiences as a beginning teacher and the fact that I began to teach without formal teacher preparation (that occurred later), I feel justified to say that my initial learning in this area was (significantly) “by experience”. However, it remains as a puzzle to me what I am really referring to when using the term “experience”. Similarly, we may wonder what people are implying when using the phrase “learning from experience”? Apparently, they mean something different from say “learning from a book” (cf. the quote from Carter and Anders above). But what?

I note with interest that in my culture, “experience” is often spoken of as “master teacher”. We say “reynslan er besti kennarinn” which translates to “experience is the best teacher”. However, if you asked an Icelandic to elaborate on this saying he would most

probably hesitate. He would hesitate, I think, because the word “experience” brings us very close to words like “life” and “being”. Accordingly, you might as well have been asking him or her what life is or what it means to be a human being. Again focusing on my learning from experience when taking my first steps into the terrain of teaching it strikes me most that I did not think so much about “these steps”. I simply walked into the school and then into the classroom, exchanged words with my colleagues and my students, wrote words on the blackboard, explained principles and text book problems and so on. Apparently, I “glided” into this world without much friction just as I did when returning from my graduate studies in Canada as described in the foregoing chapter. And I wonder: how could it be so?

The word “experience” has been quite central to philosophical disputes for ages. The Greeks saw it as something “out there”. Later – with the works of the Enlightenment philosophers - it moved inward concomitantly with the invention of the individual mind. With experiences firmly embedded in the head, the dispute centred on if experience should be thought of “sense data” presented to the mind (e.g. Locke and Hume) or (as Kant suggested) as something “synthesized” by the mind with the help of *a priori* given forms of “reason” such as space, time, and causality (Skirbekk and Gilje 1999; Solomon 2001). Dewey, we know, took another approach to this issue. Experience for him was a question of *interaction*, a view consistent with his non-dualistic attitude. In short, for Dewey (1916/1944), experience has two sides, an active side and a passive side, a *doing* side and an *undergoing* side. We do something with the world and the world kicks us back. “Learning from experience”, on his account, means explicating the *connection* between the two sides. Indeed, for Dewey (1916 / 1944), this is what constitutes thinking in the first place. Thinking, for him, is “the intentional endeavour to discover the connection between something we do and the consequences which result, so that the two become continuous” (p. 145).

Later developments in pragmatism have pushed the term “experience” off the table and replaced it with the word “language” (Rorty, 1999). This is the result of the “linguistic turn” in pragmatism, that is, the incorporation into it of the Wittgensteinian notion of language as a tool. Having made this turn, pragmatists see the world as a matter of language that we cannot step out of (Rorty 1999). Dewey thought of experience as an interaction between the individual and his environment and thought as a *means of explicating that interaction*, the link between what we do and what we undergo. Indeed, Dewey (1916/ 1944) asserted that, “No experience having a meaning is possible without some element of thought” (p. 145). In contemporary pragmatism (at least the Rortyan version), *both* the boundary between thought and language *and* between these two and reality has become blurred. There is no such thing as a pre-linguistic thought, and there is nothing to look for “behind” words, neither “deeper meanings” nor “structures”. Words are not *representations* of “the given”, they *constitute* it. Accordingly (in my interpretation), if we want to understand human beings and communities we should attend to what is said and how things are said.

What happens if we replace “experience” with “language” in the phrase “learning from experience”? Literally, it converts to “learning from *language*”. We come up with a new phrase. Behaving pragmatically, we should then ask if this new phrase or tool might be of some use. Moreover, focusing on our object of inquiry, that is the phrase “learning to teach”, we might ask if it would be helpful to treat it as a linguistic issue, e.g. as the issue of learning new words and try them out. In fact, this is significantly what I have already been doing in this thesis (chapter 5). Back home from my graduate studies in Canada, I looked back wondering how I should speak of my *learning experiences* over there. I came down saying that I had been learning new words and new ways of speaking and that I, by using these new words and ways of speaking, became able to recreate my past teacher life. Apparently, I saw a close link to “my experiences” in this case and “the new words” I was adopting for my

use. With this said, I should stress that I am *not* suggesting that we (teacher educators) should replace the word “experience” with the word “language” every time we use the phrase “learning from experience” (or similar phrases). That cannot be done. My point is rather that it might be useful for us to make links to “language” when using such phrases.

Thinking about my first steps into the world of teaching, I might do well describing them in linguistic terms. Entering the “school”, the “chemistry department” and the “chemistry classroom”, my task, was to learn to play the “language games” carried out in these compartments. For example, learn to say, “I teach my own book” when asked, “What textbook do you teach?” and “I have come to chapter XX” when asked (in a specific context), “How are things going?” In a sense I was “ready” to teach chemistry at the very start because (a) I speak Icelandic fluently, (b) I was knowledgeable of the subject chemistry, (c) I was interested in teaching this subject and (d) I found it easy to connect to young people. This may help explain why I felt it “so easy” to gain ground in the world of secondary school chemistry teaching even though I was without a teacher license and particular preparative acts beyond having been given a chemistry textbook and told how many chapters in it to cover before the “Christmas-tests” as we called the mid-term exams. If we think of schools and departments and classrooms as “forms of life” where things are done and said in particular ways, “the issue” for the student teacher is, significantly, to *adjust* to these forms. Given the fact that they are already familiar with these forms (e.g. through speaking the relevant native language and having been in schools and classrooms for years) they may feel this adjusting process as rather “automatic” and effortless. They “glide” easily into the “game” because they “know the rules”, at least *approximately*. Mediated by their native language, their prior experiences as students, and their knowledge of the subject they have specialized in, they know approximately how to act. Thinking about my student teachers entering the secondary schools such a description seems to me as adequate. At least does it

harmonize well with the feeling that I have been carrying with me for years, namely that the student teachers I have been trying to help most often appear to glide rather effortlessly into the forms of life characteristic of Icelandic secondary school teaching. This applies to Goldie, the student teacher we will meet in a moment. The data I have and relate to her, all indicate that she almost instantly felt “at home” in the secondary school where she did her practicum. Before we go inside the school where she and her school adviser are waiting, I will introduce her.

Goldie

You met her in chapter 6. There I introduced her as one of the “silent students” in our group but also as a “critical voice”. Interviewing her toward the end of the first half of the course Goldie made it clear to me that she was not so pleased with all aspects of my course. In particular, she complained that the frequent discussions tended to go astray, even develop into “stupidity” to borrow a word from her. Apparently, her project was not aligning so well with mine. She was expecting me to teach her how to teach. She was convinced that there was a “Theory” with a big “T” somewhere “out there” that she might acquire and then apply when working with her students:

In my mind, a theory of teaching means a theory that individuals who aim at teaching should acquire in order to become professionals because the theory shows all the best thinkable ways to deliver the subject effectively and to the best of the students.

(Goldie, Assignment 1, p.1)

However, she was not very confident about herself, at least not in the beginning of her studies in the teacher education program:

Before attending the teacher education program, I often wondered if this was something for me and I had some doubts about myself. Now I see that teaching is something much more than simply teaching a subject; it is about communication, management and my personality. Coming to the end of this term I feel, by seeing teaching differently, I am more confident about myself as a becoming teacher.

(Ibid. p. 8)

As you see from this excerpt, she gradually became more confident. Besides, she feels, when reflecting on the first half of the teacher education program that her notion of teaching is changing, her “teacher web” expanding. As told previously, she was not particularly happy with my way of managing the course she was participating in at campus, especially the discussions. Nevertheless, it appears that she also found some of our activities useful. This applies in particular to the *classroom stories* we were sharing:

What I see from my journal [that she kept over the autumn term for reflective purposes and as part of assignment 1], when it comes to the development of my theory of teaching is that I grabbed happily all the stories being told by my fellow students and my teacher ... In my view, a teacher was somebody that enters the classroom and teaches so the subject is transmitted and then walks out. I had not thought about being connected with the students but now I see how important that is... (Ibid. p. 5)

To give you an example, I had told my students how surprised I had become when facing the result of a particular test I had made and given to one of my chemistry classes. Goldie responded to this story in the following way:

On October 1st, I wrote in my journal that Hafthor had been giving a test to his class and that he had been surprised how poor the results were because he had thought that the students were in better shape. I remember that I was really amazed that Hafthor

had not recognized better his students' status but *now I understand* what he was grappling with. (Ibid. p.7; my emphasis)

I provide you with these pieces from Goldie in an attempt to give you some insights into *her story*, her project of learning to teach. No doubt, Goldie is quite serious about this project. Besides, she is very interested to *serve her students well*. Serving them well means to her teaching them so that they *understand*. Connected to this issue and of particular interest to Goldie is her emphasis on *connecting the subject (chemistry) to daily life*. For example, during the student teaching in which we are going to partake soon, she was teaching about polymers. Elaborating on this issue in her diary at home later in the day she wrote:

I wanted to link this stuff as much as possible with reality so I came up with the idea of having the students making a nylon thread and a piece of eraser. I had a few days to find some recipes and material and try the things myself; so, this has been somewhat stressing and, no doubt, taken some time from preparing the ordinary teaching.

However, having been through some telephone calls, some trips here and there, and with help from Jane [the school advisor's pseudonym] who was very supportive and enthusiastic, all went well. (Goldie's practicum diary, 1.3.00, p. 4)

Note the positive attitude of Goldie to her school adviser. Thinking about the visit waiting us, I cannot but feel that they were having a good time together, *sharing a genuine interest in serving well their students*. We should keep this in mind when we now walk into the high school where Jane is chemistry teacher and head of the chemistry department and in which Goldie has already been teaching for some days. The day before the visit, I sent her and Jane an e-mail announcing my arrival. Goldie wrote in her journal:

Ooowh, I got an email telling that Hafthor is coming tomorrow. I am a bit stressed.
(Ibid. p. 4)

Entering the School

The school building we are entering is of the type that “breathes” the past: old, made of wood, with narrow corridors and stairways that creak. Goldie was already there but during these ten minutes or so that elapsed before the teaching began, I did not see so much of her. The reason was that she was experiencing a computer problem or, more precisely, a *double* computer problem: she was unable to print a document from a disk she was carrying with her *and* she was unable to get at an e-mail and an associated attachment she had been sending to herself from her home. I sensed this was something Goldie had planned to use in her teaching this morning but was not sure what it was. An aspect of learning to teach in post-modern times? - one might wonder. Back home that day Goldie wrote in her diary:

“Jæja, o jæja” [something I think is untranslatable; a kind of intonation or cadence that carries with it an emotional content, like the English “OK” may do when it points to an act of embarrassment or a feeling of having failed]. That morning went astray but I was astonishingly calm having to improvise for Hafthor and teach his book [she is referring to the fact that she was, in two of her classes using a chemistry textbook I wrote some years ago]. The e-mail did not work... the backup failed, the disk was damaged, what a beginning... I had to think quickly. Happily, I had been working through the textbook problems fairly recently. This is not so difficult... (Goldie’s practicum diary, 2.3.00, p. 3)

Using the word “improvise” links to the document that she could not print or get through the e-mail she was sending to herself. To put things plain: *she was without the teaching plans she had been making at home.*

We went downstairs to the basement where the chemistry laboratory is located. However, this lesson was not going to be a chemistry lab but, as we say in Iceland, “bóklegur tími”, literally meaning “bookish lesson”. In science subjects, such lessons quite often begin with the teacher presenting a topic or a problem and then the students “take their turn”, i.e. do some seatwork linked to the teacher’s presentation. Typically, the teacher shows the students how to solve a particular textbook problem and then the students work on similar textbook problems for the rest of the lesson. Such a form of “bookish lessons” has become common practice in physics and chemistry teaching in Icelandic secondary schools.

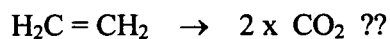
The students came in, approximately twenty of them, apparently a courteous and friendly group. The teacher in me sensed the building up of a good rapport from the very start. I was right. From the very beginning the students seemed to really *attend* to what Goldie was saying, not least her introductory words telling that she was not going to do what she had intended to do because the computer... etc. You know that story. Then she said: “Við skulum bara reikna verkefni” which might be translated to “we shall just calculate a problem”. In addition, she announced that she would be working out textbook problem number 7.7.

I felt excited. Why I was excited? Because I knew that problem! The textbook of use in this class was one of the chemistry textbooks *I* wrote during my life as a textbook writer. Therefore, I knew this problem 7.7 *very well*. Did I make up this problem? No, following the practices of most science textbook writers, I tend to borrow such things from various sources. The problems go from textbook to textbook. We are all in the same game so... What game? The game of chemistry, I mean all these problem types and the associated techniques that lead us (good users) to the right answer. You know, this is (with van Manen (1997) the “essence” of “teaching chemistry in a secondary school in Iceland”, the upper classes in particular. Our first years students get “some basic facts about the world”, for example the

atomic theory and the periodic table. Then comes the “mole concept” and once it has been introduced, we (chemistry teachers and their students) are busy “calculating problems”. Such is our practice.

When Lave Appeared

Let us leave for a moment this Goldie’s first class that morning and jump to her lesson number three. Here, she is teaching organic chemistry. I sit in the back of the room. I am “observing” Goldie. Leaning over my shoulders you see that I have just been writing a chemical equation:



Note the two question marks. I wrote them because I feared that the students would start worrying about how the four “Hs” might have disappeared. You see, after Antoine Lavoasier saved chemistry from medieval misteries, we (chemists) do not think matter can be changed into nothing. Now, having written this equation, I apparently change subject because what appears in front of our eyes now (in parenthesis for some reasons) has very little to do with chemistry:

[When I talked to Goldie in the break, she said something like this: This was nothing special, no “activators” or such things.]

“Activator” is my (I suppose: bad) translation of the Icelandic word “kveikja” which originally was (and still is) used to point to the mechanical object that ignites a mixture of fuel and air in a vehicle motor with the result that it starts going (if things are normal). Recently, this term has become a part of the Icelandic “principles of teaching vocabulary” in which it has become associated with the sentence “something that turns kids on”. In a way, this is a “smart idea” – it “shines with power” and must appear as a promising tool to prospective teachers who have heard many stories of “distracted” pupils nowadays and may

even (i.e. the student teachers) be carrying with them memories of their own sleepy eyes during boring lessons in the past. Accordingly, this new tool has become quite popular in our teacher education program and when things become popular people tend to become happy with them. Although somewhat sceptical, you (as faculty adviser) may not want to destroy that happiness. Besides, the idea seems to fit neatly with common (Icelandic) ways of thinking about teaching (as *transmission* of facts and principles). It follows that when a faculty advisor comes on a visit to a student teacher the latter is likely to point to a thing in his lesson plan saying that she “used it as an activator”. The faculty advisor is likely to nod with acceptance and maybe add a little “good!” to that little nod. Indeed, that faculty adviser might very well be me although I am trying my best to avoid thinking of teaching in such terms (because I link them with a technical orientation toward teaching). However, words have power, in particular those words that the community of which you are a member shares and speaks of as “something good”. You simply accept it (or go with it) because you want to be a full-fledged participant of your community of practice. “Kveikja” is such a term. It has become a “community term”. Before I knew it had snared me. Returning to my account of the chat I had with Goldie in that break right before her third class that morning, you may now better understand that she was in a way “excusing” herself, fearing that I was not happy with her teaching because she had not been using an “activator” to turn her students on. Now, let us continue to follow my writing in the back of the class. Following the note about Goldie’s words about “activators” in the break comes:

What are we trying to ingrain into our student teachers?

