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SCHOOL DIDACTICS AND LEARNING

Michael Uljens

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SCHOOL DIDACTICS AND LEARNING

A school didactic model framing an analysis of pedagogical implications of learning theory

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Acknowledgements

In this book a theory of school didactics is proposed. As the term “didactics” is not in frequent use in the Anglo-American world it should be noted that this study is mainly carried out within the framework of Nordic and German research traditions on the theory of education and instruction, i.e. *Didaktik*. Although there are many similarities between the German, Nordic and Anglo-American traditions many differences also exist. Therefore some emphasis is laid on a clear explication of the school didactic theory and its features. It is hoped that the reader will be able to approach the use of the concept of didactics (didaktik) open mindedly when reading this book.

One of the main ideas of the book is to approach the so called intentional and interactive teaching-studying-learning process as it occurs in historically developed institutionalized education framed by a collective curriculum and other contextual factors. Thus the point of departure is not taken in traditional curriculum theory or in the needs of academic teacher education. It is, however, possible to use the theory developed both as a research model and a thought model for teachers.

The theory is not a *normative* theory, i.e. it does not say towards what goals education should aim at. Neither is the present theory a *descriptive* one, i.e. it does not mirror the reality as such on an ontological level. Rather the theory presented is a *reflective theory of didactics*. The theory is an explication of how instructional processes in the institutionalized school may be experienced. Second, as the theory may be used as a thought model and a research model its reflective nature is emphasized. As the theory is not a copy of the outer reality as such, it is not a rationalist model: it does not reach the essence of reality. Finally, the theory is a culturally regional theory, not a universal one.

The book also defends the thesis that in order to conceptually capture the complexity of pedagogical reality it is necessary to adopt a relatively broad perspective. Therefore, limiting one’s pedagogical interest to developing principles of education and teaching based on learning theory is not enough if we want to understand the pedagogical process. Even if it would be possible to develop such instructional principles guiding practice by starting from learning theory, it is certainly not possible to develop instructional theory on the basis of learning theory. Similarly it is not possible to create theories of learning starting from instructional theory. However, whereas it may be that it is possible to develop learning theory without relating it to instructional theory it seems more difficult to develop instructional theory without saying anything about learning. The aim in the second part of this book is therefore to investigate pedagogical implications of learning theory. In doing this I would like to draw the reader’s attention to two things. First, when the analysis of pedagogical implications of learning theory is carried out this is done within the frames of the instructional or didactic theory outlined in the first part of the study. Second, cognitive learning theory is, for different reasons, chosen as the object of analysis in the second part of the book. This should not be taken to mean that I am a one-eyed defender of cognitivism. On the contrary I am critical of most of the assumptions lying behind cognitive learning theory. The reason for still choosing cognitive learning theory as the object of analysis in the second part of the book was simply that I thought it better to choose a widely known approach to learning, in order not to confuse the reader too much, since the book deals with the theory of didactics, which is not well known in the English speaking world. In addition the epistemological and ontological analysis of cognitive learning theory that precedes the chapter on pedagogical implications also offers a considerable challenge for many readers. The approach and structure of the book would remain the same whether activity theory or cultural-historical theory of learning had been chosen as the object of analysis.

It is always pleasant to reflect on the path that led to a finished book. Combined with the rewarding experiences of insight I very much appreciate having had the time and opportunity to bring this work to an end. Naturally many discussions with my colleagues and scholars in the field come to my mind. I especially want to express my deepest thanks to the following three colleagues and friends.

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It has not been easy to write this book in English for two reasons. First Swedish, not English, is my mother tongue. The other reason is that many of the concepts used in the German, Finnish and Swedish literature are not easy to translate into English. I therefore appreciate that Stiftelsens för Åbo Akademi Forskningsintitut financed the proofreading of the manuscript by Rolf Lindholm at the Department of English, University of Vasa. He also translated the German quotes into English.

I am grateful to have had the opportunity to write parts of this book while working as researcher at the Department of Teacher Education and the Department of Education at Åbo Akademi University in Vasa. Research grants from Academy of Finland, Nordiska Forskarakademin, Stiftelsens för Åbo Akademi Forskningsinstitut and Deutscher Akademischer Austauschdienst have enabled me to work on this book both in Finland, Sweden and Germany.

Finally, I appreciate that Psychology Press accepted this book for publication.

