

Reflection as a bridging concept between normative and descriptive approaches to didactics

Abstract

From a theoretical point of view, it is widely recognised that didactics has both normative and descriptive aspects. The normative approach seeks principles and procedures to decide about aims, subject matter and teaching-learning methods in education, mostly for the purpose of educational planning. The descriptive aspect of didactics focuses upon the teaching-learning reality, its contexts and the students' learning experiences, in order to understand the educational process. Traditionally and philosophically, these two areas are considered as clearly separated, and there are no straightforward ways from the descriptive ("is") to the normative ("should") approaches to education.

In educational practice, these two parts of didactics are intertwined. This paper will present a comprehensive, analytical model, mapping the main components that make up the life of classrooms. In the perspective of classroom and educational development, this model may serve as a tool to understand and to some extent explain the relationships between factors influencing classroom life. The secrets of change in individual teachers' practices are, however, to be found in how they connect and combine normative ideas and descriptive information. Thus, reflection becomes a core concept in the attempt to bridge the two separate worlds of didactics. This paper investigates what kinds of norms and ideals on the one hand, and descriptive and analytical information on the other, may constitute teachers' reflections, and how this "amalgam" is used in practice. Some considerations are also given to the implications for teacher education.

Introduction: On the relationship between general didactics and subject didactics

In many countries there is an increasing trend to focus on subject didactics, and how this discipline can be developed as a central part of teacher education in Europe. Subject didactics, as opposed to general didactics, is directed towards particular school subjects, and embraces a wide variety of theories and research approaches. In my experience, there exist as many varieties of subject didactics as there are subjects in schools. Traditionally, students in teacher education face a range of different theories and perspectives according to their subject interests. A theory about teaching and learning mathematics can be very different from a theory about social or natural sciences. After all, learning the multiplication table is quite different from learning to understand the ecological balance in nature and how it is disturbed by environmental pollution. Subject didactics is often considered as a very practical and "useful" part of teacher education, providing students with theories, perspectives, and advice closely related to the teaching situation. General didactics, therefore, has a clear limitation concerning *specific* teaching and learning problems in different subjects.

General didactics, on the other hand, is aiming at the construction of concepts and theories that can be applied to most kinds of teaching, targeting all teachers and prospective teachers, without regard

to their subject specialisation. The relationship between subject didactics and general didactics is to a high degree a question of practicality and instrumentality of theories. The meaning of “usefulness” is, however, more than giving practical prescriptions or guidance for specific subjects. Even a highly abstract theory can be very useful if it helps to ask good questions, whether it is linked to the context of specific subjects or not. In addition, educational systems have many functions that are not subject specific. A mathematics teacher and a science teacher are both on the same train towards a common goal, and their journey goes through the same landscape. All teachers, regardless of subject specialisation, must have an idea about their joint adventure and their collective tasks.

Thus, all teachers have something to learn from general didactics. There is no contradiction between general didactics and subject didactics, and there is no hierarchical relationship between them. It is more like a relation between figure and ground, it depends where focus is directed. The problems I want to pay attention to, are meant to be a backdrop for planning, analysing and evaluation of all kinds of teaching and learning processes, and I will focus upon problems that no subject-related theory can escape from.

Normative and analytic-descriptive didactics

For a long time there has been a discussion about what didactics *is*, what its object of study should be, and what function it should have. This discussion has partly been international, partly it has had a different character from country to country. It has mainly been limited to Central Europe and the Nordic countries. It would take us too far to recapitulate this debate here, suffice it to refer to other writers (Engelsen 1990, Kansanen 1993, 1999). Nevertheless, a few comments on the situation in Norway and Sweden could be of some interest.

German didactics is known to have a clear normative character, aiming at general principles on how to select content and how to organise teaching and learning. Kansanen (1999) has an important point when he says that the key to understanding German didactics is in its roots in German philosophical idealism in the 18th and 19th centuries. At the core of educational thinking is the idea of the educational potential of certain kinds of subject matter. Consequently, *content* becomes a central category in didactical theory.

