

Pedagogical thinking: The way to the secrets of teaching

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1. The problem of good teaching

As teacher educators our common goal is good teaching. Although we understand that there is no correct answer, the question of good teaching is of paramount importance and has serious consequences depending on what we think the solutions are. It is clear that all of us have a certain conception of what is good teaching. In practice, as teachers, we must somehow decide what to do and rely on our own understanding. As teacher educators, in addition, we have a certain responsibility in guiding our student teachers and this compels us to seek more general information to solve the problem of good teaching. This is not, however, a problem exclusively for pedagogy, all practical work is taking place in similar circumstances. Teaching requires decision making, teachers have to take a stand, which means that teaching is normative activity.

Deciding what good teaching is like also requires an ethical perspective. The purposes, aims and goals of teaching are naturally based on some values, and these are expressed in practice in the curriculum and in the teacher’s thinking as well as to some extent in the minds of the students. In actual fact, some one must make the decision about the right values and build a curriculum according to which the instructional process is organized. A conscious or rational approach to teaching requires knowledge of these principles.

The perspective of a good teacher existed for a rather long time in the background of the conception of good teaching. I dare say that it still exists, although teachers, teacher educators and researchers may not be eager to accept it. This conception experienced its greatest popularity in connection with the research theme of teacher personality. Large-scale research projects tried to describe the personal features and traits of different kinds of teachers. This research tradition still lives on in particular modifications. The idea behind this research program was that those characteristics that were defined as good ones could be used in appointing teachers to posts in teacher education departments and in teacher education in general. But what are the characteristics of a good teacher personality? Good teaching takes place according to a curriculum and a good teacher is able to get the results set forth in the curriculum. According to this rationale, a utilitarian criterion was adopted: effectiveness.

In the instructional process we need practical knowledge to be able to make educational decisions that require pedagogical thoughtfulness. In addition to that we need research knowledge to be able to orient ourselves in the instructional process; it means writing the curriculum, as well as planning and evaluating the instructional process. Reflection is a means to get information of one’s own work. Reflection is not only lonely work; it also presupposes interaction with literature and working with various kinds of material. What is, however, important is that reflection requires discussion with colleagues and other experts of a teacher’s work. Changing experiences with colleagues may widen our perspective and get new viewpoints to our thinking. Contemplation and discussion is not, however, enough, reflection also presupposes distance and distance we get through real research work. It does not mean that teachers are

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1 e.g. Ryans, 1960.
2 e.g. Wayne & Youngs, 2003; Zumwalt & Craig, 2005.
5 Bengtsson, 1995.
researchers at the same time but they need to know how to use research knowledge in their work. This is pedagogical thinking, how to justify decisions and actions in the instructional process.

Teachers in the field, in their classrooms, must make educational decisions constantly. Teaching on the practical action level deals with everyday problems and it is evaluated against criteria, standards, which we get from the curriculum. Pedagogy tries to combine the normative and descriptive aspects, teaching and research on teaching, and to be of help on the practical level. When we move from the practice of teaching to teacher education our problem of good teaching rises to a second level which is good teacher education. In addition to good teaching we should know what good teacher education is like.

2. Complexities of good teaching

A common practice in constructing a teacher education program is to divide it into three main parts: studies in education, subject matter studies along with pedagogical content knowledge, and practice with student teaching. These areas are overlapping and no strict limits can be drawn between them. This kind of totality can be constructed in numerous ways and it may be called the basic level of teacher education.

It is necessary for most people planning to become a teacher. On the other hand, in the art of teaching (Didaktik) we may speak of “natural forces” or “spontaneous forces”⁶. These may automatically come into operation when adults work with children. This kind of thinking partly explains why the belief of someone being an innate teacher still persists. I suppose it is possible to develop this everyday teaching skill in the course of years. Teacher education makes the development of these skills systematic and safe. It is not, however, certain that teacher education is needed to achieve these basic aims. Working as a teacher inevitably brings about learning in this respect.

Besides the basic level of teacher education, there is another stratum, which may be called general teacher education. It aims at the sustained development of a teacher’s work, and it is in close connection with the basic level. My thesis here is that this general level is not achieved in the basic teacher education without special attention to its requirements. Further, I claim that a certain distance to practice is needed at the same time as teachers are working in this very practice. This means discussion, thinking, reflection, research, and related activities⁷. In addition to practice and experiences, conscious efforts are needed, and a teacher education program may be constructed in such a way that it takes these requirements into consideration.