Michael Uljens

I

TOWARDS A MODEL OF SCHOOL DIDACTICS

1

Introduction

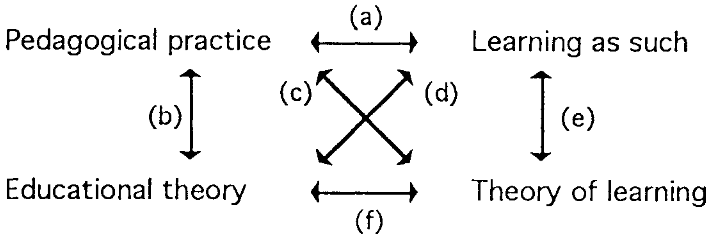

FIG. 1.1 Four interrelated factors of importance in specifying the relation between educational theory and learning.

BACKGROUND AND AIM

Institutional education is an intentional and interactive process through which individuals become encultured into the complex web of human competence and social networks constituting societies. Becoming encultured requires the student's intentional development of competence and personal identity.

The human ability to learn is a fundamental prerequisite for this process to occur. Without accepting this, practical educational activity is rather meaningless. However, we know well that intentional teaching does not always lead to learning. Nor does an individual's intentional study activity necessarily lead to what was striven for. Therefore, as teaching intends to support the student's activities aiming at learning, it may be asked how teaching and learning are related more precisely.

If pedagogical practice aims at supporting learning, then it is also relevant to ask how educational theory is related to learning. One reason why this question is important is that insights into teaching and learning are considered to constitute aspects of a teacher's professional competence (Francis, 1985).

Individual teachers' understanding of teaching and learning varies considerably (Pratt, 1992; Prawat, 1992; Prosser, Trigwell, & Taylor, 1994). Also, educational theories relate differently to learning theory. Yet educational or instructional theory should be quite explicit with respect to how learning is dealt with (Diederich, 1988, p. 34).

In order to explain how educational theory is related to learning, it is useful to discriminate between the theory of learning and learning as an empirical phenomenon. Similarly we may discriminate between educational theory and pedagogical practice. We thus have four interrelated factors—learning, theory of learning, pedagogical practice and educational theory (see Fig. 1.1).

The following comments may be made in relation to the figure presented above:

(a) Pedagogical practice aims at facilitating learning;
(b) Educational theory aims at providing conceptual structures by which pedagogical practice may be described, analysed, understood and, sometimes, guided;
(c) Pedagogical principles are often developed on the basis of learning theory. In a narrower sense, teachers' understanding (or personal theories) of learning may affect their way of teaching. These principles should not be equated with the concept of "educational theory";
(d) Educational theory is indirectly related to learning as an empirical phenomenon since pedagogical practice aims at facilitating the individual's learning process;
(e) The theory of learning aims at providing a conceptual framework by means of which learning may be described and understood;
(f) Learning theory is related to educational theory as the pedagogical process aims at facilitating learning, and as it is possible to develop prescriptive pedagogical principles guiding practice on the basis of learning theory.

Of the relations described above, that between learning theory and pedagogical practice (c) is the most extensively developed. A traditional position concerning this relation is that knowledge of human learning may be useful in decision-making in pedagogical practice or in order to develop instructional materials or methods (e.g. Rein, 1912).

The object of this study is not, however, limited to the relation between pedagogical practice and learning theory. The aim is also to try to determine the relation between educational theory and learning theory (f). The reason is that both educational theory and theory of learning are important to pedagogical practice, but in different ways. While learning theory can be prescriptively related to pedagogical practice in that principles for teaching may be developed starting from learning theory, this is not necessarily the case with educational theory. Educational theory may also be related to pedagogical practice in a descriptive or analytic way, and does not necessarily state how teaching should be carried out. It can be delimited to pointing out fundamental constituents of pedagogical practice and it may actualize questions requiring prescriptive or normative decisions.

As educational theory may be related to pedagogical practice in different ways, we can see that the specification of the relation between theory of learning and educational theory is dependent on the nature of educational theory. Therefore the primary aim of this study is to outline a didactic model valid for the pedagogical reality in schools, which in turn gives us the possibility of specifying how learning is dealt with.

THE PROBLEMS

Granted that prescriptive pedagogical assumptions, developed on the basis of learning theory, are too narrow to enable us to fully understand the complexity of pedagogical reality, we must try to define the relation between learning theory and educational theory in some other way.