The German tradition of didactics has been well known in Norway and Denmark during the 20th century. Since the 1950s, scholars like Torstein Harbo and Reidar Myhre have brought the heritage from Wilhelm Dilthey and Eric Weniger, and more recently Wolfgang Klafki, to the Norwegian audience with their textbooks for teacher training. Along with this influence, Scandinavian educational thinking has also been seriously influenced by Anglo-American ideas. The most important is the progressive thinking of John Dewey and William Kilpatrick, and from the 1950s James Mursell and his principles of “Successful teaching” were widely appreciated among teachers. The American influence implied that the focus was moved from teaching content to students’ learning experiences. Educational psychology has also had a strong impact on Norwegian teacher training. But this cannot be compared to the importance of the progressive movement. Empirical-cartesian ways of thinking about education were never any success in Scandinavia. Child-centeredness and focus on students’ needs is, however, a common denominator for both educational psychology and progressive education, and child psychology has functioned more as a means of creating understanding for the child’s psychological needs and learning problems than for prescribing procedures for effective teaching.

Both the German and the Anglo-American tradition had a clear normative character, even if one pointed towards personal “Bildung” by acquiring knowledge, the other towards the students’ needs and activities. These competing perspectives of teaching had both functions as background ideologies

for *the planning of teaching*, either with thoughts of the formulation of national teaching plans or for teaching plans at school and classroom level. They gave a small incentive to some empirical research in didactics.

An exception here is an influx in the 1960s of national and standardised tests to measure the students' level of knowledge. This was a clear undertaking encouraged by American psychometrics and the belief that tests could contribute to increasing the level of education in schools. Similarly goal management, for example with Tyler's rationale and Bloom's taxonomy as a starting point, was well known in the 1960s. Neither the work of test-ideologies nor goal management ideologies gained any foothold in Norwegian education in this period. The "big histories" in Norwegian teaching training were still Herbart, Pestalozzi, Fröbel and Dewey, without defining which of them was most distinguished.

By the 1970s a new direction occurred in Scandinavian didactical thinking towards more *empirical research*. The impulse came primarily from Sweden, where sociological perspectives from structuralistic and partially neomarxist theory gained influence in school and classroom research. Important names were Urban Dahllöf and Ulf P. Lundgren, who are regarded as the instigators of the so-called *frame factor theory*. Attention moved from the process of planning and from the question of what the contents and work methods of teaching *should* be, to an analytical approach where the question is *why teaching turns out the way it does*. Attention was particularly given to how different structural frames, material and cultural conditions contribute to shaping life in school. Ideas from the "hidden curriculum" research were obviously present, as well as inspiration from American structural functionalism, social anthropological ideas and neomarxist conflict perspectives. At the same time there was a spring flow towards new research methodologies, where qualitative investigations opened paths towards new perspectives and new understanding in classroom research. The positivistic, causal research paradigm lost its leading position. We were facing a new type of empirical research aiming at investigation and understanding of relations between different impacts in an ideographic sense, not finding or looking for general principles about causes, effects and predictions in classrooms.

A discussion that crystallised from the frame factor theory was: what controls a teacher's work. According to this theory, a teacher's work could be conceived as a product of external conditions so that the teacher's individual ability to construct his own teaching was limited. "It is not the teacher's fault", it was said (Arfwedson 1985). In contrast to this thesis is the view that the teacher, as a competent and responsible professional, has plenty of opportunity to practise his teaching freely within given boundaries. This discussion will probably never have a final answer even though we are now facing a period with more emphasis on the teacher's independence.

The idea about the teacher's limited freedom has been useful in teacher training. In this context, students are often told about ideals and how things should be conducted in classrooms. During their practical in schools the students experience a reality which can differ greatly from the ideals, and the phenomenon of "theory rejection" and "practical shock" are well known among teacher trainers. One step in the direction of building a bridge between intention and reality is to train students to understand why teaching does not always turn out as the recipe describes. To analyse and understand the real teaching situations, and to distinguish between what teachers can actually do anything about, and what he or she cannot control is an important qualification for all teachers. The Swedes, Gunnar Berg and Erik Wallin, have suggested that all teachers have an unused work space, which means they often think that the barriers are greater than they really are (Berg and Wallin, 1983). To exploit the existing work space turns out as an important challenge to all teachers.