In the basic teacher education, the programs usually concentrate on practical skills and fundamental knowledge of the whole instructional process. The content requirements are so extensive that it is not difficult to fill a four-year or a five-year program with rich content. As a matter of fact, strict selection is needed. Much of the knowledge and the skills that it is possible to acquire without its inclusion in the teacher education program are excluded. Various content courses, one after another or alongside each other, bring about horizontal knowledge. This kind of readiness and knowledge competence has no end; new requirements are produced all the time. This is also one of the reasons for life-long studying for teachers.

In addition to the basic level of teacher education, the general level of teacher education must somehow be achieved. The core of the idea is a kind of metacognition, discovering by looking at one’s own work and decisions concerning teaching. In the

guidelines for building a teacher education program, this point of view is not directly seen. Thinking skills, metacognition, problem solving, decision-making, and similar topics are often mentioned but as separate courses, not as a means to look at the totality of the program. If we adopt the principle of building a teacher education program systematically, it means that the program has some basic beliefs to guide it and an organizing theme or themes as principles for the selection of its content. As an organizing theme, a research-based approach is presented here. It is founded upon a teacher’s pedagogical thinking; on the way a teacher makes decisions and how these are justified.

**Motivation**
The desire to become a teacher varies among countries. A common feature everywhere is that women have a clear majority in teacher education and in the teacher’s profession and this majority has also increased in recent years. In my country, Finland, the popularity of the profession of teaching is surprisingly high. In a relatively large survey at the beginning of 2004, 26% of the students who were just starting their matriculation were of the opinion that the work of teaching was the most interesting among the professions. In practice this means that every year about 15% of the applicants for teacher education programs will be accepted to start their studies. This concerns class teachers in particular (grades 1–6). This also means that we have an entrance examination according to which the students are selected. The access to subject teachers is also difficult with the same kind of entrance examination; the procedure is, however, different. In a large survey made in 2004 about the esteem of various occupations the teacher-related jobs were of high esteem. We may interpret these results to indicate that a teacher’s work is appreciated in the society. The status of a teacher’s profession is, however, dual sided by nature: on the one hand it is highly appreciated and respected in society, and on the other hand its salary and academic esteem is quite low.

The consequence is that we have a large amount of applicants to teacher education every year. The high numbers of applicants may be considered evidence of motivation to teach. Motivation may with good reason be regarded as a prerequisite as well as a criterion for good teaching. How strong is this kind of motivation? Could we speak of having a calling? Hansen, in analyzing teaching as a vocation says, “... in addition to being of social value, an activity must yield a sense of personal fulfillment in its own right in order to be a vocation.” Hargreaves speaks of different kinds of commitment. Perhaps having a calling might be too strong an expression and commitment develops along with a teacher’s work experience. We have used the concept of *purposiveness*, based on the gradual internalization of the curriculum with its goals and aims. One politician’s answer to a question concerning having a calling to teach was that she does not like the phrase because it denotes empty talk with much responsibilities and low salary and is dedicated to women in particular. In any case, we may consider motivation to be a proper requirement for good teaching.

What does it mean to have many applicants to teacher education in addition to the fact that they are highly motivated to a teacher’s work? It should be easy for them to adopt the requirements for the basic teacher education. But how to select the right ones? Korthagen divides the requirements for a teacher into two categories: qualities and competencies. In short, qualities are innate by nature and very difficult to change.

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8 e.g. Howey, 1996.
10 1995, p. 3.
We can also speak of character strengths and virtues such as creativity, courage, kindness, and fairness. To draw a distinction between qualities and competencies it can be said that qualities come from the inside and competencies from the outside. Examples of the competencies Korthagen presents are how to take into account different learning styles and how to reflect systematically. A practical conclusion, however, is that it is possible to select students for teacher education according to motivation and certain personal qualities. This is rational because these are very difficult to change. Competencies, to the contrary, can be developed and can also be aims and goals for teacher education.

Purposiveness

If we start from the stance that teacher personality is relatively stable and time-consuming to change we should concentrate on the students’ development in the awareness of pedagogy, this means on the general level of teacher education. Teaching means working in a special context that is defined by the limits of the curriculum. There is purpose all the time in this process. On the one hand, purpose gets its meaning through the curriculum; on the other hand, this purpose becomes a part of the thinking of the participating persons. They, the teacher as well as the students, have intentions that they bring into the process with all of their own experiences acquired during their former lives. Purposes must become internalised into the thinking of the participants before they can be present in the process. The crucial question becomes how to integrate the purposes of education, defined and specified in the curriculum as goals, aims and objectives, into the thinking of the teacher and of the students.