A fundamental starting-point is that learning must be of interest to educational theory (Hollo, 1927, p. 119). The primary argument for this is that the aim of educational practice is to support the individual's attainment of competence. As an increase or change of competence is often thought to be reached through learning, it is argued that teachers may use knowledge of the process of human learning when organizing situations facilitating the attainment of competence. If this position which should not be regarded as self-evident, is accepted (cf. Bannister, 1982; Desforges, 1985), then a theory that purports to be valid for pedagogical practice must acknowledge the fact. The question then is how educational theory or theory of didactics acknowledges learning theory in offering a conceptual system supposed to be valid for pedagogical practice.

The First Problem

The first problem in this study is to reflect on what questions educational theory should answer in order to be suitable for pedagogical purposes, i.e. relevant in terms of offering instruments by which we can handle the complexity of pedagogical reality in a satisfying way. Part one of this study is devoted to that problem.

As a result of this part of the study, a didactic model is outlined. The model developed is identified as a model of “school didactics”. School didactics is defined as a field of research within general education. This field is limited to research and theory aiming at understanding the pedagogical practice (*Erziehung* and *Bildung*) which takes place in institutionalized educational settings guided by a curriculum collectively agreed upon. A conceptual structure within the school didactic field of research is thus not to be understood as a general theory of education or teaching.

The aim of presenting this descriptive model is twofold. First, it may be viewed as an effort to contribute to the development of didactic theory. Second, the model also offers a framework for the following investigation into pedagogical implications emanating from learning theory. It is considered valuable that the solution offered concerning the first problem, i.e. the didactic model presented, offers the framework for analysing learning theory in the second part of this study.

The Second Problem

The second problem in this study is to investigate the pedagogical implications of the cognitivist theory of learning. This part of the study is to be conceived as a clarification of the pedagogical model presented; if pedagogical practice aims at affecting an individual’s possibilities of reaching competence through the process of learning, then it is reasonable to expect that the theory of didactics recognizes learning theory. The answer to this problem offered by the model presented here is that learning theory is accepted as having a prescriptive function in two different but related ways.

Firstly, learning theory is assumed to play a role in pedagogical practice since a teacher may reflect analytically on theories of learning, i.e. what it means to attain a certain degree of competence and further that the teacher, on the basis of such reflection, makes decisions on how to organize and carry out the teaching-studying-learning process. (The expression “teaching-studying-learning process” is shortened to the acronym TSL process in this study.) In doing this the teacher reflects analytically and acts in a normative or prescriptive fashion; if acquiring competence “X” means “Y” then one should do “Z”.

Secondly, precisely because of this it is important to investigate what kind of pedagogical implications different theories of learning have. Therefore the second part of this study is devoted to an analysis of cognitivist learning theory. Prescriptive propositions may thus be handled within the framework of an otherwise descriptive didactic model. Yet, even though we may use descriptive didactic theory as a general frame of reference in this study, it does not offer us the instruments to analyse theories of learning themselves. Rather, the didactic frame of reference shows us why and how learning as a phenomenon is important in the theory of didactics and in pedagogical practice.

The chosen level of analysis, when the cognitivist theory of learning is investigated, is the philosophy of mind. This was considered a reasonable level since it contained problems that every learning theory deals with in one way or another. Two problems were chosen. Firstly, the relation between an individual’s conceptual knowledge and external reality, and, secondly, the problem of how to describe this conceptual knowledge.

The first problem deals with what it is to have knowledge of the world. Since teaching and education often aim at increasing, developing or changing an individual's knowledge, the question of what it means to possess knowledge is naturally a fundamental one from a pedagogical perspective. This is identified as the epistemological mind-world problem.

The second question deals with the problem of how to describe an individual's understanding of the world, his knowledge, mental representation, conceptual structure, etc. In order to be able to change this understanding or conceptual knowledge structure, i.e. to facilitate learning, we must decide how we want to describe what it is to be aware of something. In particular, we must know how we want to describe and discuss a change in this awareness of something. This question is identified as the ontological mind-brain problem.

Having investigated how the cognitivist theory of learning appears in the light of these two problems, we are ready to return to a didactic level of reasoning. Instructional implications of cognitivist learning theory are organized on the basis of the analysis carried out on the level of the philosophy of mind.