The most important function of an analytical perspective is in the context of evaluation. Evaluation of a school's practice has traditionally been directed towards students' results, often measured by traditional tests. An analytical perspective that includes the whole school's undertaking, including frames and how teachers use them, gives a far more penetrating understanding about how a school works. We should not forget that an analytical perspective will be an important prerequisite to bring about *change and development in schools*, as will be shown below.

Therefore we will find in Scandinavian didactics both a normative and an analytical-descriptive perspective side by side. These two apparently incompatible perspectives have found their place because both seem very useful. Still, little has been done to investigate the relationship between these two basic perspectives and put them together as a whole.

An analytical framework for interpretation of classroom practice

Many models have been made to map the factors that have an impact on the teaching-learning situation. For example one could mention Wolfgang Schulz (1969), Gunilla Svingby (1978), Andrew Pollard (1985) and Michael Uljens (1997). I present here a model that has much in common with these, but it differs from them in trying to include normative and ideological elements as a important group of factors influencing school practice. The model is a foundation in a textbook for Norwegian teacher training (Imsen 1997), shown in Figure 1.

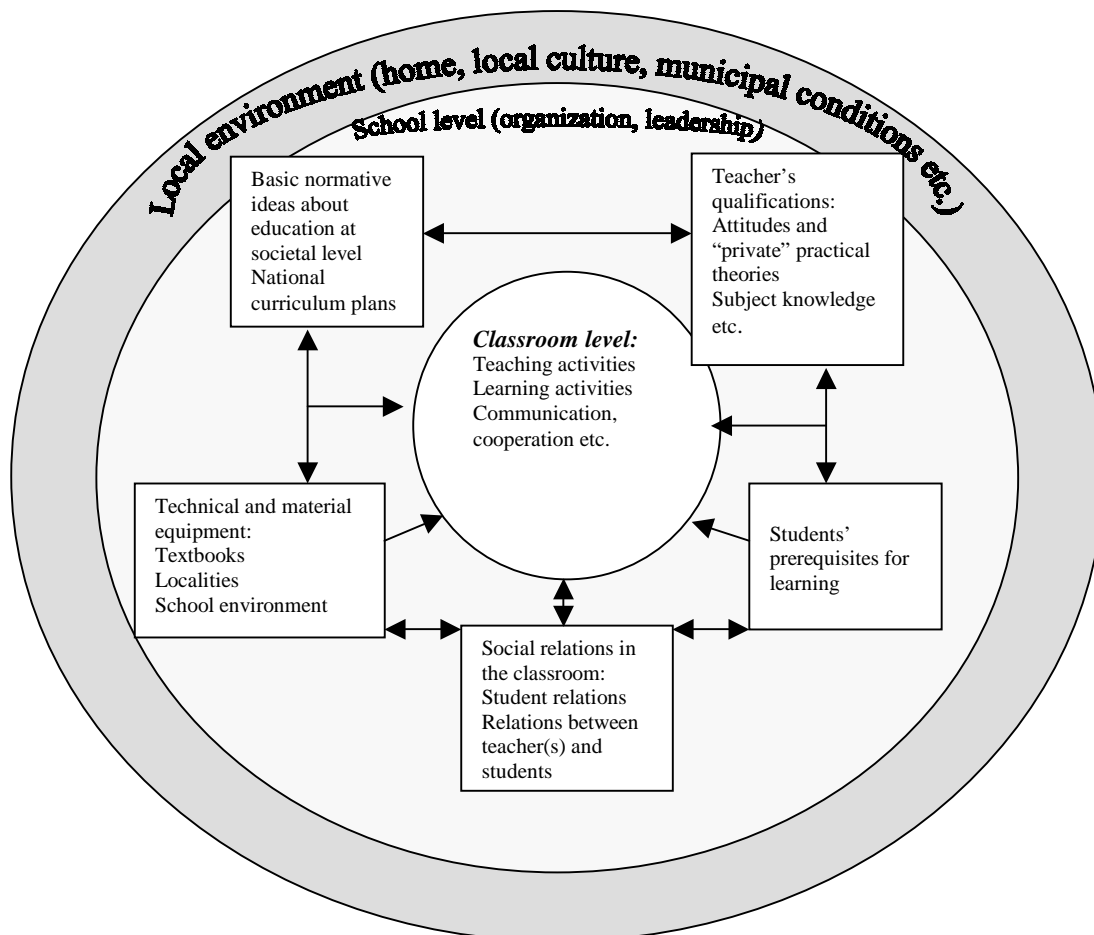


Figure 1 Model for analytical interpretation of classroom activities

At the core of the model is *classroom practice*. This encompasses the teachers' teaching and organisation of students' learning as well as students' learning activities. In short: the life in classrooms is in focus.