The more the teachers reflect on the premises of their teaching and the whole instructional process, the more the value questions come into their consciousness. The purposes of the curriculum and their own intentions may become integrated to build a personal conception of the instructional process. With the internalised purposes as their intentions, the aims and goals gradually receive the character of some kind of a deontological theory with moral responsibilities. The understanding of the nature of values behind the curriculum is then of central importance. Teachers work with different degrees of moral consciousness, depending on their commitment to the aims and goals directing their action.

Speaking according to the language of normative ethics, we can combine the value questions with the goals and aims of the written curriculum. In this way we can also link the content of the curriculum to the teacher’s purposes. If teachers know the curriculum, its purposes, aims, and goals, it is possible for them gradually to make these to become a part of their thinking and internalise its content as part of their responsibility. In the teachers’ pedagogical thinking, the decisions that are made during the preinteractive phase of the instructional process derive their reasons through a certain kind of deontological thinking; that means through the content, and behind the content through the aims and goals, that reflect the value base of the curriculum. In practice, the aims and goals to a certain degree determine the freedom of teachers’ thinking. And by approving of these, they become a part of their own thinking. A teacher’s intentions become identical with the purposes of the curriculum. The teacher follows certain rules and administrative regulations as self-evident action, but not without criticism.

Pedagogical responsibility also comes into action on the other side of the process. Although a deontological understanding of the curriculum has its obligation, the teacher’s work is evaluated according to its results as consequences in students’ personal development. This teleological aspect of the instructional process must be in harmony with the purposiveness of the teacher’s thinking. Combining the deontological aspect with the teleological aspect reflects the teacher’s conscious understanding of the total-

\[\text{cf. Frankena, 1973, pp. 12-33.}\]
ity of the instructional process within the curricular frame. If we, however, restrict ourselves on the basic level of teacher education there is the quasi-teleological action, where decisions are determined through technological means, such as textbooks and other teaching materials, without the teacher’s personal contribution to their use. This kind of action may be substituted by any agent in the instructional process.

There is a certain difference between purposes and intentions. In this text the term purpose is used in the context of the curriculum, where it is seen as goals, aims, and objectives. Intentions, on the other hand, are in the mind of the teacher. The students have intentions, too. It is, however, the intentions of the teacher that are defining the intentional situation\(^5\) in the instructional process. Nevertheless, as Clark and Peterson\(^6\) note teachers may have many other kinds of intentions during their work besides bringing about learning. That is why it is important to try to combine the teachers’ intentions with the purposes of the curriculum. If that process succeeds, the thinking can be called purposive, and teachers have internalised the aims and goals of the curriculum into their thinking; hence we can call it pedagogical thinking.

3. Teachers’ pedagogical thinking

The action of teachers may be understood as making educational decisions. This is taking place constantly and in addition to the knowledge basis, many other factors have an influence on this process. In pedagogical thinking the interest is to get to know how these decisions are justified. When a teacher makes a decision, it is no more a descriptive consideration, but instead it becomes normative at the very moment the decision is made. Teachers must take a stand and evaluate all the time what they are doing. It may be unconscious, too, but nevertheless it is normative on some basis. Every aspect of pedagogical content has its own features and is important in its own way, but what is common to all teachers is the background thinking or what kind of justification they are using.

Making decisions is generally selecting between different alternatives. It is continuous and unavoidable; the existence of alternatives is, however, a necessary condition\(^7\). There must be open alternatives from which to select. The selecting itself is conscious, but the level of consciousness may differ from clearly motivated decisions to almost unconscious selection. It is common to present behind this selection process some kind of personal belief system\(^8\). Fitzgibbons\(^9\) calls those beliefs concerning education a person’s philosophy of education. This personal belief system may also be conscious or unconscious, or more generally partly conscious. It can be divided into two bases, the intuitive and the rational. The personal belief system is thought to be behind the decisions; many times it is thought to be hierarchical by nature.

The intuitive bases and rational bases may be independent from each other; however, some kind of interaction is more plausible. The intuitive means one’s own experiences; it may be founded on personal needs or tradition. Rational bases include pedagogical principles, research findings, scholarly contributions and examined practice. It may quite easily be widened to a more detailed structure where there is interaction between the bases, and the reasons given consist of common elements from both the intuitive and rational bases.

Some examples show the nature of these justifications. If teachers base their decisions on some kind of authority, it may be intuitive or rational or both. There may be


\(^{16}\) 1986, p. 273.