THE APPROACH

A Phenomenological-hermeneutical Approach. In its concern with how the reality of institutionalized education is constituted and what is required in order to describe it conceptually, the approach of this study is phenomenological. If such description is taken to mean that an aspect of educational reality is described as it appears to a subject who tries to reach some kind of essence *(Wesenserfassung),* then parts of this study may be seen as a phenomenological investigation. In fact, this is precisely the way the school didactic model was originally developed; it was an explication of how one part of educational reality was experienced.

Phenomenologically, theoretical knowledge of the educational field was bracketed through the "epoché". In phenomenological terms, being in the "natural attitude", a kind of eidetic reduction was carried out; questions that had to be answered in order to reach a description of the TSL process in schools were reflected on. However, in this view of phenomenological pedagogy there was no need for a "transcendental subject" in reduction (Danner, 1989, pp. 155–156; Karlsson, 1993; Uljens, 1992a, pp. 31–37). The bracketing refers only to the developmental process through which a first version of the model was constructed (see e.g. Uljens, 1993a). This phase did not consciously have its point of departure in any specific theoretical school of thought. My personal experience in the field of education formed the basis for this first phase of reflection. However, this was considered only as a first step to be followed by a hermeneutical phase. Having reached a first delimitation and structure it was possible to investigate this model in relation to previous theory in the field. This phase was crucial since a new model gets its cultural meaning and role only in relation to previous and contemporary scientific discourse. Only by such a comparative discussion can the features of the present model be communicated.

Methodologically, this second phase does not fall within a phenomenological description. The phase of hermeneutic interpretation in the research process was reached (Dilthey, 1958). To explicitly relate the pedagogical model developed to other contemporary approaches may be characterized as a kind of historical, social and cultural reflection; the historicity of the thoughts developed was accepted. Therefore, claims and perspectives put forth are seen as regional, not universal, truths. In this matter Schleiermacher (1957, p. 20) asks about the generality of educational theory: "To what extent can our theories be regarded as generally valid? Will it be possible to devise a universal theory of education, that is, one that is valid for all times and places?".[1] In conformity with Schleiermacher the position of this study is that a universal theory of education is not possible. This view of scientific knowledge also sees the discipline of education as a cultural science; educational theory makes sense only in a cultural and historical perspective. Analytical propositions developed should not therefore be disconnected from the culture within which they have been produced.

The hermeneutic process of relating an early version of the model (Uljens, 1993a) to previous theory led to further development of the model. As a result, some parts were emphasized more and others less. This phase of the analysis may be described by the "hermeneutic circle"; the interpreted object was the phenomenologically described model. The "hermeneutical difference" between the model and previous theory was dealt with in terms of the hermeneutic circle, and reached the position presented in this study. In Gadamer's terms the different "horizons" were brought closer to each other, the horizons being the original model and the research tradition of didactics. The model was thus partly developed through a "discussion with the tradition" (Gadamer, 1960).

In this study Ricoeur's (1989, pp. 114ff.) view of the relation between phenomenology and hermeneutics is also supported, i.e. a hermeneutic phenomenology is accepted. This position accepts the problem of meaning as the fundamental one both in interpretation theory and phenomenology. As Ricoeur (1989, p. 114) notes, in order for meaning to become a hermeneutic problem "the central question of phenomenology must be recognized as a question of meaning". The problem of meaning in phenomenology refers to the nature of an experience, which again has a lingual aspect as discussed in Ricoeur (1989, p. 115):

> Experience can be said, it demands to be said. To bring it to language is not to change it to something else, but, in articulating and developing it, to make it become itself.

A second perspective on the relation between phenomenology and hermeneutics advocated by Ricoeur and conceived of as relevant here, is the distanciation from the "experience of belonging" (ibid., p. 116). That is, there is a connection between the hermeneutic concept of distanciation and the phenomenological epoché (bracketing), as long as the epoché is conceived of as "the intentional movement of consciousness towards meaning". In other words, to distance us from lived experience means to "interrupt lived experience in order to signify it" (ibid., p. 116). Ricoeur concludes (p. 117):

> [H]ermeneutical distanciation is to belonging as, in phenomenology, the *epoché* is to lived experience. Hermeneutics similarly begin when…we interrupt the relation of belongingness in order to signify it.