The main question is this: *Why is classroom practice like it is?* The question is not only trying to explain why things sometimes go wrong, or why something goes very well. The main purpose of the model is to understand the complex interplay between factors on different levels that makes up the daily teaching routines, providing certain patterns that are well known from so many classrooms. Partly it is about understanding common patterns in most classroom practice, partly it is about understanding why some classroom practice can differ so much from classroom to classroom.

The model has four different levels of social analysis. *The classroom* is the lowest level. It consists of all students in the class and the teacher or teachers at work, and the inter-play between them. A still lower level would have been to focus on the individual student or the inter-play with the other students. For simplicity, that is not included here. That does not mean it is considered irrelevant.

The next level is *school level*. That includes all students, teachers, principal and administrative staff. They work like cogwheels in an old-fashioned time piece, mostly it goes smoothly, sometimes there are problems in the machinery. The school can be considered as an organisation, and this organisation embraces all activities going on at that school.

The school is not an isolated organism that works independently from what is happening outside the school gate. Parents' attitudes and expectations will always influence the principal and teachers' choices and decisions, and there is a difference between running a school in the city and in the countryside. Local culture and local natural environment are important resources for teaching, and local industry and economy give premises for what values are important to transmit in the school. Furthermore, affairs at the municipality and county levels, for instance political priorities about schools and the economic frame, have much to say about how a school works. *Local environment* is therefore a third level of analysis in the model.

The last level, *the macro level*, is represented by the state. It includes parliament, government, the legal system and the social welfare system. The educational system is in itself an important institution in society. The basic conditions for educational activity are decided on this level. In many countries, government and parliament make decisions about curriculum plans for all schools in the country, and sometimes they make decisions about the economic frame as well.

These four levels, *classroom, school, local environment and state* are in a reciprocal relationship to each other. In teacher training, it is important to realise how the state indirectly steers classroom activities through curriculum plans, and how the state is steering schools indirectly through municipalities or counties. Furthermore, it is important to learn how the school works as an organisation, and how leadership and ways of cooperation are influencing teachers' classroom practice.

The most important and perhaps the most evident factors that influence classroom life, are illustrated by five squares in "the inner circle" in the model.

The first factor is *curriculum plans*. In the Scandinavian countries, the state has given curriculum plans that schools must follow to a certain degree of specificity in different subjects. This may vary from country to country, and not all curriculum plans are detailed in the same way. In some countries, the decision to decide about curriculum content is delegated to school level, or even to teacher level.

Curriculum plans will not only be decided from political considerations. Behind most national curriculum plans, there are important historical traditions, partly reflecting conflicting ideological

perspectives or different philosophical ideas about school practice. These ideologies are important to understand, in order to come to grips with the main ideas in the curriculum plans. They say something about how teaching *should* be, and they demonstrate normative ideals for teachers as guiding principles for their work and good advice for their practice.

But curriculum plans never decide about teaching directly. The difference between intention and reality is well known. How the main ideas are to be realised in schools depends on many other factors.

The main road to realisation of a national curriculum plan goes through teachers' heads and hearts. How do teachers conceive and interpret the national plan? Is the plan put away in the bookshelf in the staff room to be doomed forever as unrealistic "curriculum plan poetry"? Or is it used actively by teachers as a starting point for teaching planning? Do the teachers have their own conception of education and methods besides the national curriculum plans, a kind of private philosophy of education? If so, how does this private curriculum play together with the official curriculum?

Teachers' personalities, attitudes, values and reflections are considered as very important factors in the system that decides about the conduct of teaching. At this point, this model differs from traditional frame factor theory. The model allows for teachers' independent and creative organisation of teaching. But the teacher does not work completely on his or her own. There are always other forces that influence teaching, too.