\(^{17}\) cf. Fitzgibbons, 1981, pp. 11-19.


many categories of authority, but it is essential that teachers openly believe and do as their authority implies. This authority may be a colleague or some background group (e.g. teachers' association or teacher-parents association), some university professor or a priest. It may be some administrative department or the Board of Education. Some model or ideal may serve as an authority. Furthermore, a textbook or a school of thinking, an ideology or some other normative system may function as an authoritative basis in decision-making. On the other hand, decisions may be based on content categories or classifications in various disciplines, such as education, psychology, sociology or epistemology.

A popular way to describe the various aspects in a teacher's implicit theory or personal belief system is to look at it from various levels. Although it is questionable whether the different aspects or factors really build a hierarchy or are in a hierarchical relation to each other, it is in any case a clear way to analyse them.

![Figure 1. Pedagogical level thinking](image)

In Figure 2, the pedagogical level thinking is presented. In describing this quite common way of looking at the relation between the various factors, the idea of Eckard König\(^\text{20}\) is utilized. König speaks of object theories and metatheories. Object theories examine practice on the action level and one may build models and totalities of the phenomenon in question. In principle, it is possible to build many kinds of object theories, depending on the aspect under consideration. Important, however, is that these possible object theories may in turn be examined and a potential totality, metatheory, may be built on these. König calls an object theory a theory of educational practice, and a metatheory, a theory of education, a discipline.

This idea is also applied by Erhard Guhl and Ernst H. Ott\(^\text{21}\) and they use Paul Heimann's didactic theory (Berliner Didaktik) as a starting point when considering the instructional content. The instructional process is the basic level that is here called the action level, according to their terminology. On the action level the instructional process proceeds in successive cycles consisting of preinteraction, interaction and postinteraction. Working on the action level is everyday teaching. Making educational decisions is

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happening all the time; how it is done varies, however, from teacher to teacher. A struc-
tural analysis is done on the first thinking level, where the concepts developed are ana-
lyzed and their mutual relationship is established. The second thinking level builds the
frames for a potential metatheory, where the object theories are combined or analyzed
with the intention to build a new and more abstract totality.

4. How it works in practice

During many years the model of teachers’ pedagogical thinking has been tested in prac-
tice. Arguments and justifications for various aspects concerning the instructional proc-
ress have been questioned. Some of these studies have already been reported\(^22\). Moral
perspectives, rules and recipes in teacher education, and supervisory discussions have, in
particular, been important themes. Planning of teaching and portfolio work have also
been subjects for investigations. Methodologically the studies have been of varied kinds:
interviews, surveys with questionnaires, text analyses with both qualitative and quanti-
tative approaches, and concept analyses. Pedagogical thinking in a student’s mind has
widened the perspective to the student’s role in the instructional process\(^23\).

As a general conclusion of the studies may be noted that in spontaneous discus-
sions teachers seldom give reasons for their doings. They may describe their activities
and if asked for more information they usually give more detailed descriptions. In one
study\(^24\), when reading a number of lesson plans of teachers I began to wonder why the
teachers described their planning as they did. The teachers reported what they in-
tended to tell the pupils. There was order in these accounts: they were full of details,
there were questions concerning the content, there were pondered alternatives pre-
sent ing different points of view of the content. In short, the lesson plans were full of
content with some suggestions for pupil activities in connection with this content. My
question was: Why do teachers tell so much about content if they have a good knowl-
edge of it? If they have a good knowledge of the content, I would expect them to tell
how to use this knowledge in the pedagogical context without telling things they al-
ready know. Why not outline this content in some system, time, order, hierarchy, _Tyler
rationale_, etc.? Or is it that they do not have a good knowledge of the content of the
lessons and that is why they must study the content by telling it in their plans? One cue
for this direction was a finding that for those subjects in which the teachers were spe-
cialized they used aims and goals in their reports. The fact, in any case, is that the les-
son plans do not have any other outline as how the content is going on. Where are the
justifications, alternatives with various strategies, aims and goals, etc.? Or is this kind of
result only an artifact that depends on the research technique, and the teachers do not
know exactly what the researcher wants from them? Or are these things so simple and
self-evident that experienced teachers will not mention them to the researchers?