From the context outlined above it should be clear that I am worrying if we (teachers in the teacher education program), by accepting terms like “activators”, are encouraging our students to think about teaching in a technical way.

I continue writing:

I begin spontaneously to think of Lave's social cognition and cognitive apprenticeship.

(Underlining in the original.)

Here, I stop for a moment, apparently surprised by what is coming out of my pen. I leave a space of two lines in my notebook before proceeding:

Our student teachers enter particular environments, ... [my writing – one word - is now indiscernible to myself], organization – something that is already shaped. What matters [to them] is to adapt to the environment, do a good job, do a good service to the school adviser and the pupils. The student teacher walks into the work with the pupils and their teacher [the school advisor]. (Underlining in the original.)

If I remember right, Lave appeared suddenly and without prior notice. For a few minutes I forgot Goldie and the chemical equation with the four “Hs” and began to converse with Lave. From my current (neopragmatic) position, I see this as an instance of “vocabularies at war” going on in my mind and body and in the pen I am holding. Apparently, what turns on this war is Goldie’s mentioning of “activators”. No doubt, I get somewhat irritated (cf. “What are we trying to ingrain into our students?”) and then I go to attack on “the technical army” that threatens my existence. Interestingly (for me) I then go to Lave for support and she gives me the words “social cognition” and “cognitive apprenticeship” to fight against my enemy, TRA (“The Technical Rationality Army”). I should tell you that Lave’s words appeared in my journal entry in their *English* format, i.e. as written above, whereas the rest of my writing is in Icelandic. The reason, I think, is simply that I have not found the Icelandic counterparts to Lave’s English terms. Doubt they have been translated to Icelandic. In the “battle” that follows Lave’s appearance (see the excerpt above), I threaten TRA with new words and new ways of putting words together, e.g. “something that is already shaped”, “adapt to the environment”, and the partly underlined sentence, “The student teacher walks into the work with the pupils and their teacher”. The

fact that the last sentence is partly underlined indicates to me that I was saying to myself that it was particularly important. Apparently, this sentence links to Lave's notion of *learning*, i.e. her view that learning is a pattern of participation in a community of practice (Lave, 1996; see also Lave and Wenger, 1991). Here you are witnessing me trying to *switch to a new frame*, bring new "answering words" to Goldie's student teaching. I am trying to see Goldie in her practicum in a way akin to how Lave saw her Vai and Gola tailors: Goldie is a newcomer in a particular community of practice. Her master "teaches chemistry" and her master knows that "teaching chemistry" is a particular "form of life" with multiple links to history, culture, subcultures, society, language, classroom architecture, textbooks, and students. Goldie knows, at least approximately, what is expected of her because she has been an apprentice of such forms of life for years and years in school and university (Lortie 1975). There is the textbook spread over the desks, there is the whiteboard and the marker, there is the overhead projector, there are the students with their faces turned to you ready with their pens and their notebooks and The scene is familiar and the scene *tells you how to act*. It *mediates your actions* whether you like it or not. It "caught" me when I came back from Canada and it is ready to catch Goldie into its intricate web of relations, values, customs, habits of language, etc. Learning to teach *in this place*, I argue, means "being encultured" or (with Lave, 1996) "crafting identity in practice" or (with Dewey, 1916/1944) "get[ting] used to things by *first* using them" (p. 47; emphasis in original). And penetrating every corner of this scenario, not to forget, are "habits of language" that make us say things in particular ways and in accord with "what is permitted" in the community of practice involved. However, having said this I should be quick to add that I do not think of learning to teach as synonymous to "getting used to things". When I think of Goldie, for example, I feel I can see in her way of being as prospective teacher something that might be labeled as "distinctively her own". Making this move, I once again sense a "push" from Dewey. As we know,

education for him means *growth*. Growth has two sides. One is the “getting-used-to” side, which he names “habituation”. The other form, the one that *constitutes* growth, is the “active capacities to readjust actively to meet new conditions” (Ibid. p.52). When I think of Goldie in light of these Deweyan growth terms, i.e. habituation and active readjustment, I feel I can see both “at work” in her. During the primary school practicum to which she is referring above, she was without doubt being drawn into the “forms of life” characteristic of the school she was in. Interviewing Goldie and her mate (our students work in pairs when doing the primary school practicum) and their school adviser with the practicum done, I was for instance taken by how strongly Goldie and her mate seemed to be “absorbed” into the school adviser’s (and, I assume, the school’s) *concern for individual pupils’ social problems*. I take this as a sign of habituation. They (Goldie and her peer) were becoming *participants in the discourse of this community* and, in doing this, learning what things were important and picking up appropriate words and ways of talking of speaking about those things. However, in the midst of this all, they were trying out “their own little things”. Goldie, for instance, was teaching about nuclear energy during that practicum and she made great efforts to “encourage the pupils to think about the issue and awaken their interest... [and involve them in discussions on it] so that they might be better at participating in discussions on nuclear energy that take place in society” (Goldie, Assignment 2, p. 4). Doing things like this is not a common practice in science teaching in Iceland and I think Dewey would have given me right to think of this as an example of “active readjustment”. It should be noted that Goldie and her mate were given considerable freedom in this case. “Do what you like”, might have been the message. Such messages to my *science* student teachers are not uncommon when they enter *primary* school practicum and may in part be explained by the fact that their primary school advisors often see them as somebody “more knowledgeable” than themselves. In general, those who teach science in primary schools in Iceland are not subject specialists. Also a part of this picture is

the fact that science teaching in primary schools in Iceland has not hitherto been assigned high status, at least not when compared to subjects like mathematics and Icelandic that have been objects of centralized state testing for years. Accordingly, science teaching in primary schools is not that “nailed down”. In the secondary schools, however, science teaching is more meticulous or strict because it is guided by the common view that “there is so much to cover”. Goldie is familiar to this emphasis on “covering the content” because she has been a student in a secondary school. Accordingly she may have been prepared for less “free play” when entering her secondary school practicum than she experienced in the primary school. This, we would expect, will help mediate her actions.

We should now return to Golide’s first class that she was teaching this morning in March 2nd 1999. She had just explained to her students the problem she had experienced earlier this morning with the computer that denied her access to the things she had been doing at home in preparation to this lesson and announced that:

“We Shall Just Calculate a Problem.”

To refresh our memory, the problem of concern here is a “textbook problem” in a chemistry textbook I wrote some years ago. This was my second book in this area, a book filled with “type problems”, that is problems where the solution procedure has been explained (theoretically and by example) beforehand. Learning this type of chemistry entails learning to identify a problem X as being an *instance* of a particular *problem type* and work it out in accord with the *rules* given for that type. The problem Goldie is about to explain to the class goes like this – in my translation of course:

When 12,29 g of metal at 95,0 °C is stirred up in 40,0 g of water at 22,0 °C the temperature of the water goes up to 24,0 °C. Calculate the specific heat of the metal.

When I read this text, I *bring to it an array of words and other symbols*. For example, I read that little “g” immediately following 12,29 as “grams” and link it instantly to the term “mass” and the associated symbol “m”. In similar ways, °C brings up “temperature” and the symbol “T”. To the phrase “goes up to”, I assign instantly the symbol “Δ” (a symbol for change) and to “specific heat”, I respond by the symbol “C_{sp}”, the agreed-upon chemical symbol for this term. In my trained mind these symbols then rapidly assemble themselves into a *formula* that relates the relevant quantities: $q = C_{sp} \cdot m \cdot \Delta T$ where q stands for heat. No less important, I *structure* the problem immediately as being an interaction of two systems in terms of heat exchange. That is, the metal, being hotter than the water, will give off heat and the water will absorb all that heat because these systems are interacting in a heat-insulated environment. In other words, we assume that the water will take up all the heat given up by the metal.

I do not know if Goldie reads problem 7.7 as I do. I doubt that. However, when writing about this particular class in her diary later this day she remarked:

Happily, I had been doing these problems. This was ... so easy that I would have managed it anyway. (Goldie, Practicum diary, 2.3.00, p. 4)

Saying things this way (“I would have managed it anyway”) she is making a connection to the fact already known to us, i.e. that she was *improvising* because the computer would not let through her teaching plans and resources for the lesson we are following. She adds:

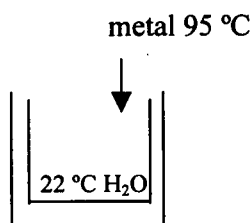
I would of course have worked out the problems keeping in mind that I was going to explain them on the blackboard [whiteboard]. But I feel things went quite well in spite of the fact that I was not prepared. Who would do better! And now I had forgotten Hafthor and was no longer stressed by his presence. (Ibid. p. 4-5)

Note these words! They may appear ordinary but on closer look, we may see them filled with connections. In my reading of the excerpt, Goldie is “in good hands”. She is being taken care of by the vocabulary of chemistry. Like me, she has been “programmed” to respond to problems of this type with particular symbols and equations and decision procedures. This explains why things “went quite well” although she was “not prepared”. In a sense, she was not telling the truth. *She was prepared*. She had been building these chemical symbols and techniques into her “final vocabulary” (Rorty, 1989) for years. In addition, she had been doing “such problems” and had found them easy. Despite the fact that she is meeting the class with no lesson plan and other things that she planned to use, she just smiles and says: “We shall just calculate a problem”. Having said this she is calm and no longer worrying about my presence; and we all look to her, we see her grabbing the blue marker with a firm hand and moving it toward the whiteboard. The students grab their pens and I grab my pen. We are ready.

Who Was Doing the Observing?

Figure 7.1 below shows what appeared in my journal while “observing” Goldie teaching in this class:

Problem 7.7



Final temperature: 24 °C

Specific heat of the metal?
 C_{sp} ?

$$q = C_{sp} \cdot m \cdot \Delta T$$

We cannot use this equation now, can we?

> Now she comes to $q_{\text{water}} = - q_{\text{metal}}$

Note

- > presentation of the problem
- > blackboard [whiteboard!] use
- > guidance

- * The students begin to work on their own.
- * Here Goldie is solving a problem that is quite demanding logically and that requires deliberate organization.
- * I notice that Goldie is doing this without anything on paper. I would think it might be better for a beginner to have such things on paper, having made up her mind beforehand how to work out the problem.
- * It is a bit of an art to deliver well such a problem because there are so many threads that need to be woven together. When twenty people watch you the thing gets even more demanding.
- * Obvious that Goldie was making efforts to connect to the students.

Figure 7.1.

At first glance, notes like these may not appear as interesting or as worth commenting on. However, things are nothing “in themselves”, at least not to pragmatists like me. They *become* something. What they become depends on the words we bring to them, the links we

make. In fact, “ordinary words” may become highly interesting if we think of ourselves as participants in language games as Wittgenstein did and of utterances as mediated actions like Bakhtin did. If we do this, language changes from being a medium of representation to become *social activity*. Moreover, barriers between what is going on “in there” (in people’s heads) and what is going on “out there” evaporate. For language, in this view, is no longer a third thing coming between the self and the reality. I am not using it to express some pre-linguistic thoughts nor I am using it to represent reality out there. *My reality is my language*, the words at my disposal. These are my tools for knowing my way around the world. During my graduate studies in Canada, I learned new words and new ways putting words together to describe my past. As a result, new “pasts” were created. Earlier, during my studies in Norway I also learned new words and word links. In particular, I became familiar with the vocabulary of chemistry and this vocabulary showed me the way while writing my chemistry textbooks for example. And, as you see from figure 7.1, when Goldie begins to explain problem 7.7, this chemical vocabulary was activated. Note the thick line in the middle of the figure. Down to that line, I was simply “copying” things Goldie wrote on the whiteboard. “Simply?” Why do I speak like this? There is nothing “simple” in this. On the contrary, we should pause and ask: why do I behave like this? Why do I *copy* what Goldie is writing?

We should remind ourselves that “officially” I am a faculty advisor. I am representing the teacher education program. My job is to figure out if Goldie is doing a satisfying job. I am expected, in cooperation with her school adviser, to judge her teaching, identify “what is good” and “what is less good” in her teacher behaviour. I am supposed to provide as comprehensive and balanced picture of her as possible. For that purpose, some of us (faculty advisors) carry with us so called “checklists”. However, I was not carrying with me a checklist while visiting Goldie. In fact, since I came back from Canada I have not found a use for or tried to avoid such checklists, saying to myself: “Don’t tear them apart”. “Look at them

holistically". Here, "them" points to my student teachers, of course. Adopting such ways of speaking happened concomitantly with my beginning to avoid checklists when following my students teaching. Besides and as told above, I was carrying with me – as a rule of action – the slogan "learning to teach *from within*": I was trying to see my students as *agents crafting their teacher identity*.

Nonetheless, we should ask: What is a checklist in this context (teacher education)? From my (linguistic) point of view, it is a sub-vocabulary, a subset of a bigger vocabulary called "the vocabulary of principles of teaching" or, if we like, the vocabulary (social language) of those who tend to think of teaching in a technical way and of teachers as users of research-based academic knowledge, what Schön (1983) refers to as "technical rationality". Here you may find one thread why I dislike checklists: I do not like to think of teaching and teachers in such terms. Accordingly, I turn from this technical vocabulary and *start hunting for alternative terms* and ways of talking. However, there is a "danger" inherent in this move: Where is my "place of destiny"? To *what vocabulary* should I turn for words when I have rejected the vocabulary of technical rationality?