Students' prerequisites for learning are important for all teaching. Learning depends on a stimulating meeting at the cutting edge between what the student knows and does not know. Furthermore, the students' motivation, self-confidence and psychomotor abilities play an important role, besides their linguistic and cultural background. In most countries, the school has an obligation to meet the students at their own level so that teaching as far as possible should be adapted to the students' prerequisites.

Furthermore, social conditions in the class are important for teaching learning processes. What role does the teacher play in establishing the classroom climate, and how does the classroom climate depend on the school climate as a whole? This and similar questions about the social classroom community makes a fourth group of factors that are important to understand classroom life.

The fifth group of factors embraces *material frames* such as school location, localities, textbooks, and other learning resources. In what ways do the material frames decide about methods and organisational learning? Is it the case that the better equipped the school, the better the quality of teaching? Can the teachers use bad equipment as an excuse for not doing a good job, or can a good teacher overcome the barriers of inadequate materials?

None of these five factors influences classroom practice alone. Teaching is constructed in an interplay between all of them. All factors are more or less at work in all kinds of teaching, as we usually know them.

The overall structure of the model is similar to the ecological model of Urie Bronfenbrenner, which says that different levels of society play off each other. In one way the model indicates a structural perspective ("it is society that decides"), but that is only a part of the picture. The model includes normative regulations on teaching that in many countries are decided by the state through national curriculum plans. But the model also indicates that ideas never work directly on teaching, but through those teachers who will translate them into practical activity. To understand this, a

phenomenological perspective is necessary. In addition there is an interaction perspective behind the analysis of classroom activity. The model is primarily focusing on the inter-play between external frame factors and internal social activities. It is not sufficient to explain life in the classroom referring only to the activity inside the classroom walls.

As mentioned, this is not the only model that has been presented about the complexity of school and classroom practice. I do not suggest that this model is better than others, and it will probably be subject to revision and improvement, dependent on teaching context and what the analysis is meant for. A weakness is that the *historical dimension* is not emphasised. That does not mean it is excluded. Much of what is happening in schools has to be understood as inherited culture and structures from earlier times. The normative ideas have, as mentioned, long historical roots. Such is the case with other factors. Teachers' routines, the physical design of schools as well as social conditions in local society all have a past to carry forth with them, both good and bad. History is an invisible background at all levels.

I have chosen to call this model a descriptive-analytical model. It is primarily designed to help students and teachers to understand what is going on in the classroom. What about *planning of teaching and learning*? How can this model be stretched from a descriptive, analysing position to be a tool in the hands of teachers who are continually confronted with the teaching of tomorrow?

Development and change as a challenge for didactics

Education can be legitimised in different ways. In today's society, education is important to secure economic growth, employment and welfare for all. All over the world politicians and educators work both nationally and locally to improve the quality of education and to improve national competitiveness in an increasingly capitalistic society. This is in itself a challenge for schools. In many countries, schools of today experience a conflict between, on the one hand the responsibility to take care of individual students' personal needs and development, and on the other to comply with national and international demands for increased productivity and economic growth. In both cases, there is a strong demand for quality in education and for continuously revising and developing school practice. Society changes, students change and therefore schools have to be changed, too. *Development* is today a challenge no schools and no teachers can escape from. Teacher training must therefore aim at student teachers' ability to develop themselves as professional teachers, not only the ability to reproduce teaching from given models.

The idea of development is not new. In education, John Dewey was among the first to put it on the agenda, with his message that the road to development goes through the student's own, active experience. In the 1970s, the English scholar Lawrence Stenhouse, and many others, transferred the idea of development from experience to teachers and to whole schools as organisations. Just as young students develop through active learning, teachers can learn from their own practice and promote change in schools (Stenhouse 1975). There can be no school development without teacher development. Resisting the Tyler-rationale and the belief that schools can change only by formulating objectives, he claimed another strategy. It is that of teachers' continuous evaluation of their own practice, reflection on their own experiences and the ability to learn from their own mistakes and successes. Description, analysis and reflections about practice are the raw materials for planning new teaching-learning programmes. *The reflective practitioner* became a slogan that was echoed far outside the British Isles.