The relevance of this position to the present study is the following. Sometimes it is claimed that pedagogical practice is primary in relation to educational theory, i.e. that practice is not dependent on theory. Schleiermacher's widely referred position from 1826 may exemplify this:

> Still, it is nevertheless a fact that in every domain that goes under the name of Art, in a narrower sense, practice is much older than theory, so that it can simply not be said that practice gets its own definite character only with theory. The dignity of practice is independent of theory; practice only becomes more conscious with theory.[2]

The view expressed requires some comments. Naturally the educational practice *(Bildungswirklichkeif)* is much older compared with a contemporary understanding of theory. Educational practice also continues to exist regardless of our description of it in the naive sense that it does not cease to exist if we stop talking about it. At least it would continue to exist as past “lived experience” (Van Manen, 1991). However, in such past lived experience the meaning of the experience is not always evident. Therefore, precisely as Schleiermacher argues, a fundamental feature of theory is that it helps us to deepen our understanding of pedagogical reality. Hollo (1927, p. 12) expresses this by saying that we may become educationally “seeing” by the help of theory.

However, a deepening of our understanding must not be compared with a more detailed description of practice. To deepen our understanding is more; every description always has a constitutive function as well. Thus some kind of reflection is connected with every practice. Even identifying something as pedagogical is a result of some kind of reflection.

Taken for granted that some kind of reflection is always connected with practice in a constitutive fashion, i.e. that practice gets its meaning only by virtue of this reflection, then practice is not, as Schleiermacher claims, independent of theory. In this respect educational theory would be primary in relation to practice; theory defines the essence or the meaning of educational reality.

Thus, the conclusion is that instead of claiming that theory is secondary to practice or that practice is secondary to theory, we should ask: “What kind of reflection is present in practice?” This position should not be connected with solipsism but rather with critical realism (or “epistemic” realism, Putnam, 1988). In this view the world itself does not contain the limits for how it may be described. Only the describers themselves may decide upon which rules are to be followed, since the description is made in relation to previous knowledge and with certain interests in a given cultural and historical context. This means that scientific models can be tested empirically, provided that the assumptions behind them are accepted. This view also allows us to compare scientific models with the models teachers have. Against this background the methodology of the first part of the present study may be characterized as a continuous shifting between conceptual analysis and theory-generating activity.

The main role of the model, with respect to empirical research, is that it offers a framework for an empirical research programme as well as a thought model for teachers. Yet a view according to which theory would be a picture of an outer reality is not accepted. Therefore a difference between the notions model and theory is not important on an ontological level. Both theories and models reflect ways in which we experience reality.

On a conceptual level the difference between a model and a theory could be defined as follows: a theory is a model of the world that is explicit with respect to the tradition of educational science. The next question would naturally be: What is counted as being scientific? The answers to that question vary depending on more fundamental assumptions, of which one, the relation between theory and reality, was indicated above. However, the actual conceptual structure is not a theory in the sense that it would offer explanations of our observations of the pedagogical reality; it is not a predictive theory. Rather, it is a constitutive theory defining what institutionalized education is about in the first place. Differently expressed, the analysis carried out is an ontological one as it asks about the fundamental nature of the institutionalized teachingstudying-learning process.

The Structure of the Study

In order to make the reading of this study easier, I will briefly present the main components of it here and show how they are related to each other. The study is divided into two parts. The aim of the first part is to put forth a model of school didactics. The development of this model is to be seen as one of the main results of the present study.

The structure of the first part is as follows. The second chapter discusses teaching, studying and learning and how the relations between these concepts may be defined. It is also shown how didactics may be seen as the science of what is called the TSL process.

After this a school didactic model is presented in the third chapter. The model is related to two influential German approaches, Wolfgang Klafki's position within the erudition-centred theory of didactics *(bildungstheoretischer Didaktik)* and the so called Berlin model of didactics (P.Heimann, W.Schulz). As the problems of normativity and prescriptivity are fundamental to every educational theory, a separate section is devoted to this problem. It is shown in what sense and respects the theory presented is on the one hand analytical-descriptive and on the other normative-prescriptive.

In the second part of this study the model developed is used to frame an analysis of the pedagogical implications of learning theory. In Chapter 4 it is shown how the school didactic model is related to learning. Then the instruments of analysis are presented, i.e. the epistemological and ontological problems used to approach the cognitivist school on learning theory. Special attention is devoted to the process and result of learning as these aspects of learning are naturally related to many different types of decisions made in teaching.