I was "observing" Goldie. At the very beginning, in front of me on the desk, was only a white page of my journal. That white page was waiting for my "answering words". I grabbed my pen and began to write. Figure 7.1 shows what appeared in my journal, my initial account of Goldie's teaching. Looking at it, an array of chemical symbols meets the eye. Down to the thick line, I rewrite Goldie's writing on the whiteboard. Saying this now I do not use the word "simply" as descriptor because there is nothing simple about this. We might better say that the scene is *very complex*. For one thing, the "I" that is following Goldie is a remarkable "gathering of diverse actors": It is a faculty adviser, Goldie's teacher at the university, a secondary school chemistry teacher, an author of the textbook in use, and a researcher. Holding firmly to my neopragmatic (linguistic) stance, I tend to see these "actors"

as labels for different vocabularies or (with Bakhtin) as representing different social languages. Assuming that you accept this vantage point (at least for a while), I now invite you to take a “linguistic look” at figure 7.1. This time we look at it and say: How is this writing *mediated*? What vocabularies are at work? Which social languages are invoked? When I look at figure 7.1 with the help of (mediated by) such questions, I first of all see the marks from the *vocabulary of chemistry*. To begin with, I “copy” her writing. It would be quite misleading, however, to think of this copying act as mechanical. I am not a copying machine. I am a human being, a user of language. Words are tools that I use to interact with other human beings. Right now, I am interacting with Goldie and it just happens that at the very moment my pen touches the white paper of my journal I start to co-build a “little chemical world” with her. She is working out problem 7.7. In doing so, she is mediated by the vocabulary of chemistry. I *go with her*, I follow every single step she makes along the route to the desired end, and we see that this route is the route predetermined by the rules of a language game called “chemistry”. I go with her and I am excited to see if she will be following the rules of this game. I become easily drawn into this game because *I am doing it all the time*. A chess master plays chess. A chemistry teacher plays the game of chemistry. When I entered my first class as teacher in early September 1979 – without teacher certificate – I was already into this game of chemistry. I was *trained* as chemist. I was holding a chemistry textbook in my hand. Add to this the fact that I was quite able to use my native language with its metaphors of communication and knowledge and it becomes perfectly understandable why I felt ready to teach. *My actions were firmly mediated by my native language and by the social language of chemistry*. I was “in good hands”. Later “additions” to this picture, for example “pedagogical ideas” of various kinds, have for the most part been “disturbances”, that is they have largely served to *problematize* things I took for granted in the first place. Most disturbing of all was “the constructivist idea” that wanted me to see my

students as architects of their own knowledge because such an idea is incompatible with forms of speaking inherent in my mother tongue. From the very moment this idea came into my teacher life, my rules of actions became weakened. From this point on, my actions as chemistry teacher were guided by *two sets of beliefs*, one linked to constructivism, the other to culturally inherited ways of speaking about things of the world, teaching in particular. When the world causes you to hold contradictory beliefs in regard to your profession, you may be facing a serious dilemma.

Goldie is learning to teach. That is the *general part* of her agenda and that part is surrounded by diffuse and contradictory ways of speaking, exemplified by the different orientations Feiman-Nemser (1990) identified in the teacher preparation literature. However, she is also learning to *teach chemistry in a secondary school in Iceland*. That is the *situated part* of her agenda and I dare say that it is the strong part guiding her actions, the “strong hand” leading her. Entering the school we are visiting here, she was entering something *familiar*. From the moment she entered the chemistry department of this school, she was “at home”. “Being at home” in a place means feeling comfortable with the practices characteristic of that place. Once in there, she looks around: There is the periodic table - hmm. Chemical glassware on the bench there - hmm, the textbook - hmm, problem 7.7 - hmm. Lots of “hmm’s”. And when she becomes a bit frustrated because one of her classes is “not ready to accept new things” she feels relieved hearing her school advisor say that, “this class was of the type that wants things directly into the vein and nothing more about that” (Goldie’s practicum diary, p. 2). Proclamations of this type, I would argue, may easily become part of the beginning teacher’s beliefs. The class and the school adviser cause Goldie to hold a particular belief about the class involved. As Rorty (1999) points out, beliefs (rules of action) are usually true because we weave them into our “justificatory web” (p. 37). Jane’s words help Goldie make things coherent; and this will enable her to meet this class next time

– now as it has been framed adequately. She will most probably act in accord with her belief. I doubt she will try to counteract what she holds as true.

There I am following Goldie teaching her first lesson that morning. Now you have seen what I wrote in my journal while “observing” her (figure 7.1). You have seen that out of this social gathering constituting my “I” the chemistry teacher has emerged as the “person in power”. The text that appeared in my journal, my “observational account”, is a “chemistry-laden” text. This is obvious in the beginning, down to the thick line I have inserted in the figure. Until that line the chemistry teacher in me was doing the observing and the associated writing. Underneath this line, other social languages enter the scene and it becomes more mixed. Note the question that comes right after the inserted line:

We cannot use this equation now, can we?

Followed by:

> Now she comes to $q_{\text{water}} = - q_{\text{metal}}$.

Obviously the chemistry teacher in me “goes meta” (Bruner, 1996) at this point. The reason, I think, is that Goldie is not following precisely the navigation route prescribed by Mother Chemistry. She should have introduced the equation $q_{\text{water}} = - q_{\text{metal}}$ at an earlier point and before she introduced the formula $q = C_{\text{sp}} \cdot m \cdot \Delta T$. As Mother Chemistry sees it (and I am pretty close to her, you know), the problem Goldie is explaining is a problem of two systems interacting in terms of heat exchange. This is how it should be structured if we are to follow the map Mother Chemistry has given us and programmed in people like me. If you think I am losing myself in details, you are entirely wrong because it is “details” of this kind that separates the “expert secondary school chemistry teacher” from his less expert colleagues. As I have said earlier, the *sine qua non* of teaching chemistry in a secondary school is explaining a problem type to the students in the hope that they may be able to solve similar problems by themselves. This has been a substantial part of my work in the school

classroom for two decades. No wonder then that ways of speaking associated with this part of my social practice come to the fore in the moment Goldie “gets off the road”. My past social practice and its associated language mediate my observing and the associated writing. Goldie is learning *how to teach chemistry*. I am supposed to help her. Accordingly, I write in my journal things that point to central issues of chemistry teaching as seen by the culture that has fostered me most.

Next (in my notes - figure 7.1) comes:

Note

- > presentation of the problem
- > blackboard [whiteboard!] use
- > guidance

Also highly to the point, it seems. These words speak to the *structure* of the problem outlined above. Using the word “Note”, I am saying: When I converse with Goldie and her school advisor afterwards I will address this issue. I will be doing my job!

And then:

- * The students begin to work on their own.
- * Here Goldie is solving a problem that is quite demanding logically and that requires deliberate organization.
- * I notice that Goldie is doing this without anything on paper. I would think it might be better for a beginner to have such things on paper, having made up her mind beforehand how to work out the problem.

* It is a bit of an art to deliver well such a problem because there are so many threads that need to be woven together. When twenty people watch you the thing gets even more demanding.

* Obvious that Goldie was making efforts to connect to the students.

How ordinary! Look at the first sentence: "The students begin to work on their own". So what? Why write this? Did I expect them to walk out of the room or begin to sing or something? Glance through it all – my notes. What do you *see*? Something *interesting*? Is this not quite simply typical of the things that slip out of our pen when we try to describe a classroom scenario that aligns well with *how things usually are*? Is this not simply an instance of "something must be said"? I am a faculty adviser. Faculty advisers are expected to make reports, write something.

Certainly, my notes, the words I write while observing Goldie, may not be candidates for a literature prize or something of that sort. However, seen from a particular perspective they may appear as interesting. Seeing them as *tools* I am *using* for particular *purposes* they may gain importance. For, as Wittgenstein has noted, the "functions of words" are as diverse as the functions of tools in a tool-box (a hammer, a saw, etc.) and what "confuses us is the uniform appearance of words when we hear the spoken or meet them in script and print. For their *application* is not presented to us so clearly" (Wittgenstein, 1972; quoted in Wertsch, 1991, p. 105). Look again at:

* The students begin to work on their own.

When I read this sentence now (one and half year after I first wrote it) it brings up a web of answering words. For example:

Following the tradition, when the chemistry teacher has explained the problem type, the students should begin to work on similar problems because this is what matters. When the exam comes, the students must be able to switch to the appropriate decision procedure for every problem type appearing in the exam. Such is the case of chemistry in secondary schools in my country, especially in the upper classes.

Now look at:

* Here Goldie is solving a problem that is quite demanding logically and that requires deliberate organization.

Reading this sentence, I feel I can see several of the “actors” in me at work; certainly the chemistry teacher, but also the textbook author and even the researcher who has been rather silent until now (mostly following at the other actors with a surprising look). Obviously, the sentence links to the structure of the problem mentioned above (e.g. the equation $q_{\text{water}} = -q_{\text{metal}}$) but it connects also to the problem-solver (e.g. Goldie) and what Shulman (1987) has spoken of as the “processes of pedagogical reasoning and action”. As far as I remember (and contrary to Lave), Schulman’s name did not appear in my conscious thinking that morning while observing Goldie. Nevertheless, I see “him” at work in this sentence. During my graduate studies in Canada, he was one of the authors whose final vocabulary I explored. And I was most impressed by his way of speaking about teaching, in particular his notion of “pedagogical content knowledge”. In other words, he was one of those people that helped me bringing new words to my teaching experiences, including saying things like “requires deliberate organization” in the sentence above.

Let us continue:

* I notice that Goldie is doing this without anything on paper. I would think it might be better for a beginner to have such things on paper, having made up her mind beforehand how to work out the problem.

The dialogue in my head continues. Hardly has the researcher in me (or some of the other actors) spoken of “deliberate organization” that the faculty adviser steps in and notes that Goldie is “without anything on paper”. It is like the phrase “deliberate organization” activates the faculty advisor and makes him aware of the fact that Goldie is “improvising”. Seen from my current position (a year and half later and all that) this writing appears rather strange because all actors of my “I” knew that Goldie did not get her things through the computer. However, who is infallible?

Next:

* *It is a bit of an art to deliver well such a problem* because there are so many threads that need to be woven together. When twenty people watch you, the thing gets even more demanding.

I have italicized the part of the excerpt because I want to stress a linguist aspect here, a habit of my mother language. Using it, I wrote – in Icelandic:

Það er talsverð kúnt að *koma* svona verkefni *vel frá sér*...

Given that “verkefni” means “problem” it should be clear to you that I use “deliver well” for “koma... vel frá sér”. Taken literally, that Icelandic phrase means “sending (something) well away”, i.e. you send some “information packet” to another person (or persons) knowing that you have prepared the packet so well that it will most likely appear undistorted to the “inner eye” of the receiver to use a Cartesian term. An appropriate analogy might be that you are going to send a valuable but fragile thing to your friend and to ensure that it reaches him undamaged you wrap it carefully. This way of speaking of knowledge aligns pretty well with what Micheal Reddy (1979) calls “the conduit metaphor” of

communication (see also Wertsch 1991). Following Reddy, this metaphor governs how users of English speak of communication. It implies that once you have come up with an idea or a thought and want to share it with a listener, you insert it into language (words), which you then send to your listener who in turns “extracts” the idea or the thought from the words he received from you. According to Reddy, trying to escape the conduit metaphor of communication when addressing the issue in English may be risky because “practically speaking, if you try to avoid all obvious metaphor expressions in you usage, you are nearly struck dumb when communication becomes the topic” (Reddy 1979, p. 299; quoted in Werstsch 1991, p. 72). Turning to Icelandic, one faces the same. However, one should note that the conduit metaphor is not only shaping how we speak of *communication* but also how we speak of *knowledge*. Given its prominent place in the way we talk of communication, the conduit metaphor also determines how we speak of knowledge because “knowledge” happens to be one of the things that is “sent” through the conduit. Following this thread, teaching and learning soon follow into this web of relations because they centre about the term “knowledge”. In short, *our mother tongue determines how we speak of issues most central to education*. This is evident in the way I speak of knowledge in Icelandic in the excerpt provided. The example reminds me of the *power* of our mother tongue: day in and day out and in the most subtle ways, it controls my speech. Most of the time I simply live deeply in my mother tongue and use unconsciously words it “hands” to me. So firm is the grip of my mother tongue that I do not notice, for instance, that I often speak in a ways that contradict what I, in my “more conscious moments”, consider as “my way of thinking about knowledge”. “My way of thinking about knowledge” is “the constructivist way” or so I have told my student teachers and myself. However, *in practice* – when speaking - the metaphors of my language, including the conduit metaphor, take power over me. My mother tongue, to precious to me, may be my worst enemy in this respect, that is, when trying to rethink my

practice because “rethinking my practice” implies *adopting new ways of speaking* about it. Given the “grip of my mother tongue” this is by no means simple. Conversing with a student teacher after a lesson, I glide - almost without a friction - into a particular language game, made prior to my arrival at the scene of teaching and even prior to my arrival on the place called “Iceland”. Alternative metaphors, say of communication (e.g. of the constructivist type) may of course be brought up during the conversation but only to be swept away in the strong current of the mother tongue because they appear as alien fragments that do not fit with “how we talk”.

And lastly:

- * Obvious that Goldie was making efforts to connect to the students.

Once again, something very “ordinary”. Let us make a little flashback, this time to chapter 5. In that chapter I told you about Parker J. Palmer’s (1991) book *The Courage to Teach*, a book that had become a little “bible” of mine in the difficult period when I was making my first efforts to re-establish myself as teacher educator after returning from Canada. I wrote:

Reading Palmer enabled me to tell a new story of my own practice, a story that pointed to the importance of connectedness, identity, and integrity. *Connecting this new story of my past with the butterfly-stories I was bringing with me from Canada helped me start creating a new story of myself as a teacher educator.*

(Chapter 5, p. 110)

Do you see my point? The word “connectedness” is closely associated with my re-creation of myself as a teacher educator. This “thing” had always been with me but when Palmer gave me the word for it, that is “connectedness”, I was able to start the process of assembling “my Canadian butterflies” into a coherent set of beliefs and thus initiate the rebuilding of the teacher educator in me. Later on, when observing Goldie, this word comes

into my writing - *mediates my action*. I note with pleasure that Goldie seems quite able to *connect* to her students, smoothly and without much efforts. That makes me feel good.

Now you have seen what appeared in my journal while observing Goldie's teaching. If we think of my action as mediated it is clear that the vocabulary of chemistry is the main mediator. When I follow her teaching, I am drawn into the details of the textbook problem she is explaining to her students. I "explain" this by the fact that I am a chemistry teacher too. Like Goldie, I am carrying with me the words and symbols and algorithms appropriate for the problem that is being worked out. I am a chemist and chemistry teacher. When she begins to work out problem 7.7 on the whiteboard I am fully and wholly "into it", even to the degree that other things, including those we usually see in a faculty advisers checklist, fade away or become peripheral. If you read my report of Goldie's teaching in that lesson, you will not find evidence that I was checking, for example, if:

the logical development of the lesson was evident,

Goldie's questions were clear, concise and appropriately directed,

the lesson was proceeding at an appropriate pace,

the physical environment was suitably organized for instruction,

emergency and safety procedures were known and followed,

rules were clearly stated,

transitions between activities were smooth,

volume, inflection and tone of voice was appropriate,

Goldie was using suitable gestures, proximity, wait-time, and eye contact,

to mention some of the items checklists often contain. In fact, I see the possibility that if an "expert faculty advisor" had been testing me observing Goldie I would have failed that test. Because, on that test I would have been required to "provide a broad and balanced report" of Goldie's teaching, tell in clear speech if she was good for the job she was aspiring

for. However, being so taken by Goldie's way of explaining problem 7.7 I came up with a quite narrow description, largely in terms of the language of chemistry. In a sense then, I was doing a poor job.