The idea of school development has been a powerful strategy for improvement in education during the 1980s and 1990s. In today's schools we find a wide variety of developmental strategies, mostly

built around the same pattern. The ideas of teachers' ownership of reform programmes along with the notion of teachers' and schools' learning by experience are at the core of most school development programmes in Scandinavia as well as in many other countries. So is also *action research*, where researchers and experts are climbing down from their ivory towers to join school teachers as partners in their evaluation and developmental work (Stenhouse 1975, Carr and Kemmis 1986). Few ideas about educational research and development have had such vitality and ability to survive critique as action research. The approach in action research is interesting, because it reconciles the problematic dualism between normative and descriptive-analytic didactics.

The main steps in the action research paradigm makes the so-called "learning circle", like the one we know for instance from John Dewey. The point of departure is: look at the result of a series of actions, then learn from the results of these, and use this new knowledge as a base for new actions. In a simplified form the "learning circle" is shown in Figure 2.

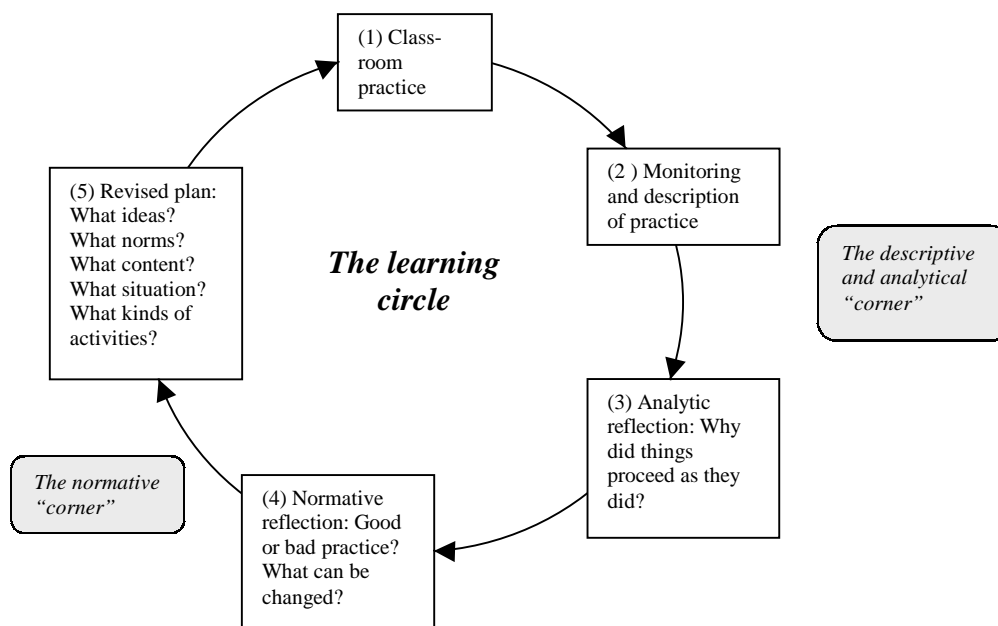


Figure 2 Relation between normative and descriptive-analytical steps in didactical discourse.

This learning cycle contains many partial processes that will not be discussed in detail here. There are a variety of techniques for monitoring and collecting evidence about teaching practice, and teachers face a lot of serious and difficult ethical problems in connection with the conduct of analysis and evaluation of teaching. Not least, there is a series of questions to be asked about the notion of *reflection* – what can be revealed about this phenomenon that appears to be the power source of the whole process? The model does not say what analytical perspectives or what normative ideas are to be applied. In this sense, this model is on a meta-level, including different ideologies and different kinds of analysis. The circle can be exploited individually as well as collectively, and for the whole school as well as for groups of teachers. It can also be applied to different levels of specificity, being valid for teachers' collective work for a joint "ethos" as well as for individual teachers in different subjects. The learning circle is valid both as a general model for school development and improvement as well as for development within special areas of subject didactics.

As a powerful strategy for school development all over the world, this way of thinking should be included in our didactical theories. This seems to be exactly what is happening. The Danish scholar Per Fibæk Laursen is probably right when he claims that in both German, Anglo-Saxon and Nordic

didactics, the focus has moved in the 1990s from planning, on the one hand, to evaluation and reflection on the other (Laursen 1997). There is no doubt that didactical thinking in a traditional, normative sense still has an important role in this context, but this has only to a small extent been visible in those models for school development that have been most prominent so far.