Having shown how the cognitivist approach to learning may be characterized with respect to the epistemological and ontological problems in Chapter 6, the pedagogical implications of cognitivism discussed in the light of this analysis are presented in Chapter 7. In the final chapter teachers' professional competence is discussed with regard to the use of didactics in reflection on practice.

In sum the study shows how the descriptive model of school didactics presented may be used both as a research model in educational research and as an instrument in teachers' pedagogical reflection.

NOTES

1. *[W]elchen Grad von Allgemeingültigheit kann wohl unsere Theorien haben?* Wird es möglich sein, eine allgemeingültige Pädagogik aufzustellen, d.h. für alle Zeiten und Räume?”.
2. Ist doch überhaupt auf jedem Gebiete, das Kunst heißt im engeren Sinne, die Praxis viel älter als die Theorie, so daß man nicht einmal sagen kann, die Praxis bekomme ihren bestimmten Charakter erst mit der Theorie. Die Dignität der Praxis ist unabhängig von der Theorie; die Praxis wird nur mit der Theorie eine bewusstere. (Schleiermacher, 1957, p. 11

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Didactics and the Teaching-Studying-Learning Process

INTRODUCTION

The general aim of this chapter is to actualize and discuss questions about didactics. This second chapter paints a landscape of problems, fields and questions that are systematically approached in Chapter 3 by presenting a didactic model.

The chapter begins by reflecting on what a theory or model of didactics is needed for. We will see that the way of answering this question decisively determines how didactics is approached and conclusively developed.

Having delimited the object of the theory of teaching our attention is turned to the process of learning. After delimiting teaching and learning, the relation between the two is specified. Also, the relation between studying and teaching, as well as between studying and learning, is developed. Special attention is paid to the learner's intentionality and the socio-cultural situation as a constituent in the TSL process. In the final section the concept of didactics is introduced. It is suggested that didactics generally should be conceived of as the science of the TSL process. Finally, it is suggested how didactics may be related to instruction and education as well as what it means to view didactics from a normative-prescriptive and analytic-descriptive perspective.

ON TEACHING

In trying to define teaching[1] we may begin with the etymological roots of the concept.

It is not surprising, from a Nordic perspective, that the Middle English term *lernen* can mean both to learn and to teach. In Swedish the same term can be used both for teaching and learning; but the derivation of teaching from Old English pointed out by Smith (1987, p. 11) is interesting. He writes:

> It [teaching] comes from the Old English *taecan* which is in turn derived from the Old Teutonic *taikjan,* the root of which is *teik,* meaning to show, and is traceable to Sanskrit *die* through pre-Teutonic *deik*. The term "teach" is also related to "token"—a sign or symbol. "Token" comes from the Old Teutonic word *taiknom,* a cognitive with *taikjan,* Old English *taecan,* meaning to teach. To teach, according to this derivation, means to show someone something through signs or symbols; to use signs or symbols to evoke responses about events, persons, observations, findings, and so forth. In this derivation, "teach" is associated with the medium in which teaching is carried on.

The conclusion drawn above points to teaching as a symbolic communicative process, i.e. communication directed towards “evoking responses” by using signs or symbols representing something else. In this “teaching as *taecan*” tradition, instruction seems to go back to the activity of a person being able to handle symbols (a priest, a shaman), i.e. a mediator. The emphasis is put on the syntactical aspect of the symbol, i.e. the method of teaching or the how of teaching, not on the content of teaching. It may therefore be interesting to know that the roots of the Finnish word *taika* meaning magic, and the related word *taikuri* meaning magician also go back to the Old German *taikna* and Gothic *taikns* meaning sign (Itkonen & Joki, 1969, pp. 1196–1197).

It is useful to contrast this view of teaching with the Middle English *lernen,* German *Lernen* (learning), German *Lehrer* (teacher), German *Lehre* (knowledge). The point is that in the German *Lehren* as well as in the Swedish *lära* and the Finnish *opettaa* the content, i.e. the *what* of teaching, is prominent. The Icelandic word for teacher is in line with this; it is *kennari,* literally meaning a person who knows. In this “teaching as *lernen*” tradition, instruction appears to be more strongly related to the teacher’s personal insight into the content than to knowledge of methods.