I bring up this theme because it has been one of the things of my practice that has been causing me difficulties and making me uncertain. As you now know, working as a teacher educator it has been my job – in main - to help prospective teachers gain ground in the territory of secondary school (science) teaching in my country. For me, student teaching has always been a significant part of this job. Grappling with this component, my colleagues and me in the teacher education program have developed several kinds of checklists. Doing this we have been guided by the belief that this would help us come up with a “fair” picture of our student teachers’ performances during practicum, help us figure out if they were good for the job they were preparing for. Accordingly, when I visited my student teachers (mainly science teachers) I used to carry a checklist in my bag. Sometimes “I left it there” (in my bag), sometimes I brought it up on the desk, sometimes looking at it, sometimes not. Whatever I did, I sensed a tension, a conflict, a moment of hesitation, often associated with a feeling of irritation. This last emotional element linked to the fact that I “in my heart” was against such lists. However, this “should I use it” struggle continued during all my pre-Canada years of my practice. Returning from Canada, I felt I knew wherefrom checklists were coming: They were an offspring of the technical rationality Schön (1983) speaks of in his book, *The Reflective Practitioner*. In response, visiting my student teachers in my post-Canada period (which still lasts) I have not been carrying with me any checklists. Returning from Canada I was carrying with me “butterflies”, saying things like “what counts for the beginning teacher is being able to reflect *in* action and *on* action”. Besides, “learning to teach means figuring out your own beliefs and wonder about their usefulness” and “if teachers do not reflect on their actions, their students will not do that either and mindlessness will reign”. Phrases of

this kind had become parts of my new vocabulary and a new story of myself as teacher educator was beginning to take shape. As you now have seen, creating this story I have been picking up words and ways of speaking from people like Parker J. Palmer and Jean Lave. During the time I was visiting Goldie (March 2000; I am writing this part of my thesis in September 2001) things of my practice were “very much under construction”. Many words and phrases from Palmer had got a secure place in my new theory of my practice, e.g. “connectedness” and “good teaching comes from within” and he had helped me form the slogan “learning to teach from within”. Visiting my students in this period then I think I may say that Palmer was with me. And we should note, behind him I discerned an “army” of scholars speaking in similar ways, for example those scholars who want to see teacher preparation being *built on* and/or *developed from* the student teachers’ entering beliefs (Kagan 1992; Richardson 1996; Wideen et al. 1998). Accordingly, when visiting my students during their practicum I was trying to do my best to attend to them as “they were” instead of “tearing them apart with checklists” as I sometimes said to myself. Schön (1988) has spoken of the same – with reference to children in a class – as “giving the kids reason” (p. 19). Observing Goldie, I was trying my best to “give her reason”, that is trying to guide her *with reference to her own beliefs*. A picture of her was already in the making, that is, I felt that I was at this point beginning to understand her learning to teach project. Interviewing her toward the end of the first term helped me do this; and so did her assignments. I was beginning to see her as a beginning teacher firmly determined to serve her students well, have them understand, make links to daily life, help them seeing chemistry as something meaningful. And I felt comfortable going with her in this project; to encourage her, support her. But how should I do this? What are the *practicalities* of supervising student teachers on this ground or in this (sociocultural) frame? What do we (teacher educators) *do* and what do we *say* in these circumstances? Facing such questions we should not forget that our students

are just beginning to weave their web of “what counts as good teaching” and that they, in this process are being guided by a host of actors, including what they have seen during their schooling and what appears as normal ways of acting and speaking in the place called “school”. When Goldie enters the secondary school practicum a part of her teacher-web is already taking form and when we look closely at it we see a mix of what the culture provides and what might be labelled as “distinctively her own”. I have already elaborated on this view in the text above. Here I want to focus on *me*, asking for example, “how could I be of help to Goldie?” From my current position (late 2001) I tend to say something like, “I must attend to both parts of her web” and “I must help her figure out what is good for her” and “I must help her take a closer look at the threads she is taking from culture”. The problem, however, is that Goldie and I might find it problematic to communicate on *this ground* for the simple reason that “this ground” is *my ground* but not hers. Being a beginner, Goldie’s vocabulary related to teaching is still rather meagre. Reading her assignments linked to teaching I see clearly the fingerprints of habitual ways of thinking about teaching but only faint signs of “alternative ideas” such as constructivist ones. Visiting her, following her teaching, I feel I am witnessing even stronger this “grip of cultures” on her, including habitual (Icelandic) ways of speaking of teaching and related issues and the social language of chemistry. In short, I cannot resist thinking that her path was very much “marked out” for her. And there *I* was, standing at the sideline of the road she was following, searching desperately for words that might support her in finding “building blocks” for the part of her that I had identified as “distinctively her own”; helping her to “come somewhat free” from the strong “cultural grip” that seem to be carrying most of us, mediating our actions. However, I did not find those words; or, when I felt I was finding some they appeared rather weak and isolated. Like Goldie in her project, I was beginning to weave a new web - a web for teaching teachers. Doing it, I was using words from various authors, e.g. Parker J. Palmer. At the time of the visit to Goldie described here,

this new vocabulary, although still premature, was close enough to my heart to cause me avoiding checklists and their associated language of technical rationality. Not using a checklist and with my new vocabulary underdeveloped, there was no other way for me than to relapse into habitual ways of speaking, e.g. using the words and phrases characteristic of chemistry and the traditional discourse of secondary school chemistry teaching. This might help explain why my account of Goldie took the shape it did. Looking toward the next section, this “power of habitual language” may also help us describe the post-teaching conference Goldie, Jane, and me were having that morning for the purpose of evaluating and/or helping Goldie evaluating her teaching performances so far.

Conversing With Goldie And Jane

Jane: They were very proud of themselves in 2. X [my pseudonym for the class she is referring to and that Goldie was teaching some minutes earlier]. “Haven’t we been fantastic?”

Goldie (laughing): Yes!

I: Said who?

Jane: The class we were in right now. That class is known as a restless class.

I: The class she was teaching now? Really?

Jane: Yes

Goldie: They....

I (interrupting Goldie): It was so nice being there with them!

Goldie: Maybe they had decided to be kind to me! (more laughing)... It has been such a good experience being with them, a most interesting and lively class to work with.

This is how our talk began. We were sitting in a room located between the teachers' dining room and the schoolmaster's office, an old room with old furniture and old pictures on the walls. From the very moment we sat down, we were having a good time together. You know how this is. Friendly eyes, words said sounding well in everybody's ears, people talking effortlessly and, from time to time, even adding a little laughter to what they say, a laughter that is met with an emphatic smile or a responding "being-with-you laughter"; and you feel good and you know that everybody is feeling good. Shortening the description, we simply say that there is a "good rapport" in the group.

A year and a half has passed since that meeting. However, to me it appears as having occurred yesterday. The reason it is so vivid in my memory may in part be accounted for by the good feeling I link with it, hopefully apparent in the entering excerpt above. However, there is something more, something I find it difficult to find words for but simultaneously hearing a voice from deep within encouraging me to try because – as this voice says – "here is something important, Hafthor"; and, subsequently, the word *professionalism* surfaces. In that meeting we were really trying hard to *talk well* about things we had been experiencing earlier this morning, that is the three lessons in which Goldie has been teaching and Jane and me "observing" her. Now time is ripe for talk, for *feedback*. We may assume Goldie is waiting for that. "What will these experienced teacher say of me?", she may be asking.

What will we say? Listening to the audio taping of our talk it strikes me that it is like *three equals* are talking, not two advisers and a student teacher. As you may see signs of in the first part of our talk given above, we were having such a good time together. I think I may say that we were very happy having got this opportunity to talk about an issue that all of us cared about, i.e. chemistry teaching. And our conversation was running smoothly. Thinking

about this, Merleau-Ponty's concept "coupling" comes to my mind and also Gadamer's "fusing of horizons" (for references, see Davis and Sumara 1997). Using these concepts, these authors point to the situation that emerges when people interact so strongly in a genuine conversation that a "new transcendent unity arises" (Davis and Sumara 1997). In my view, such descriptions may favourably be connected to Wittgenstein's notion of language game. Most often, I would think, when we talk, words flow between us almost automatically. The discussion follows a routine way, a way mediated by habitual ways of speaking. We know what to say and how to say it. In the talk Goldie, Jane, and me were having that morning, several familiar terms related to teaching were brought up, most notably "classes" and "students". From my years as secondary school teacher, I can tell that these terms were a sort of favourite issues once we (teachers in my school) began to "talk pedagogy". For good reasons, I should add. No doubt, the question, "How will my classes be?" is an important question for most teachers at the beginning of the school year. Your classes are "good" and you are in heaven, your classes are "bad" and you may feel being in the opposite place. However and once the teaching has begun, you are also aware of that you might be judging a class of yours wrongly, in particular if you are having some kind of problem with it. In that case, you are in need of "affirmation": Am I judging rightly? And you bring up the issue with teachers teaching the same classes as you are. In the conversations that follow, words are searched for to describe adequately the classes under consideration. As an outcome, the classes become "labelled" as such and such; and the labels become parts of the community's "class talks" and handy tools teachers offer student teachers once the latter arrive, say for practicum. Our newcomers, however, are only partially "newcomers" in this respect. They have been spending as much time in "classes" as they have been sleeping. They "know" what it means, "to be in a class", and they have adopted particular ways of speaking about such things. Consequently, picking up the teachers' (school advisers) class talks may not be

problematic. This may explain in part why Goldie, Jane, and me are acting like equals when speaking of “classes”. In fact, one may well extend this argument to other “school terms” like “teaching”, “learning”. All of us, Goldie included, have been using these words over and over again. In doing so, we tend to let our mother tongue carry us because our mother tongue takes care of these words and their appropriate connections and offer them to us much without our noticing. This helps making us equals. Our mother tongue is mediating our talks and we (faculty advisers and school advisers) should thank her because so far we have not succeeded to develop a special social language for this segment of teacher education. Guyton and McIntyre (1990, p. 514) claim that student teaching is lacking a theoretical basis. Besides, they refer to Watts (1987) and Zeichner (1987) to build the argument that there is “no agreed-upon definition of the purpose and goals of school experiences or student teaching and that much variety exists in the ways these experiences are conceptualized, organized, and actually implemented, even within the same institution”. If this holds, one should actually expect this field, that is, student teaching and accompanying counselling, to be “at the mercy” of habitual ways of speaking, our mother tongue in particular. Listening to the audiotaping I made of the talks Goldie, Jane, and me were having that morning seems to support this view. Sounds, familiar sounds, long-used words, fill the air of that old office – and that office smiles at us because it has been hearing such words thousand and thousand of times. More than so, these words seem to be spoken of the same way year after year, decade after decade. Says the old office. And it continues:

But that does not mean that your talks are not important or not interesting. I have been listening to thousands of talks about teaching, classes, and students. Almost without an exception, those involved in the talks do not think they are doing anything particular. Just talking. What you people tend to forget is that your talks are one of your most important ways of world building; that by conversing you are building valuable

knowledge, personal knowledge. Somehow you, human beings, must deal with your environment, cope with the tasks you are supposed to accomplish. For that purpose, you use different kinds of tools. As teachers, you use physical things like the blackboard, the chalk, the overhead projector and so on. Your most important tool, however, is language. I listened carefully to you and Jane conversing with Goldie about her teaching. I know that you feel that this was "something quite ordinary". Old school offices hear thoughts too. I think you are wrong. I think that you, that community of three people, were doing a good job. For one thing, you were listening carefully to each other. I noticed words being taken and given back to the speaker, most often followed by genuine answering words that helped the speaker make connections to other words or situations, that is, to think. I know about your frustration, Hafthor. I know that you feel like lost when you step inside a secondary school because you feel pressed to leave your constructivist ideas in the main entrance. Once inside the secondary school, you feel that things are carrying you rather than the opposite, that you are forced to relapse into habitual ways of speaking in order to connect to the people inside, that your course at the university is useless. And so on. Many worries, lot of concerns. That is good. Problems and conflicts are your friends, said your colleague – what was his name? Fullan? Michael Fullan? My advice is: turn to life itself. One of the people you call your "guides" – John Dewey – once wrote that, "An ounce of experience is better than a ton of theory because it is only in experience that any theory has a vital and verifiable significance" (Dewey, 1916 /1944, p. 144). Goldie, your student teacher, has uttered something similar. You quoted her earlier in this chapter. She thinks experience is the best teacher. And most people seem to be willing to go with her – and Dewey – on this. The problem, however is to "see the teacher" and – no less difficult – discern the learning process. To approach the problem and prepare yourself for the transcript that I know you are going to show us

soon, Hafthor, I suggest that we return to your friend, John Dewey and witness how he differentiated training from education in chapter two in Democracy and Education (Dewey, 1916/1944). The core idea for him is the notion of participation in a common activity. A horse that is being trained is not a partner in a shared activity. A child being invited to go out with her mother ("we are going-out") and things associated with that joint activity gain meaning in relation to it. That is social learning. As always, language enters the picture:

When the mother is taking the infant out of doors, she says "hat" as she puts something on the baby's head. Being taken out becomes an interest to the child ... By conjunction with the other factors in the activity the sound "hat" soon gets the same meaning for the child that it has for the parent; it becomes a sign of activity into which it enters. The bare fact that language consists of sounds which are mutually intelligible is enough of itself to show that meaning depends upon connection with a shared experience ... In short, the sound h-a-t gains meaning in precisely the same way that the thing "hat" gains it, by being used in a given way. (p. 15).