Reflection a bridging concept?

The focus of interest here is the supposed antagonism between what “is” and what “should be”. It is argued here that the two didactical paradigms are not incompatible, and that both appear as distinct steps in a complicated learning process. The learning process itself is probably universal, but it is here portrayed with regard to how the individual teacher or groups of teachers can use the learning circle in their planning, conduct, and evaluation of teaching.

How then, can the descriptive and the normative be reconciled in teachers’ learning processes? This is partly a philosophical question, partly an empirical one, being at the core of the rapidly growing research about teachers’ thinking. One thing is how teachers should think in this connection, another thing is what they actually do. A third question is how the normative and the descriptive ways of reflection can be presented in a systematic way in teacher training.

According to the model in Figure 2, it is assumed that normative and descriptive-analytic didactics meet in teachers’ reflections about practice. First, they have to understand what happens in relation to external frames, students’ prerequisites, social interactions, local conditions and national curriculum plans. In the next step, they must think normatively and evaluatively about their analytical understanding: Is this good practice, and why? As the last step in the process come revision and new planning: Should practice go on the same way, what new subject content should be chosen, and why? And what kinds of activities should be organised, according to the present situation? In other words: in theory, the teacher thinks first descriptively and analytically, and then normatively about the same problem. The question is whether this is a realistic assumption about teachers’ thinking or not, and whether it takes the developmental process forwards.

In the rich research literature about teachers’ thinking and reflections during the last two or three decades, there is very little focus upon how teachers sort out or mix these two steps in reflection. Traditionally, research about teachers’ thinking has been oriented around three areas: 1) teachers’ interactive thinking, 2) teachers’ thinking about planning, including both preactive and postactive reflections, and 3) teachers’ more general theories and beliefs (Clark and Peterson 1986). One should expect to find some evidence about how teachers handle the descriptive and the normative aspects of reflection in connection with research about teachers’ preactive and postactive thinking. In Clark and Peterson’s comprehensive review of research on teacher thinking from 1986 (*ibid.*), this problem is not mentioned at all. Indirectly the teachers’ normative orientation is suggested because several studies indicate that *content* is the first and most important category in most teachers’ planning. In a more recent review, Kenneth Zeichner shows that there is a distinction between those who investigate teachers’ planning as a purely rational and logical concern on the one hand, for instance in connection with management by objectives and implicit norms about effectiveness, and those who consider feelings and caring attitudes towards their students on the other (Zeichner 1994). There are also theoreticians who make a distinction between reflection at different levels of abstraction, like Erich Weniger did. Three levels are suggested: 1) teachers’ practical actions, 2) teachers’ reflections in planning for their practice, and 3) reflections at a more general, ethical and critical level (Handal and Lauvås 1987, Uljens 1997). Investigations seem to suggest that teachers’ thinking is most often connected with the first two levels, and that thinking at the third level is rare. It is also difficult to get student teachers to reflect on the higher level because they are more concerned

about their closer, practical teaching tasks. Zeichner is a bit sceptical of this way of thinking about “levels” in teachers’ thinking, because it gives a misleading impression of a hierarchical relationship between practical and theoretical reflection. Both forms are important, and he does not want to devalue practical thinking (Zeichner, *op. cit.*). The problem he is then left with, is that there are ethical and normative principles hidden in all practice, like Weniger indicated, and that these should be revealed at a conceptual level if any evaluation, critical reflection and reformulation about educational practice is going to take place. The normative aspect may easily be forgotten if one is addicted only to practical and technical deliberations.

Research about teachers’ thinking has been rather descriptively oriented in order to map what teachers are thinking and how they think, and to a lesser degree been guided by questions informed by theoretical or philosophical problems. The question about how normative and analytic-descriptive didactics can be reconciled in teachers’ reflections is still an open one from an empirical point of view. From a theoretical perspective, the relation between the normative and the descriptive aspects of the learning circle is one of the most important challenges for future didactics. There are good reasons to encourage further investigation into this problem, both theoretically and empirically.

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