Smith (1987) has presented a useful overview of definitions of the term teaching, some of which will be pointed out here (see also Smith, 1956). He distinguishes between teaching “in the conventional sense, or the descriptive definition; teaching as success; teaching as an intended activity; teaching as a normative activity; and the emerging scientific notion of teaching” (p. 11). Of these the first four will be discussed.

According to Smith, (1987 p. 12) an example of a descriptive definition of teaching is that “teaching is imparting knowledge or skill”. This is because the definition meets what is typically required of a descriptive definition. Smith (1987, p. 11) says that “A statement of the conventional meaning together with an explanation of what the term covers is referred to as a descriptive definition” (see Scheffler, 1960, for an extensive discussion on this topic).

The notion of “Teaching as success”, again, implies that teaching always leads to learning. The expression teaching-learning process is often used in order to indicate this. According to Smith (ibid., p. 12) “teaching can be defined as an activity such that X learns what Y teaches. If X does not learn, Y has not taught.” Dewey (1934) supported this view and Kilpatrick (1926, p. 268) argued in the same vein. Ryle (1990) is again mentioned as one of the proponents who argued against this understanding by distinguishing between task verbs and achievement verbs. The point is that while somebody may be engaged in a teaching process without success, it makes less sense to say that somebody has learned something unsuccessfully.

Third, Smith (1987) regards teaching as an intentional activity—“While teaching may not logically implicate learning, it can be anticipated that it will result in learning. A teacher may not succeed, but [] is expected to try to teach successfully” (Smith, 1987, p. 13). A version of this argumentation is represented by Eisner (1964). Eisner (1964) points to a difference between instruction and teaching. Instruction refers to intentional efforts aimed at supporting student learning but does not require learning to occur. Teaching would again be restricted to those activities that really make learning occur. Similarly Scheffler (1960, pp. 60 ff.) in his analysis of teaching distinguishes between teaching as success and teaching as intentional activity.

Finally, teaching is seen as normative behaviour. Teaching is here regarded as a generic term—“It designates a family of activities: training and instruction are primary members and indoctrinating and conditioning are near relatives while propagandizing and intimidation are not family members at all” (Smith, 1987, p. 14). This last definition is important, since it makes it possible for us to distinguish educative teaching *(erziehender Unterricht)* from training, indoctrination and conditioning.

Of the above mentioned approaches the view of teaching as an intentional activity is considered fruitful. Yet I would very much like to complete that understanding by stressing the importance of content. Therefore I find Passmore’s (1980, p. 22) position interesting when he describes teaching as a “covert triadic relation", i.e. a relation including somebody who teaches, something that is taught and somebody who is taught. In German literature this is referred to as the traditional didactic triangle, consisting of the three poles teacher, student and content (see e.g. Diederich, 1988, pp. 256–257). However, the fact that teaching is temporally and contextually determined must also be taken into account, especially if we want to understand teaching in schools. Such a view should not be confused with any form of contextual reductionism, according to which teaching is explained by contextual factors.

There are also other ways to approach the problem of teaching. Fenstermacher and Soltis (1986) distinguish between three conceptions of teaching; the executive approach, the therapist approach and the liberationist approach. Various aspects of these conceptions will occur in the discussion of what didactic theory is needed for, what questions it should answer and how the problem of normativity and prescriptivity is handled. However, if the position of this study is to be characterized by one of these approaches, then the liberationist approach is the closest. The difficulty of making use of the descriptions presented by Fenstermacher and Soltis (1986) is that they discuss conceptions of teaching from the practitioner's perspective theoretically in a quite limited sense. The approaches characterized clearly reflect three normative educational philosophies. As we will see, the degrees of freedom with respect to reflection and normative position-taking increase if we adopt a descriptive approach to didactic theory.

Instruction and Teaching

Instruction is conceived of as dealing with all the different ways in which a pedagogical situation helps students to reach or develop certain insights or a certain degree of competence. For example, Gagné and Briggs (1979, p. 3) define instruction as "all…the events which may have a direct effect on the learning of a human being, not just those set in motion by an individual who is a teacher." This definition naturally means that teaching is seen as only one form of instruction in addition to written instructions and the learner's self-instruction.