I, the old office, listened carefully to your talks that morning. I remember it all. Old offices do not forget what they hear. You did not talk about hats; but you talked a lot about classrooms. Why? Are classroom of concern to you? I see you nodding. Of course they are. Every teacher needs to build some meaning for the thing/sound "classroom" just as the child in Dewey's example needed to build a meaning for the thing/sound "hat". And that meaning has to be socially constructed because its function is to coordinate our actions and help us live together. In the case of the child and the mother the meaning for "hat" was constructed through joint activity in which both of them were interested. The same applies to the conversation that follows. It is a joint activity. All

three of you are actively pursuing things together. *One of them is the sound/word*
"classroom":

1. [I:] Now I have been with you in three lesson... have been writing a lot [one may hear me scramble through the pages of my journal]
2. [Goldie:] Jesus! [Apparently, a sound addressing the many pages I have been writing rather than something divine.]
3. [I:] ... and, ...ehe..., this is something that I will look close into later and work out.. and, and, I am just saying that I have been feeling well [referring to my observing Goldie] ... I feel somehow this has been running so, so... without any big obstacles and, and, what I find most valuable is somehow... I experience you such that you glide so well into this role...I don't know, what do you feel...about the time you have spent here? Not so many days but...what, isn't this your third or fourth day?
4. [Goldie:] The first class was dreadful...
5. [Jane:] It wasn't, it wasn't dreadful. But one could see a great difference between the first class and the next when you repeated things right away. It wasn't dreadful, I would not say that. Not at all. But the second class was significantly better. You were very quick to discover what you need to do differently, you see.
6. [I, addressing Goldie:] But why did you feel it was so dreadful?
7. [Goldie:] Now, I started to read wrongly the list with students' names, forgot one name, marked off a wrong name and then when I was scanning the names and figuring out if I was remembering the faces I asked, "Is John here?"...no, "*Where* is John?" and then, of course, he was not in there.. and I had already marked him as being present. And then I needed to go through the list all over again and this was so stupid, you see! When you begin like this it is so difficult to get something....

8. [I:] Yeah, yeah...
9. [Jane:] They [referring to Goldie's students] were also a bit like... this was a first class on a Monday morning, they were, aha... not really ready to go into it. You know, soon there came questions that were very transparent [out of context] and...
10. [Goldie:] And I had been taking, you know, I was talking about polymers, had been taking with me a sample...
11. [I:] A sample?
12. [Goldie:] Yes, of polymers, plastics and such things.
13. [I:] Yes.
14. [Goldie:] And they simply, they found this dreadful!
15. (much laughter)
16. [I:] Now?
17. [Goldie:] But then I did this in the other class and it was quite different. Then we had a lot of fun.
18. [I:] Yes...could you explain to yourself why it was so dreadful in the first class but so fine in the other?
19. [Goldie:] It was both the students themselves...
20. [I:] Yeah..
21. [Goldie:] ... and the other class is much more... they are simply quite different...
22. [Jane, with strong intonation:] *Very* dissimilar.
23. (now all of us three speak for some seconds so words become indiscernible)
24. [Goldie:] And so it was just me, I was so clumsy, I lost the rhythm, you see.
25. [I:] That did not make life easier for you? Didn't help?

26. [Goldie:] Yes... but next time I met this class they were very cheerful ... and promised me, you know, I told them you were coming and they said, "yes, then we will say, how well we understand this stuff".
27. (much laughing, words said do not come through)
28. [I:] You aren't teaching this class today?
29. [Jane:] Yes, it is the next class.
30. [I:] Oho, I see, the next class, yes, yes ... so I should be there!
31. (more laughing)
32. [Goldie:] To see if they do what they promised!
33. (more laughing)
34. [Jane:] This is a class that is rather strong, demanding, you see..
35. [I, an empathetic:] Yes.
36. [Jane:] ...with regard to explanations but they, you know, want to be fed [with information], get things readymade. The other class is more lively, you know, in discussions..
37. [I:] Yes.
38. [Jane:] ...and such things.
39. [Goldie:] They didn't want this, you know, it was a kind of sidetrack showing them this polymer thing...
40. [Jane:] Yes, its just, you see..
41. [Goldie:] To what end? Why should we learn this. This is not for exam!
42. [I:] So they want to have exactly what the exam requires of them and that's all!
43. [Jane:] Yes, this description fits that class. Nice kids, a bit ... [indiscernible] a bit difficult to take out of the usual things.

44. [I:] How strange this is, I mean how different classes can be! For example, as you describe here, a class that wants things straight. One begins to wonder if somehow this class has gathered a group of individuals with similar attitude or... what happens?
45. [Jane:] It seems.
46. [Goldie:] A strong part
47. [I:] Yes maybe, a strong part that governs...
48. [Goldie:] And the others follow.
49. [Jane:] This is such a great difference. When teachers are talking about these two classes then they always talk about this one ... that wants, you know, as the prudent, calm class that it is so easy to teach
50. [I:] Yes.
51. [Jane:] But the other class has been causing troubles... But I feel, it is much more fun teaching them even though they are not always prepared for the lessons and...
52. [Goldie:] I was so anxious taking over this class we were in right now. I once visited you [addressing Jane] and it was so noisy, in the beginning, you know...
53. [Jane:] Yes, it was this lunch break on Thursdays... it is often very difficult.
54. (voices mix)

Gee and Green (1998) wants us to think of conversations of the type just given not simply as talks for talk's sake but as a *building process* in which the participants are engaged in various social building tasks. An example may be *world building* that these authors define as the process of "assembling situated meanings about "reality", present and absent, concrete and abstract" (p. 139). A situated meaning for Gee and Green is "an image that we (participants in an interaction) assemble "on the spot" as we communicate in a given context, based on our construal of that context and on our past experiences" (p. 122). I note with

interest that they refer to Wittgenstein when providing this definition of situated meaning. I also note, and with no less interest, that Gee and Green refer to Bakhtin when arguing that “all languages are composed of many different social languages” (p. 141) and that no one is monolingual in the sense that, “All of us control many different social languages and switch among them in different contexts” (p. 142). Consequently, for these authors, “discourse analysis is an analysis of social languages” (p. 142). A conversation, from such a point of view, is an exchange of words (sounds) between actors that are trying their best to cope with their practices for the purpose of constructing or refining their maps of the terrain. In the excerpt given above the issue under construction (or refinement) is “different classes”. As you may have noted, all three of us participate explicitly in this process, that is, *we bring words to it*. However, one may also see that our contributions are somewhat dissimilar. Goldie is (understandably) occupied with what has been occurring to her this morning and during the days of practicum preceding this one. Accordingly, she is mostly telling little anecdotes from the classes she has been teaching. Jane is somewhat in this track too, which is understandable given the fact that Goldie is talking of “her” (that is Jane’s) classes. However, Jane also makes efforts to *generalize* the stories that come up, in particular subsuming them under labels that the community of teachers in her school has come up with as appropriate like “strong, demanding class” (line 34), or “prudent, calm class... easy to teach” (line 49). I *cooperate* in this generalizing process (e.g. lines 42 and 44). Interestingly Goldie gets on this generalizing track toward the end of the excerpt (line 46) making the suggestion that the reason classes are so different may be ascribed to a particular “strong part (group)” of students within the class. Note also that I pick up this suggestion (in line 47) adding the words “Yes, maybe, a strong part that governs”, and that Goldie immediately provides answering words to my words (in line 48) saying: “And the others follow”.

Focusing on me and keeping in mind that I saw it as my task to help Goldie learn well from her experiences, we may wonder if I was having some success in this regard. At first glance at the transcript given above, it does not appear that I am “standing out” in some way. As noted above, listening to the audio taping, I felt we were three equals and I accounted in part for this feeling with Gadamer’s notion of “fusing of horizons” and Merleau-Ponty’s concept “coupling”. However, on closer view at the excerpt given of our conversation one may notice attempts from my part to “step out of the flow of words”. All of us, I would suggest, have experienced such a “stepping-out-of-the-talk”, eventually wondering, “what is going on here” or “where are we going”. Such “sidetracks” or “lift-ups” may be particularly pressing for a participant who is given the responsibility to *lead the discussion* in a particular direction or seeing to it that it will be useful with regard to a particular purpose. In this case, I was most of all concerned that our talks would *serve* Goldie in some way. After all, she was here to learn and I saw it as my job to help her learn. “Background thoughts” of this kind were without doubt “at work” in my brain during our talks. In fact, if we examine closely the transcript we may discern their impacts on what I say or how I respond to the others. In line 6, for instance, having heard Goldie describe her first class as “dreadful”, I ask her *why* she felt so. Note also that I follow up on this (in line 18) by asking her *if she can explain to herself* why it was so dreadful in the first class. I take this as a link to my slogan “learning to teach *from within*” that I, as told earlier, was always carrying with me. “From within” points to my emphasis that my student teachers develop their voice and that includes adopting the habit of *articulating* things. Accordingly, I make a little pressure on Goldie: “Yes ... could you explain to yourself why ...” (line 18). We might also pay attention to line 44. Having been listening to Goldie and Jane (and myself) talking about these different classes I sort of make this into something to *wonder* about or to *inquire* into, saying “How strange this is...” and closing the sentence asking, “what happens?” As evident from the dialogue that follows

(lines 45 to 49) both Jane and Goldie join me in this process of wondering. Still asking if I was doing a good job, I am now inclined to say “yes”. Looking at the transcript I feel a bit proud because *I managed to create or help create moments of wondering and moments of inquiry*.

Rorty (1979) wants us to think of knowledge as *conversation* rather than *confrontation* with nature. Indeed, I read him to be saying (in *Philosophy and the Mirror of Nature*) that this replacement is a crucial premise for dropping the notion of mind as a mirror of nature. In his view, “we understand knowledge when we understand the social justification of belief” (p. 170). Toward the end of the book I have just mentioned, he revisits this theme, in a section titled “Philosophy in the Conversation of Mankind”, writing:

If we see knowing not as having an essence, to be described by scientists or philosophers, but as a right, by current standards, to believe, then we are well on the way to seeing conversation as the ultimate context within which knowledge is to be understood. Our focus shifts from the relation between human beings and the objects of their inquiry to the relation between alternative standards of justification, and from there to the actual changes in those standards which make up intellectual history.

(p. 389 – 390).

From this point of view Goldie, Jane and me were *co-constructing* knowledge through our conversations. In the transcript provided we were co-constructing what we label as “class(es)” and “different classes”. Entering the conversation all of us have built some beliefs in this regard. During the conversation, we articulate and justify our beliefs. Words are said and words are heard and given answering words. Our conversation about different classes is not an isolated event. It is a part of an ongoing conversation in society, schools in particular. Both Jane and me have been participants in such conversations for years. Goldie is, relative to us, a newcomer. Participating in the conversation she will, I believe, pick up words and

learn to link words in new ways. Prior to our conversation she as been puzzled by how different classes may be. During the conversation her puzzlement is met with understanding, that is many answering words that may become part of her “final vocabulary” (Rorty, 1989) and thus help her constituting her different future classes in appropriate ways, e.g. as “restless”, “calm”, and “easy to teach”. In fact, it seems she was engaged in the construction process of different classes from her first day in the practicum. Reflecting on her encounters with her very first class (that she above, in line 4, talks of as “dreadful”) she wrote that:

I felt that I was pretty good explaining things and using activators and such things but the kids were somewhat uninterested and not ready to accept innovations. Jane also told me that this class was such that they just wanted to “get things straight and no extras”. (Goldie’s practicum diary, 28.2.00, p. 2).

I put the word “get things straight and no extras” in quotation marks to make you aware of that once again my translation may not be so good. Goldie said in Icelandic that in this class the students “vildu fá hlutina beint í æð og engar málalengingar”. Translated word for word this becomes “wanted to have things straight into the vein and no lengthy talks”. Our (Icelanders’) linguistic practices may be somewhat different from English speaking people. Anyway and to the point, what we see is that (a) Goldie’s first class responds to her innovative efforts somewhat negatively (as seen from her point of view), (b) she brings this up with Jane who responds by telling her that this class just wants to “get things straight”. From my own life as teacher, I can tell that stories of this sort have been an important part of my teacher beliefs. In chapter 7, I told you about a class that I was teaching during the first year after I came back from Canada and that was causing me much trouble. Bringing up this troubling element in conversation with colleagues who were also teaching in this class, I was met with considerable enthusiasm that linked to the fact that they too were experiencing this class as troublesome. At some point in time, several weeks into the school year, somebody

came up with the Icelandic label “sundurtættur” which refers to something that has been torn apart. This label followed me for the rest of the year, positively in the sense that it helped me say that I was not solely responsible for the bad things happening to this class, negatively in the sense that it may not have encouraged me to work constructively with the class. My point telling you this is that labels we use for our different classes may strongly shape how we work with them. From this point of view the conversational knowledge construction Goldie is participating in of “different classes” is an important element in the development of her knowing in action (Schön, 1983). That is, the words and ways of speaking she is picking up from the conversations she is part of are most likely to be parts of her interactions with her future classes. To begin with, these words may for her stand out as something new and exciting as a new toy does to the child. But just as new toys gradually fade away into the background of “my toys”, so do new words (if they are welcomed) “disappear” into “my thinking” or “my flow of words” and, consequently, be part of “who I am”. Goldie, on this account, is *crafting her identity* (Lave, 1996) through interactions with her classes and through the conversations she is having with people in the community of teaching, including Jane and me. Her new knowledge, on this account, is not something accumulating in front of her inner Cartesian eye, but rather *her emerging ways of coping with her new environment* (the school), her emerging ways of acting and talking in the community of practice she is entering. Her learning to teach in this community may be seen as a gradual adjustment to the physical and social environment that constitutes the community, including writing on the whiteboard with a marker, explaining a problem to the students and participating in talks about classes. Seen this way, her learning is very *piecemeal*, in fact occurring in such small steps that they are hardly visible and, accordingly, difficult for her to articulate and, no less importantly, difficult for outsiders and potential helpers like Jane and me to participate in unless we do think that we are actually witnessing a learning process. The hope I see in the

sociocultural approach taken here is that it may help us (supervisors) become more *sensitive* to the linguistic aspect of learning to teach. If we think that learning to teach is significantly a question of using words to build worlds and identities we might be better attuned to the concerns of our student teachers and, concomitantly, in better position to give them a helping hand – or maybe better - *helping words*.