In a recent study concerning mathematics teaching\(^25\) a part of the study consisted
of analyzing justifications on content basis. Six teachers participated in the study and
two mathematics lessons were videotaped of every teacher. Interviews with stimulated
recall followed and the interviews were analyzed according to various aspects. One
problem was how the teachers justified their action and decisions. In this analysis the
justifications were categorized according to the content of the lessons. Two categories
were built: general pedagogical (didactic) themes and subject-specific (mathematics)

\(^{22}\) cf. Kansanen, Tirri, Meri, Krokfors, Husu, & Jyrhämä, 1999; Kansanen, Tirri, Meri,
Krokfors, Husu, & Jyrhämä, 2000; Tirri, Husu, & Kansanen, 1999; Kansanen, 2001;

\(^{23}\) Kansanen, Pitkäniemi, Byman, & Hulkkonen, 2000.

\(^{24}\) Kansanen, 1999.

themes. Both of these were further divided into numerous subcategories. The results indicated that the teachers used both category systems in their accounts. In content-based justifications it is not, however, so much question of decisions or solutions, the justifications are based on beliefs and the teachers are in some way describing these beliefs. This kind of argumentation may be characterized more as static without dynamic tension between challenging alternatives. It is situation-bound and based on practical aspects. It seems that most of what the teachers tell is this kind of content-based justifying. It certainly offers possibilities to analyse their thinking on different levels but reasons for certain understanding concerning the belief systems are not possible to find out.

If the teachers are, however, specifically asked for justifications they are gradually able to produce those. A usual remark in those situations is that they do not have happened to think of the justifications, but when asked justifications may be rich and diversified. The basic classification into two categories, intuitive and rational, may be too simplified. Usually thinking follows some mixed pattern where content and reasons are all mixed up. Here are some typical examples from justifications of supervisors in teacher education:

Intuitive reasons

*Because I have found them good.*

*I justify so that all advice are derived from practical situations and are not any writing-table philosophy. They are not opinions of a supervisor but observations based on student behavior from countless lessons. The things dealt with in the supervisory process are thus the result of a long product development. The student notice this quite rapidly as following the advice produces wished-for results. Differences of opinion with other supervisors have not been brought forth as to the advice because they know that work is the best adviser.*

*I justify the advice with examples from my own work. Or I tell how and in what situation I myself have acted as I have described.*

Rational reasons

*Direct advice and guides I indeed give in questions of safety.*

*I justify with children’s learning strategies.*

*When we talk about teaching methods and about their usefulness etc. I apply the knowledge I have got in my own studies.*

*You are a model for your students. The students easily do the same as you do.*

Mixed patterns of justifying

*My arguments vary according to the topic of action is under discussion. I try to differentiate my views depending on their being generally accepted or only subjective, or if it is possible to find knowledge which is based on research.*

*Generally I justify my advice appealing to general didactic and educational conceptions concerning the problem presented. I make use quite much of my somewhat short but fruitful experience. Sometimes balanced adult common*
sense is helpful to observe things, which are brought to discussion: advice and justifications are not needed.

There are some things (the use of black board lights, the use of overhead projector, the things which are connected to the size of the text on board, to the clarity of making the presentation concrete) which I indeed justify by saying that it is a fact that writing on board with big letters is better visible than with small letters or that I myself have found the argument to be true or someone else has found it true. Of some things I say that there is no one right way to teach, everyone has to choose the one which is in line with his/her personality; on the other hand I have arrived at my own way of action with my experience and in particular my nine-year experience in practical field work. I suppose that I know quite well where I send my student teachers. In the course of years and in my studies I have, of course, happened to read many kinds of texts, various kinds of research results give hints. They will either be cited directly or told about that I have read that somewhere. The years of supervision have naturally taught, or at any rate I hope so.

5. Some concluding remarks

In this article I have claimed that teacher education may be divided into two levels: the basic level of teacher education and the general level of teacher education. I have claimed further that the basic level is relatively easy to attain and it is also possible to attain through experiences in practice, without formal teacher education. The general level of teacher education, on the contrary, requires special attention to become reality. The basic pedagogical knowledge and teaching methods repertoire are, of course, corner-stones in every teacher education program but they are not enough to obtain the general level of teacher education. Some main organising principle of the program is required. I have also tried to present how pedagogical thinking could be developed by guiding teachers to provide arguments and how to justify their decisions and actions. Adopting the role of a practitioner researcher might be of help. This means that teachers are able to reflect on their own work with the help of research methods. In this reflection they are like consumers of research knowledge and are capable to utilise it according to their own needs. This does not, I claim, take place without special attention. Our experiences, however, indicate very encouraging results.

References


Wissenschaftliche Buchgesellschaft.