The relation between education and instruction may be clarified by introducing the problem of values. Values are connected with the instructional process in different ways; the process may be structured in relation to certain aims (values) or certain values may guide the process as such. Further, since knowledge as such is always value-related on some level, the pedagogical process is connected with values. Reaching insight or acquiring some competence or skill thus includes the internalizing of values connected with a certain field of knowledge; the subject becomes encultured into a belief-system through learning (see e.g. Brown, Collins, & Duguid, 1989). Finally the process of choosing contents to be dealt with in school, the choice of a form of representation and the choice of suitable working methods for the students is in a fundamental sense value-related. In this respect the instructional process is always educating *(bildende)*. In this study teaching is understood as one form of educative instruction (Herbart).

Even though instruction and education are two inherent aspects of the same pedagogical process, it is useful to distinguish them for analytical purposes. The distinction between instruction and education allows us to identify situations in the schools that are value-related and primarily educational, not primarily instructional.

If the value-laden, educative dimension is accepted as one dimension present in instruction, then the concept of teaching may be subordinated to instruction. This also means that informing somebody of something is not teaching, since informing is not thought of as including an educative interest. And instruction by indoctrination or by force is not teaching.

Intentionality of Education. It is also important to make a distinction between intentional and unintentional education, or between intentional and functional education. While intentional education is always goal-oriented, this is not the case with functional education. This means that while intentional education is conscious, functional education is not. Here one could ask if it is not possible to distinguish between education or teaching that is consciously intentional and teaching that is consciously unintentional. Yes, it is reasonable to make such a distinction, but it should be observed that when teaching is consciously unintentional this in fact reflects nothing but a very specific intention. Consciously unintentional refers in this case to the teacher's intention not to put up specific goals to be striven for during the instructional process, thus leaving plenty of room to decide upon the goal during the interactive process. Intentionality may also be understood as purposiveness, but this will be discussed in Chapter 8.

As Schröder (1992, p. 86) has noted, functional education may sometimes be more effective than intentional education. Intentional education may also functionally lead to other results than those aimed at. Naturally intentional education must be the norm for pedagogical practice in schools. Observe that when we talk about intentional education, it covers the learner's own intentional efforts to reach competence. Thus, self-instruction is included in intentional education. It would be a logical impossibility to create a school following the idea of functional education. In fact, it is not clear that the expression functional education is worth using. Rather the notions of socialization or enculturation might be better expressions for the unintentional and unconscious processes by which an individual is affected (for a discussion of the topic see e.g. Benner 1991, pp. 109 ff.; see the section on learning in this chapter).

Thus far we have reflected on how teaching as a phenomenon may be understood preliminarily. However, a description of teaching as a phenomenon is not a theory of the TSL process. We should then ask what such a theory could look like and what such a theory should have to offer.

However, there is reason to define briefly how the concept of education is understood here. Education is conceived of as being synonymous with the German word *Erziehung,* with the Swedish word *fostran* and with the Finnish word *kasvatus*. Education may be defined as the intentional activities through which individuals are intentionally encultured into the practices, norms and values of a society, but in relation to the educated individuals' interests. Thus the pole to education *(Erziehung)* is *Bildung*. This view presupposes the individual's freedom and the possibility of human growth in a wide sense of the word (e.g. *Bildsamkeit*). The practice of education always aims to become something unnecessary: the aim is to support the individual in developing to a point where the educated individual, in a manner of speaking, manages alone. This, again, presupposes that the individual gradually overtakes the responsibility for their own life and growth. This pedagogical process, constituted by education and the human capacity to intentional growth, is always culturally and historically situated.

EDUCATIONAL THEORY AND PEDAGOGICAL PRACTICE

A fundamental question regarding a theory of instruction is why we want to develop such a theory. I want to open the discussion of this issue with Schleiermacher's (1957, p. 7) question in his *Lectures on Education* in 1826: What is the object of a theory of education and who needs this theory? Why do we participate in the educational project?

Naturally there are several ways of dealing with this problem. In this study the point of departure is that research on teaching, both conceptual and empirical, should aim at contributing to the development of a conceptual language which enables us to analyse and understand pedagogical reality in a coherent way. In this respect scientific theory is understood in a quite ordinary way. Yet it may be interesting to reflect more precisely on why such a theory is needed. Here two limited perspectives are indicated, i.e. how educational theory is related to teacher education and the practitioners' reflection.

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