Epilogue

In this chapter you have got a glimpse of Goldie's project, her attempts to find her way in the landscape of teaching. Moreover, you have got a glimpse of me trying to support her as best I could do and you have met Jane, her school adviser, trying the same. In addition, you have got a glimpse of "a meeting of our minds" in the transcript above taken from our post-teaching conference. During those minutes, we were sharing words on "different classes", and in doing so, continuing a conversation familiar to most teachers. While in the midst of this conversation I did not see it as particularly interesting. Back home, listening to the recording I had made of our talks, I did not see anything particularly interesting either. "Such an ordinary talk", I said to myself. Today, almost two years after the event, I see it differently. Now it has *become* interesting. To me such a "transformation" appears as something remarkable and speaks to an issue elaborated on earlier in this thesis, the issue of self-creation. Once again, I am reminded of the fact that what we see "out there" is a fruit of our work, in particular of your willingness to explore the vocabularies of different authors and *train* ourselves in *using* the words they offer us. If we do not give up too soon new worlds may open to us. Starting to see language as tool enabled me to see conversation as a social building process (Gee and Green, 1998). The talk we had together that morning, Goldie, Jane, and me, turned – over months and years – into something as remarkable as *life* itself. After all, this conversation – as other conversations - was something *very very real*. We

were actually sitting there, all three of us, in that old office and that old office helped us remember that that we were participants in “something” that has been going on before us and will continue after we have disappeared from the scene. We may refer to that “something” as history, culture, language, or even chemistry. What matters most to me is that we were actually *conversing*, changing words, and we were doing this *on purpose*, to *support* Goldie, the newcomer in our community of practice. In the part I showed you we were changing words on the issue of “different classes”, a notion Goldie was busy building during these days of her practicum. Following this came a part in which we were bringing words to the label “learning habits”. I had been struck by how eager the students in Goldie’s classes were asking (relevant) questions and now brought this up for consideration. Jane then told us that she was trying hard to have the students ask questions. This made me think of the Australian PEEL (Project of Enhancing Effective Learning; cf. Baird and Northfield 1992) and I spent a few minutes telling Goldie and Jane about this project. From there our talks moved into the domain of chemistry, in particular how one should present chemical reaction mechanism to students because Goldie had been doing this in the lesson immediately preceding our conversation. Then we came to “the lesson with problem 7.7” of which I have spoken quite a lot in this chapter. Revisiting it, I used the opportunity to clarify to Goldie why I had been somewhat anxious that she introduced the formula $q = C_{sp} \cdot m \cdot \Delta T$ before she introduced the equation $q_{\text{water}} = - q_{\text{metal}}$. Then we talked about “the girl that did not understand”, that is, a student that had made Goldie confused and “begin to sweat” because that girl had been asking her some strange questions and I observed their talk and saw them worlds apart. Coming to the end of our conversation, I (curious as usual to know if my new course was “having some impact”!) asked Goldie if she saw some connection between the teacher education program and her experiences from student teaching. She replied:

[Goldie:] Lot of connections. This is not something very different or something giving me surprises... This works somehow, I mean, what we are learning. Works a lot but ... [pauses] there are some things that surprise me.

[I:] What?

[Goldie:] Just the students themselves...[pauses] how interested they are... they appear a sort of grown up.

[I:] And that enchants you.

[Goldie:] Yes, how cheerful and entertaining they are.

[I:] You enjoy this?

[Goldie:] Yes, I do. You see, I was never...I said to myself: I can never become a teacher. What am I thinking? What I am doing? [She is referring to the fact that she enrolled in the teacher education program].

(voices mix)

[Goldie:] This [learning to teach] has really amazed me.

[I, talking of Goldie in third person:] She has been making so much progress. I am surprised how, I mean, your [now turning toward Goldie, I think] experiences from teaching...

[Goldie:] Yes, teaching is something quite different from what I thought it was.

[I:] Yes?

[Goldie:] Yes, something very different.

[Jane:] One is soon to discover that...

(voices mix in a sort of all-encompassing “yes”)

In my reading of this text, Goldie feels that she has been through quite a lot while participating in the teacher education program. Writing this chapter, I have tried to bring some words to her “project” and my project as well. Both of us are learning to teach. Both of us are figuring out ways of helping other people learn. She is figuring out ways of helping young people learn the subject of chemistry. I am figuring out how I may be of help to people like her, that is, people who have decided to become teachers. Both of us would like to serve our students well, see them growing. What that “growing” means we may never fully grasp. For Dewey (1916/1944) growth is “cumulative movement of action toward a later result” (p. 41) that takes the form both of habituation, that is “a general and persistent balance of organic activities with the surrounding and of active capacities to readjust activity to meet new conditions” (p. 52). The latter form includes according to Dewey “thought, invention, and initiative in applying capacities to new aims” (p. 52-53). In my reading I link these forms to Frake’s (1977) argument that, “People are not just map-readers; they are map-makers” (quoted in Gee and Green, 1998, p. 124). Helping people learn to teach one must give thought to both forms; because learning to teach has two sides. On one side, it entails learning to live and work with others in accord with the cultural map set by the community involved. On the other side, it involves creating something new, a *personal* map of the territory that helps you think that you are not merely a spectator of the world but one of its creators. On one hand, we have to learn to communicate effectively with the people we work with. On the other hand, we need to figure out alternative ways of speaking. Doing the former means caring for what has been won so far. Doing the latter means looking for better ways of serving our students. For both, *conversation* is needed and we should strive to be good at it.

My aim in writing this chapter was to come up with a description of my visit to Goldie that might help me do a better job when working with my future teachers. I said that I was looking for “good rules of action” in this regard. Now we may ask if I have found such rules. Referring to the account just provided I am hopeful that I may at least be on the way to something good. Dewey (1916/ 1944), speaking of his pragmatic theory of knowledge, made the point that, “while a habit apart from knowledge supplies us with a single fixed method of attack, knowledge means that selections may be made from a much wider range of habits” (p. 340). In other words, knowledge (understood as an intellectual resource) frees us from habitual behaviour; enable us to *select* a response instead of simply responding. Comparing the “pre-Canada” and “post-Canada” years of my career as teacher educator, I feel most of all that I am “more free” now in the sense that I may, when responding to my student teachers, have a “much wider range of habits” to chose from to borrow some additional words from Dewey (1916/ 1944, p. 340). The description I have come up with of my visit to Goldie is, for me, a step in this regard, a step toward *increased freedom of description*. Besides, I do admit that the sociocultural/ linguistic account given in this chapter provides me with some hope. Looking toward future work with my students, I envision the possibility that “language” may become more of an issue or an object of inquiry when working together. In fact, this is already happening, evident for example in the fact that one of the themes I am working on with my student teachers this school year (2001-2) is “The role of language in learning” to refer to the course outline for my course within the teacher education program this year. Less visible but no less real for me is the “linguistic attitude” that I feel is colouring significantly my look at the world and, I hope, making me a bit more *sensitive* to how people, e.g. my student teachers, *use words*. More often than before do I capture myself in the act of “grabbing” words in a stream of words from a speaker and “throw” them (gently of course) back on him or her with a responding question, for example of the type, “What do you

mean?" As hinted at (by the words "more often") this is not a new habit of mine. However, I do it more often, and no less important, when I do I feel the presence of a pragmatic world-view that is backing me up. I may have been looking for "good rules of action". What I am coming up with, it seems, is a coherent set of beliefs "moulded" in "the pragmatic workshop". This gives me hope when looking to the work with my future student teachers. I sense the possibility of new adventures waiting us.

Bringing Things Together

In this final chapter I will bring together pieces from the foregoing chapters in light of the main question of this thesis, namely:

How do teachers learn to think and act in particular ways?

Two major themes have been emerging through this study:

Learning to teach as 'personal' and as 'situated'.

The role of language in learning teaching.

Consequently, the discussion that follows will address these themes in particular.

How one brings together pieces from a complex study like this one depends not only on the questions asked and the major themes, but also on the perspective guiding the study. In my case, it is Rortyan pragmatism. Accordingly, I will work from this perspective when addressing the main question and the main themes mentioned above. This implies that I see it as my responsibility to approach my task now in a similar way that I did when dealing with my records, that is in a way that may point to new possibilities for teacher educators to develop their practice.

Learning to Teach: The 'Personal' Perspective

Returning to Iceland from my graduate studies in Canada I felt that I was carrying with me two *entirely different* stories of learning to teach, one set describing it as a 'personal' (constructivist) issue, the other set portraying it as a 'situated' (contextual, social) issue. Following the first set, I should conceive of my student teachers as thinkers creating knowledge relevant for the job waiting them in schools. Following the latter set, I should see their learning as situated, social or contextual, for example as a matter of "becoming

encultured into teaching communities – learning to think, talk, and act as a teacher” to quote Putnam and Borko (2000). As told (chapter 5), I pushed the latter set aside. I felt that I had two good reasons for doing this. For one thing, guided by my cultural upbringing, I felt compelled to *select* one of those two perspectives, arguing for myself that both could not be ‘right’. Besides, I found it hard to accept the idea that one could simply take learning out of the heads of people and place it somewhere *between them*. After all, I was originally trained as a biochemist and most biochemists tend to think of learning as (biochemical) processes occurring *inside* of the head rather than *outside* of it.

For some reasons, however, stories of the kind Lave and Wenger (1991) were conveying *attracted* me, and I do believe that the reason was that I was no longer a practising biochemist but a constructivist oriented teacher and a teacher educator. Indeed, my constructivist ‘bent’ had already made me *rethink* the issue of learning. Instead of saying “students *receive* knowledge” (as I did until I became familiar with constructivism in the late 1980s) I was now saying “students *construct* knowledge”. That is, I was no longer thinking of knowledge as a ‘commodity’ that could be transferred between people. It was ‘something’ people make but, of course, in their *heads*. Apparently then, the constructivist part of me was not on a collision course with the biochemist.

Or what?

Studying at UBC I had learned about something people were calling “social constructivism”. I also sensed that a ‘war’ had begun between the supporters of that version of constructivism and the older version of it, that is ‘personal constructivism’ (Cobb 1994). I also sensed that the ‘social constructivists’ were close allies of the ‘socialculturalists’, people like Lave and Wenger. Reasonably, this war-like situation caused a tension in me. On one hand I felt attracted to the ‘social constructivists’ because they were emphasising the teacher’s role in the learning process. On the other hand, they were, I felt (or at least some of

them) threatening to take learning out of the brain! To shorten my story, I found a resolution of my dilemma. I said to myself: "Let us recognise the role of others in the individual's learning but let the learning itself stay where it 'rightly' belongs, that is, in the brain".

I add this piece now to the story told in chapter 5 of my struggles to puzzle together all the new things I was bringing with me from Canada because it points to the *epistemological* aspect of those struggles. Although the piece given above may sound humorous, I was, at the time of my returning to Iceland, really *concerned* about this controversy on learning. I was wondering, "What shall I believe?" Having spent two graduate years exploring the issue *I should know*. In fact, I was *confused* – not the first time indeed in my life as an educator. And I asked myself: 'Will this (the confusion) never come to an end?'

It has. I do not feel confused about this issue any more.

Now I say: There are *useful descriptions* and there are *less useful* descriptions. As an educator I look for useful descriptions, useful in the sense that they may help me improve my work with my students. The reason I speak like this is that I have trained myself to speak the pragmatic way. Pragmatists are not interested in metaphysics and epistemology; they are interested in social matters, the struggles of ordinary people. They think that what matters most for human progress are improved ways of speaking, better descriptions of reality. Whether the new descriptions are 'more right' or 'closer to reality' than the older ones we will never know because whatever we say about reality we say that *in* language. However, we may figure out if things are *useful* or not by simply *giving them a try*. On this account, it is impossible to figure out if any one of the three perspectives 'personal constructivism', 'social constructivism' and 'socioculturalism' is closer to reality than the others. On the other hand, there is always the possibility that they, or some of them, may turn out as *useful for particular purposes*.

And this is really my idea:

Both the personal and the situated perspectives on learning to teach may turn out as useful descriptions albeit serving different purposes.

Let me illustrate my point with stories from the foregoing chapters.

Back home from Canada (chapter 5) and figuring out what might be good for me to believe with respect to the course I was about to launch I came down with a set of statements that I labelled “My Pedagogic Creed”. On top of that list was the following statement that I now repeat for our convenience:

I belief that *good teaching comes from within*, that it is always rooted in personal attributes and the world-view of the one that teaches. Learning to teach means *developing one’s own theory of teaching*.

This statement, you may remember, was grounded in part in my reading of Palmer’s (1998) book, *The Courage to Teach*, partly in stories of learning to teach from various authors (for review see Kagan 1992; Wideen et al. 1998) and partly – and maybe most significantly – in my own experiences as a chemistry teacher. Bringing these three pieces together I could say: Classroom teaching is rooted in *personality*. Accordingly, learning to teach requires a journey into oneself. My student teachers must explore their inner life, their ideas and figure out who they are and who they want to be. This is the very first step in the process of learning to teach. So I said.

Having pushed the situated perspective aside I turned to the task of adopting the personal perspective on learning to teach to my purposes. Teaching my student teachers, ‘Good teaching comes from within’, would be my new rule of action. Besides the phrase ‘learning to teach’ now became extended with ‘from within’ thus transforming into the slogan ‘learning to teach from within’. Having made this new slogan I actually felt a bit proud of myself. I felt *I* had come up with something by my *own* efforts!

Done with my new slogan I took it with me to my student teachers, the new group. Meeting them for first time, on September 3rd 1999 I introduced it to them. As told in chapter 6, they embraced the idea immediately. During our first coffee break, we were sitting in a tight group around a relatively small table. Following my journal, we were “deeply engaged in a discussion on teachers’ self-confidence, security, and self-knowledge”, adding a few sentences later that, “I felt that the people were really engaged in the discussions”. At the very end of this journal entry I wrote: “What a wonderful beginning!”

Apparently, my students were accepting my new pedagogy right away.

Or what?

Did they really do so? All of them? *Who was doing the speaking?* Examining this case it has occurred to me that *not all of them* may have been that ‘enlightened’. *Some* may have been, in particular those with teaching experiences. For example Cathy who told us that she, as teacher, had been keeping a journal in which she wrote about her classroom experiences – in order to ‘map herself as a teacher’ as she said. However, at this point in time I was not aware of the *heterogeneity* of the group in this respect. I did not notice that the ‘newcomers’ in the group, those students who had *never taught* in a classroom, did not speak that much. Having no experiences as teachers, *they* were not carrying with them as many ‘answering words’ to my ideas as those *with* teaching experience and were therefore less able to *participate* in this classroom talk. These ‘voices’ came through later on, toward the end of the autumn term when the students were asked to evaluate the first part of the course. Goldie, for example, when reflecting on the course in a particular assignment and, in doing so, using a particular table form I had provided, wrote in a matrix defined by a row called ‘personal factors (I as a student)’ and a column labelled ‘negative/inhibiting factors’: “Anxiety, feel pressed to express myself even if I feel I have nothing to say”.

In short, guided by my new slogan 'Learning to teach from within' I tended to *overlook* that some students in the group were not particularly enthusiastic about it. *They were expecting something else*, for example more lectures, more 'real stuff', more techniques and procedures for the teaching tasks waiting them in the school. "Why not tell us, Hafthor, you are the expert!" some of them said.

No doubt, however, the slogan 'Learning to teach from within' was showing its value *in practice*. It helped me *focus* on my students, their particular *qualities* – seeing them as 'persons' rather than simply 'students'. Observing them teaching, for example, I was 'tuned' to these personal qualities, actually searching for their strengths, or, as Dewey (1916/1944) might have said, their "active tendencies". This made them (or at least some of them) feel good because in a way I was 'giving the ball' to them, saying, "It is your responsibility to figure out who you are as teacher and who you want to be as teacher". Plausibly, the personal perspective has its limits and drawbacks. It lets one 'see' some things clearly while obscuring others; highlights one aspect, neglects another, and so forth. One of its drawbacks, I think, is that it may *overemphasise* the 'individual' thus enhancing *individualism*. I noticed, for example, that I was often reluctant to *criticize* my students' teaching performances or 'push' them to see things differently. I was so focused on their individual qualities that I tended to 'hide' or even forget *my view*. The risk involved here is quite simply that the student teachers 'sail their own way' in a sort of delightfulness over their personal qualities, eventually guided by an enhanced individualistic attitude telling them that 'now they have found their own style and all is good'. Another (and related) drawback with such person-oriented perspectives is that they tend to neglect interactions with, and influences from, the environment.

Learning to Teach: The Situative Perspective

As told, beginning my new course I pushed the situative perspective aside because I could not really make sense of some of the terms associated with it, for example the term 'situated learning'. Done with the course and exploring my data, I felt increasingly attracted to it. After all, I had been plagued for a long time by a feeling telling me that although my student teachers and I were having a 'good time' at campus, *things somehow took on a new shape and a new direction when the student teachers began teaching in real school settings*. Besides, my attitude toward inquiry was changing. I had started to explore the writings of Rorty, and found that I should approach my data *imaginatively*. No doubt, the situative perspective with all its strange terms was a challenge for an imaginative mind! Chapter 7 in part and chapter 8 in whole represent my efforts to explore the usefulness of the situative perspective. Here I will focus on Chapter 7 but reserve chapter 8 for the next section because the latter brings in the issue of *language*, which I prefer to deal with separately. Chapter 7 tells the story of my return to my old school and the associated unpleasant feeling of being 'engulfed' by this school in such a way that I felt pressed to keep private the ideas that I was carrying with me from Canada. I recast this story here as story speaking to the situated character of teaching in relation to community, communication, and connectedness.

Returning to the chemistry department of my school I felt that my colleagues and I had drifted apart to the degree that we were no longer *genuine* colleagues. When building things together in an earlier period we were certainly on a *common pursuit* even though I may have been 'a bit more on the pedagogic side' than they were, in particular after I became familiar with the notion of constructivism. Besides, I had – through my studies in Canada – become a *scholar*. Accordingly, it was not as easy for me as before to *align with the forms of life characteristic of my school*. This time we (my colleagues and I) had *less in common* than before, less of a common understanding, less of common goals. Worst of all, I felt that it

would do no good even *telling* my colleagues of the new ideas I was bringing with me from Canada. Arriving at the first meeting I had with my colleagues in the chemistry department a week before the school would begin, I sensed strongly that *things would be as usual*. Feeling this pull of old forms, I decided to keep my 'Canadian treasures' for myself. In hindsight, this indicates to me that I had become *peripheral* to this community of practice in the sense that I was now less able to *communicate* with my colleagues than before when we were 'doing things together'. Besides and no less important, *this alienation affected my teaching chemistry* this year. Feeling that I had become a stranger to my colleagues and an outsider to the school culture, I simply 'lost power'. I felt no longer interested in the activities of this department. I even caught myself looking frequently at my watch during the working day wondering if "this day would not soon come to an end". In such mood one is bound to relapse into habitual ways of doing things. At least was it so in my case that I tended just to pick up old transparencies and other things from the past and stick to routine practices established long ago. As the school year passed I became increasingly an "equivalent of an aeronaut" (Erickson 1991).

What does this story tell? To me it brings the following message:

While trusting in Parker J. Palmer (1998) that good teaching is grounded in the identity and integrity of the 'I' that teaches, that 'I' is, I argue, by no means an 'island' nor is it a stable entity. On the contrary, it is pretty much a *social* thing in the sense that its integrity and its sense of identity are *closely connected to, and dependent on, the community to which it belongs*, the activities of the group and the beliefs and attitudes of the other members.

Working with interested colleagues makes you interested. Seeing them enlightened you tend to become enlightened too. And this gives power and courage to teach. When things turn the other way, when you do not feel connected to your colleagues and alien to the culture of the department or the school, your identity and integrity as a teacher are in danger. Walking into

the classroom to your students, you are no longer the same. And the students will sense this immediately. They can see it in your face and your movements, they can hear it in the way you speak and they can feel it in how you attend to them and how you respond to them. At last, this was so in my case: *Becoming disconnected from my colleagues and an outsider to the culture of the department I was also becoming disconnected from my students.*

I conclude that who you are *as a teacher in action* is not simply a personal matter. It is a *situated* matter. It is quite simply so, as Dewey (1916/1944) said, that, "Thinking and feeling that have to do with *action in association with others* is as much a *social mode of behaviour* as is the most overt or hostile act" (p. 12). This, of course, applies to teachers. We are human beings too.

The story told above (and in detail in chapter 7) illustrates, I argue, the *usefulness* of the situative perspective. Using it enabled me to *redescribe* the unpleasant story of my returning to my old school in such a way that it became sensible to me. Done with this description I simply felt better. I was more at peace with a story that had bothered me for a long time. More generally, the story I tell points to the *power* of the situative perspective. Using it, that little burden I was carrying with me turned into a story of *the situated character of teaching*. This indicates to me that using this perspective, things we merely *sense* as complexities may become more understandable and thus create possibilities to act purposefully. Understanding, in a pragmatic view, is a matter of bringing adequate words to particular problems so that they may be solved. The situative perspective offers us new words and ways of speaking that may help us deal with the complexities of our job and thus enable us to serve better our students.

No doubt, the situative perspective has also its drawbacks. Becoming 'too much' drawn to it, teacher educators risk forgetting the idiosyncratic qualities and the active

tendencies of their student teachers. In other words, the 'personal' may *disappear* into a background of complex social and cultural relations.

The Role of Language in Learning to Teach

This study addresses teacher learning. I am asking:

How do teachers learn to think and act in particular ways?

Approaching this question I have been exploring my own attempts to learn to teach teachers in *new* ways, guided by the idea that, in doing so, I might come up with descriptions that speak to it.

In my view, I have been learning to teach teachers from the very moment I accepted a part-time position within the teacher education program at the University of Iceland in the late 1980s and began to wonder *what I should teach*. Please, notice the emphasized words because they indicate certain behaviour on my part. I was *not* wondering *how* I should teach but *what* I should teach. The problem for me was to find a *content* for the course. The rest, that is *how* I should teach the course, was not an issue for me. That part was somehow 'given'. By the time I got this new position I had been teaching chemistry for a decade or so and become an 'expert at the blackboard'. Accordingly the 'how' was not an issue. I knew how to do such things. The problem was the content.

Fifteen years later I still teach "this course". I use a quotation mark to indicate that the course I am teaching today is very different both in form *and* in content, compared to its earlier versions. Above all there is now a strong emphasis on *interaction*. We talk a lot, we share ideas, we wonder about things. We do things together. Most often we sit in a circle, facing each other, listening to each other, responding to each other. I am no longer the 'expert at the blackboard'. I am in the circle. I am with them. We are exploring things together.

How did this happen? Why and how did I change my practice this way?

My answer, in brief, is this: I went to Canada.

Studying at the University of British Columbia I experienced *new things*, new ways of *doing* and new ways of *speaking*. In the courses I participated in we were as a rule sitting in a circle, facing each other, sharing ideas, responding to each other, questioning, listening. Becoming a teacher in the teacher education program at UBC I also experienced ways of working and thinking that were new to me. Planning things together with the other teachers in my department I again noticed this strong emphasis on *action* and *interaction*. The lesson plans we were making together always aimed at *engaging* the participants, the student teachers, having them *do* things, encouraging them to *articulate* their ideas and *share* their ideas with others. Besides, I was reading books and articles. What I *selected* for reading was not *ad hoc*. It was *in line* with the other activities. It was, in main, readings *speaking to* this type of behaviour, to teaching as social, to action and interaction.

I had come into a new 'loop'. I was about to leave the old loop I had been in. I was about to establish a new type of behaviour, new habits of thinking and acting. And this was happening through participation in various activities and through my own readings and reflections on those readings and on my past teaching practices in Iceland.

However, there was 'something more'. It was also me, my 'I'. Arriving in Vancouver in July 1997 I was in *the mode of searching for something new*. I was looking for an 'alternative'. Somehow, I was not longer comfortable with my own practice as a teacher educator. I was becoming bored by always doing the same things. Besides, I was carrying with me a 'burden' that I was hoping to get rid of in Vancouver. That burden was constructivism. I had adopted this 'child' but it had made me confused. I did not really know what I should do with it. My school had, in effect, rejected it (chapter 2). This was, no doubt, a hard nut for me to break, a blow to my hopes. Seeing that 'child' being rejected I felt no longer comfortable with the culture of my school. And I began to *wonder* about this culture. I

started to *think* what I was really 'into'. Why did my culture reject my new 'child'? Was something 'wrong' with it? Or was it my culture that was 'wrong'?

Arriving in Vancouver in July 1997 I was carrying with me questions of this kind and hoping for something better, hoping to understand what was going on in my teaching life and hoping be able to get rid of that 'constructivist burden'. I was searching, wondering, hoping.

In short, I was *ready* to enter a new loop. And before long I was in that loop. It was a summer course with Ardra Cole, and she encouraged us to face ourselves and ask, "Who am I as a teacher?"

What a question!

From now on I began to actively explore this issue, grapple with this question. And it took no end! Currently it has resulted in the thesis presented here. And I know 'deep within' that this is not the end. On the contrary, this is a *beginning* of something new, a new loop, new search, new wondering, and new hopes.

And, in my view, this is precisely what *education* is about and, by the same token, what *teacher education* is about. Looking to my students I want to see them *grow*, get out of the old loop and find others, begin searching, hoping with force, looking for new possibilities, asking who they are and who they want to be. This is approximately my spirit when working with my student teachers today, five years after I went to Vancouver and three years after I returned to Iceland.

However, *the thing is not that easy*. Getting my students into new loops, new ways of speaking and acting, new modes of behaviour – that is not a simple thing to do! I continue to struggle with this. I see them become interested at campus. I see them become enlightened, critical of current practices in schools, even claiming that they will never behave 'like this'. As a rule they do exactly *that*. The school culture brings them to their knees, pulls them into a mode of thinking and acting compatible with the storyline, the old forms.

And I wonder: Why is this so?

As you may have noticed, this thesis revolves pretty much about this question. I launched a new course hopeful with new ideas from Vancouver. And I began to record my experiences and analyse these records in a hope that I might get at least a clue as to why things were so difficult. Visiting Goldie (chapter 8) I felt I had 'found something' – a clue maybe? Not right away though; actually, it took me two years and endless talks with my guides about what words I should bring to my original records. In the end I found a 'key' and it was Wertsch (1991) that handed that 'key' to me. Using his notion of 'mediated action' I began to see my visit to Goldie in a completely new way.

How?

Originally, sitting there in the classroom 'observing' Goldie, I was focusing on *her*, trying to see the 'teacher within'. Parker J. Palmer (1998) was with me, guiding my look, saying 'Good teaching comes from within'. While following her teaching chemistry I made notes. While sitting with her and her school adviser, I had the tape recorder on. I was there for three hours. Back home I looked at my notes and began to *reflect* on the visit. That was the beginning of a reflection that took me two years to bring into a form that I felt satisfied with and that, in the end, resulted in chapter 8 of this thesis.

Having read chapter 8 you know that it is a *sociocultural* account of my visit to Goldie. This means, in brief, that I began to approach my 'first story' (my records) with *new kinds of words*, that is sociocultural terms. Working on this chapter, I was reading Wertsch's (1991) *Voices of the Mind*, focusing in particular on Wertsch's account of Bakhtin. Bakhtin's main interest was in utterances, the way people actually speak. Looking at people's utterances he was guided by the view that people, when they speak, invoke other voices. They do not speak alone. His idea was that as people participate in the social life they pick up words and ways of speaking, albeit unconsciously. Besides, he was guided by the view that

various groups of people speak in different ways. He called these different ways of speaking 'social languages' and 'speech genres', arguing that how people come to speak depends on what kinds of social practices they participate in and even the place where they work. As Werstch (1991) points out, this Bakhtinian idea is remarkably similar to Wittgenstein's notion of a 'language game'. Switching to this latter term we may say: How people come to speak depends on the language games they participate in. Building on these ideas, Wertsch (1991) proposes a sociocultural approach to human action, saying:

The most central claim I wish to pursue is that human action typically employs 'mediational means' such as tools and language, and that these mediational means shape the action in essential ways. According to this view, it is possible, as well as useful, to make an analytic distinction between action and mediational means, but the relationship between action and mediational means is so fundamental that it is more appropriate, when referring to the agent involved, to speak of 'individual(s)-acting-with-mediational-means' than to speak simply of 'individual(s)'. Thus, the answer to the question of who is carrying out this action will invariably identify the individual(s) in the concrete situation and the mediational means employed. (p. 12)

I had got a new 'lens' to look at my visit to Goldie. Now I began to *see things new*. Gradually I began to see Goldie's actions as a part of something much bigger. Gradually the textbook entered the picture, and so did the classroom, the tables, the blackboard, and the students. I began to see threads back into history, to the culture in the school, to the culture at large. I 'looked' again at Goldie and now I asked, "Who is doing the teaching?" And I 'looked' at myself and asked, "Who is doing the 'observing'?" Very gradually I came to understand that both Goldie and I were 'wired' into a complex pattern of mediational means that was mediating our thinking and our actions. I was, in short, beginning to see our thinking and our actions as *situated*.

And there was *language*, no longer an inert medium, but a *tool*, one of the mediational means mediating our actions.

Looking with my new lens at the field notes I had made, I began to see several language games involved, most notably Icelandic and the discipline chemistry but even Parker J. Palmer and Jean Lave 'were there' and so was the 'principles-of-teaching' language game attempting to interfere with my 'Palmerian look' at Goldie.

I am asking in this thesis:

How do teachers learn to think and act in particular ways?

Goldie was learning to teach. While I was visiting her, she was figuring out how to teach the subject chemistry to secondary school students.

I was learning to teach. While visiting Goldie, I was figuring out how I might help her learning how to teach chemistry.

And so we sat down all three of us, that is Goldie, her supervisor and I. The post-teaching conference had started. We were *talking* together. The subject was 'Goldie's teaching', of course. That is what post-teaching conferences are for. The tape recorder was on.

First listening to the audiotaping I had made I did not hear 'anything special'. Of course not. Everything was *as usual*. The teaching had been as usual and our talks had been as usual, a *repetition* of a form that I had been using for years. 'Most mundane words', 'common ways of speaking'.

Good for a doctoral thesis? Hardly.

However, I was *leaving the old loop*. I had got a *new lens* and becoming more *curious* of things, even the 'most mundane words', even 'common ways of speaking'. Actually, such things were becoming of great *interest* to me because I had come to see actions and ways of speaking as mediated and as situated.

I was *not* asking: What are they talking about?

I *was* asking: What is *happening* in the conversation? What is *going on*?

I asked like this because I was beginning to see conversation as *social learning*, as a *building process* in which the participants are engaged in various social building tasks, for example world building and identity building. My guides in this regard were Gee and Green (1998). They handed me their lens and I began to explore the conversation I had with Goldie and her supervisor.

What did I 'see'?

Actually, I '*saw*' a *building process*. We were building together 'classes' and 'different classes'. Goldie began by telling anecdotes from the classes that she had been teaching. She was wondering about how different classes may be. For some reasons she felt 'captured' by this issue. Sensing her excitement Jane (the school adviser) and I 'got into it' with her because we, both of us experienced teachers, knew deeply within how much our mood as teachers fluctuates with our classes. You get a 'good class' and you smile. You get a 'bad class' and things spin down for you. This we know so well and therefore we went straight into the issue with Goldie, listening *attentively* to her words, responding to her with 'good answering words' and *there was the building process going on: a social construction of practical knowledge*.

Goldie was learning. She was learning in the most natural way; that is, she was learning without thinking she was learning like children do so elegantly when picking up their mother tongue. She simply joined wholeheartedly the conversation on 'classes', one of the most common issues in schools in Iceland. *To become a teacher one must join the conversation of the teacher community*.

We, that is Jane and I, were also learning, at least if we take learning to mean *growing* in a Dewyan sense. Whenever we *participate* in a thoughtful and genuine conversation we

grow a bit. We pick up words and ways of speaking much without our noticing. Some of them may find a niche in our changing personal vocabulary, some may even begin to make new relations 'in there' as the phrase 'learning to teach' did when I allowed it to become part of my vocabulary (chapter 5). When that happens, we begin to *see things new* because how we see the world depends on the words at our disposal and the ways we tend to link them together. New words and links make new worlds.

Learning to Teach as Language Games

I went to Canada to learn to teach teachers in new ways. That was in 1997. Now the year is 2002. No doubt, I have changed as a teacher educator as the previous section indicates. *I act in new ways*. I am no longer 'the lecturer'. I am 'the helper'. I see it as my job to help my students grow, help them develop their thinking.

How did this come about?

How did I learn to think and act in new ways?

Thinking about my years at UBC I feel comfortable saying that I learned to think and act in new ways by *participating* in the various activities on campus both as a student, teacher, and faculty adviser. Using the word "activities" I am keeping in mind both things I was doing together with other people at campus (e.g. participating in coursework and planning things together with other teacher educators) and my more 'lonely and homely activities' such as reading a book or writing an assignment on my computer. All these cases, it seems to me, may be seen as a matter of *word use*. Participating in course activities, people are most distinguishably *talking* to each other. Reading a book one attends to the words in the book and so gets in 'contact' with the author. Writing a piece we 'look' for adequate words.

Speaking about "word-use" we are very close to the idea of a language game. Briefly, it is the idea that various groups of people develop particular ways of speaking depending on

their social practices and their interests. The word “game” points to an important aspect of this notion. Ordinary games are played in accord with certain rules that, in effect, *fix the meaning of the words used in the game*. In chess, for example, the meaning of the ‘king’ is fixed by a set of rules that determine its position in the beginning and the moves it can make.

The discipline chemistry is a mix of language games. That it is a *mix* links to the fact that chemists do different things and have different interests. This causes them to speak in somewhat different ways of the ‘atom’, for example. In other words, the meaning of the word ‘atom’ varies somewhat when we move along different communities of practice within the domain called ‘chemistry’ because these communities have developed (through their work and history) somewhat different ways of speaking about the ‘atom’. In other words, the *meaning* of ‘atom’ depends on the community involved and the history of that community. Similarly, the meaning of the term ‘learning’ varies across different groups of people because these groups have adopted different ways of speaking about this term. In other words, they fix the meaning of the words “learning” in different ways. The same applies to other ‘thick terms’ (Rorty 1989), for example terms that our student teachers come across during their studies, terms like ‘knowledge’, ‘teaching’, and ‘teaching’. Their meanings vary in accord with the language game they come from. This makes it difficult for student teachers to develop their vocabularies during their formal studies.

Let us take a closer look at this issue.

Following Rorty (e.g. 1989), we should think of the world as a huge assembly of language games (or vocabularies) that have been *created* through the various kinds of social practices up through history and that *intersect* in various ways in human activities, for example in the talks of groups of student teachers in a course at campus.

For a Rortyan pragmatist like me, human beings are most distinguishably *language-users*. That is, they use words to *describe* things. The words they use and the way they use

them (how they link them) determines how they 'see' the world. *Words create worlds.*

Student teachers entering a teacher education program have already been participating in various language games, most notably the language game called 'common sense'. This particular language game traverses all other language games. When I teach chemistry I certainly rely on the language game mix of chemistry, for example ways of speaking about the 'atom'. However, my native language (Icelandic) also plays a part by handing out to me ways of speaking most Icelanders share. And my native language follows me to other places and groups as well, affecting the way I speak in those places and in those groups.

I was born in Iceland. To begin with I only heard *noises*. Gradually I began to hear *voices*, that is, Icelandic words of all kinds. And I picked up those words and the associated ways of speaking and so began to 'think', that is *use these words in some ways*. That is, I was *learning to think* of things in the world in a similar way as mom and dad and other people around me. For example, I learned to speak of fishing boats from my dad and I learned to speak of things in the kitchen from my mom. They helped me establish *particular linguistic practices* and I am happy that they did so because this enabled to *participate* in the language games of the people in my community. Entering dad's fishing boat, I could move around and *converse with him* about the various things in the boat because now I was into his 'fishing boat language game'. Becoming a bit older I left my little fishing town community to try out new language games, for example those associated with the discipline chemistry. Now I learned, for example to speak of 'water' as H_2O . And I thought that now I was coming closer to what water 'really is'. Later still I entered the language game of constructivism. Now I learned to say that 'people construct their own worlds' and I understood that 'water' could be constructed differently by my different groups of people, for example my own chemistry students. Most recently I have been exploring the writings of Rorty and discovered the meaning of the word 'water' depends on the language game it is part of and that no language

game was closer to what it 'really is' than any other. We speak but the world does not, he said. *Now I understood that there are no "Truths", only different ways of speaking.*

I became familiar with Rorty's writing during my graduate studies at UBC. I turned to his writing because I felt confused. I was writing about 'my old burden', that is my attempts to tailor the idea of constructivism to my teaching practices in Iceland, and was surprised to discover that this 'burden' gradually took on a new shape so that no longer was I 'the big hero' in a simple scenario but only one of many players in a very *complex* scenario. Turning to Rorty in my confusion he said to me that I was all right, adding:

It was quite simply so that you were bringing new words to an older story of these past events. While in the midst of these things you talked about them with the words at your disposal and in accord with the rules of the language games you were participating in at that time. That was your first story. And then you went to Vancouver for further studies. In that place you entered various new language games by participating in the activities at campus, by reading books and articles, and by writing assignments.

Sitting at your computer and writing about your early struggles with constructivism, new words and new kinds of sentences began to appear on your computer screen. A second story of your past was being created. In other words, you were redescribing a segment of your past with the new terms. This is happening to us all the time, at least if we bother listening to others and read some good books. If we do so, we expand and rearrange our personal vocabularies. Learning in the deep sense of changing as a person, developing or growing, is, in this view, a matter of redescription.

And this is really the idea that seems to describe most beautifully what I have been through when relearning to teach teachers:

I learned to teach teachers in new ways by participating in various activities where I picked up words and ways of speaking from various language games and various

people and trained myself using them for my own project of leaning to teach teachers. I was redescribing myself, my situation, and my past in the terms these people were handing out to me.

Think of student teachers sitting in a circle with their teacher around the 'great thing' called 'teaching'. The word goes between them, as we say. Each time a student teacher speaks she is not speaking alone. With Bakhtin, she invokes or 'ventriloquates' one or more situated speakers. She has been picking up words and phrases from books and articles, friends and fellow students, now and in the past. Speaking of the 'great thing' in the circle, some of these words and phrases come, not to her mind, but to her *tongue*. She says something about 'teaching'. What she says and how she says it depends on the situation 'here and now' but also, and even more significantly, on the words that are 'naturally her own' and that she has *learned to use* by participating in various activities (including various language games) over a long period of time.

A personal vocabulary that one has been developing over a lengthy period through extensive training is a *stable* thing in the sense that one does not give it up as long as it *serves one's purposes* and helps one cope effectively with one's environment, including communicating with other people. This we may understand simply but giving a little thought our ways of speaking. Communicating with different groups of people our word use may vary from one group to another in accord with the language game(s) being played. However, for each of these groups and over time, we tend to speak in a similar way today as we did yesterday, a week, a month, or even years ago. The reasons for this stability is quite simply that there are certain rules, and we stick to these rules almost automatically. If we attempt at breaking these rules we soon discover that we are no longer participants in the conversation of the group. Sensing the danger of being isolated from the group, we quickly revert to 'good old habits of the tongue' (cf. Reddy 1979). Such things often happen, I assume, to innovative

teachers who are, in their schools, trying to speak of teaching and learning in ways that deviate from the dominant language game of the school. This was what happened to me years ago when trying to bring the language game of constructivism into my old school (chapter 2).

We sometimes say that our student teachers enter our programs with 'firmly held beliefs' related to teaching and learning and that these are not easily affected. I suggest that we should rather say of them that they arrive in our programs as '*trained speakers*'. Prior to formal teacher education, they have established *stable* ways of speaking of teaching and related issues through lengthy training as participants in the 'common sense language game' of ordinary life where things related to schools, education, teaching and learning are frequent issues. Entering the teacher education program, they are entering a 'world of new language games' that offers them new words and new ways of speaking about these issues. However, due to the short time they are in the program and the complexity of this world of different language games, they are not likely adopt these new words and these new ways of speaking. Besides, these words and ways of speaking appear to them as *fragments* because they do not know the rules of the language games involved. One does not get a grasp of the meaning of the various pieces of chess unless one learns to play the game of chess. Being told of the moves allowed for the 'king' *some* meaning of it may be recognized but this meaning is very different from the meaning one gets by actually playing the game of chess. Dewey (1916/1944) pointed out decades ago that, "we are very easily trained to be content with a minimum of meaning, and to fail to note how restricted is our perception of the relations which confer meaning" (p. 144). I often become aware of these "half perceptions" (Dewey, Ibid. p. 144) when I read my students' assignments, especially when they are making links to the literature. Their text tends to become loose and incoherent when they do this. It is not likely that such fragments or "half perceptions" become parts of the students' personal vocabularies. If the fragments manage to 'creep in' during life on campus they will soon be

'frozen out' once the students enter the world of the school because in this world people play language games that differ substantially from those on campus and that are also closer to daily life talks. As soon as Goldie entered the chemistry classroom in the secondary school as a student teacher she was firmly mediated by her mother tongue and by the language game of chemistry whose rules she knew quite well (chapter 7). Even I, her faculty adviser and her teacher at the university, was quickly 'engulfed' too. The same thing happened when to me when I began to teach chemistry again in my old school as told in chapter 7.

Richardson (1996) speaks of teacher education programs as 'weak interactions ... sandwiched between two powerful forces – previous life history, particularly related that related to being a student, and classroom experience as a student teacher and teacher' (p. 113). This I accept. However, I wonder if *we (teacher educators and researchers) might be better off speaking of these 'weak interactions' and, indeed, our programs, as a matter of language games and our student teachers as human beings struggling to build stable personal vocabularies out of the complex mix of language games our programs offer.* My idea is quite simply that if we cannot *train* our student teachers speaking in new ways about teaching and learning we will not influence them significantly and our programs will continue to be 'weak interactions'. Our programs are 'weak interactions', I argue, because *they do not affect significantly our students' linguistic practices*, their habitual ways of speaking. If our programs do not affect how the student teachers *actually speak in practice* they will inevitably continue to 'see' the classroom and their students with their 'common ways of speaking' and old practices will reign.

My idea, in short, is that teachers learn to 'think' and 'act' in particular ways by adopting words and phrases from the diverse language games they participate in. Most of these words and phrases come from the common 'pool' of the shared linguistic habits. These words and phrases become the tools they use *in practice* and these direct their actions.

Teacher education programs offer them *alternative* tools. However, no effective training of these tools occurs. Returning to the place they came from in the first place, that is the school, the student teachers are likely to relapse into habitual ways of speaking (habitual word use) because *the teacher, once in action in the classroom, cannot but rely on but her own stable vocabulary*. The 'fragments' from the teacher education program will soon be filtered out in the extensive use of habitual ways of speaking characteristic of the school culture and its various sub-cultures. And things will be the same.

A Final Note

I continue teaching teachers in Iceland. The 'spirit from UBC' is still with us and so are the 'problems in the field'. However, a new 'element' is creeping into my course, the issue of language. Last year, we spent one class (3 hours) discussing this issue. I doubt that many of my students got a good grasp of this issue and it is even possible that I was not 'teaching it well'. However, I will continue to work on this issue with my students because I believe that it is important that they develop an understanding of this issue, become better aware of how words direct our activities.

Curiously, this new 'element', that is language, has also been creeping in along another route, namely *my way of thinking and knowing*. Turning to my student teachers I now tend to see them grappling with the variety of *meanings* the different language games our programs offers them. Often they appear quite confused because of this variety, maybe thinking as I did when arriving in Vancouver in July 1997, namely that these meanings are only pieces in a big puzzle that sooner or later will come together so revealing 'how things really are'. I try to convey to them that we do not need to think of the world this way, that there are alternative ways of speaking, waiting around the corner for us to use them and so open new worlds.

No doubt, the fact that the language issue has been creeping into the course I teach within the teacher education program in Iceland links to the work presented here. Before I began this thesis, language was not an issue for me. It first *became* an issue for me when I began to use a Rortyan pragmatic lens to look at the world and things in it. Using this lens, I began to see things differently, including what we call 'language', which now appeared to me as a tool we use to create and recreate the world and ourselves. Thinking about language this way one begins to see the issue of teacher education and teacher learning with different eyes. One begins to see the student teachers struggling to build durable meanings in a complex world of different language games. Seeing our students this way, I would argue, may enable us to help them grow as prospective teachers.

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