LINKING PRACTICE AND THEORY: THE PEDAGOGY OF REALISTIC TEACHER EDUCATION

Fred A.J. Korthagen
IVLOS Institute of Education
Utrecht University
The Netherlands
e-mail: F.Korthagen@ivlos.uu.nl

Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, April 2001.

Introduction

Teacher education finds itself in a critical stage. The pressure towards more school-based programs which is visible in many countries is a sign that not only teachers, but also parents and politicians, are often dissatisfied with the traditional approaches in teacher education (Barone, Berliner, Blanchard, Casanova, & McGowan, 1996, p. 1108-1109). In some countries a major part of preservice teacher education has now become the responsibility of the schools, creating a situation in which to a large degree teacher education takes the form of 'training on the job'.

The argument for this tendency is that traditional teacher education programs are said to fail in preparing prospective teachers for the realities of the classroom (Goodlad, 1990).

Many teacher educators object that a professional teacher should acquire more than just practical tools for managing classroom situations and that it is their job to present student teachers with a broader view on education and to offer them a proper grounding in psychology, sociology, etcetera. This is what Clandinin (1995) calls "the sacred theory-practice story": teacher education conceived as the translation of theory on good teaching into practice. However, many studies have shown that the transfer of theory to practice is meager or even non-existent. Zeichner and Tabachnick (1981), for example, showed that many notions and educational conceptions, developed during preservice teacher education, were "washed out" during field experiences. Comparable findings were reported by Cole and Knowles (1993) and Veenman (1984), who also points towards the severe problems teachers experience once they have left preservice teacher education. Lortie (1975) presented us with another early study into the socialization process of teachers, showing the dominant role of practice in shaping teacher development.

At Konstanz University in Germany, research has been carried out into the phenomenon of the "transition shock" (Müller-Fohrbrodt et al., 1978; Dann et al., 1978; Dann et al. 1981; Hinsch, 1979). It showed that, during their induction in the profession, teachers encounter a huge gap between theory and practice. As a consequence, they pass through a quite distinct attitude shift during their first year of teaching, in general creating an adjustment to current practices in the schools and *not* to recent scientific insights into learning and teaching.

In this paper I will first look at the problem of changing teachers or education in general and the causes of this problem. I will then describe the basic principles of the "realistic approach to teacher education", which takes recent insights about teachers' functioning into account, especially the idea that much of a teacher's behavior is guided by non-rational and unconscious processes within the teacher. I will also summarize research findings concerning effects of the realistic approach. Finally, a section is devoted to a reflection on the development toward realistic teache education. There I will also discuss our experiences with implementing the realistic approach in a variety of other institutions for teacher education.

The problem of changing teachers and education

There is not only extensive literature dealing with the often unsuccessful attempts of preservice teacher educators to influence teacher behavior, but many studies on inservice teacher education and curriculum development point at the same phenomenon. It can be helpful to our purpose to discuss the problem of educational change from a broader perspective now, before, in the rest of this paper, the focus is on preservice teacher education.

Holmes (1998, p. 254) sets the stage for the present discussion by stating that

"Even the strongest advocates of change concede that large numbers of change projects have gone sadly awry."

A well-known model for planned educational change is the RD&D model, based on a sequence moving from research, to development to dissemination. The underlying rationale is one of technical-rationality: we have a lot of knowledge about 'good education', so why not teach this knowledge to a group of teachers, and, once that has led to a successful innovation, disseminate the success? In the past, this model has often been used by policy makers - consciously or unconsciously - and has directed many attempts to change education.
After the discussion in the previous section, it will be no surprise that the RD&D model has serious limitations, as Lieberman (1998, p.19) concludes, in her introduction to the 1998 *International Handbook of Educational Change*. She refers to an unpublished paper by Huberman in which he "critiques the RD&D model as being "hyper-rational and technocratic", and insensitive to the unique properties of school cultures." Day (1999, p. 15) notes that "externally imposed reform (....) will not necessarily result in teachers implementing the intended changes", as "a multitude of research projects in different countries have shown". Fullan (1998) states: "If we know anything we know that change cannot be 'managed'." McLaughlin (1998) concludes that "it is exceedingly difficult for policy to change practice." I can add that this is extremely difficult for teacher educators as well.
In my view this has to do with an aspect of change that has until now attracted relatively little attention from researchers writing about change. In fact, in the two volumes of the 1998 International Handbook of Educational Change it is hard to find. It is the notion that there is a world of difference between two ways in which we can use the word change as a verb. The first is the transitive use of the word, for example in the sentence "I wish to change this teacher". The second is the intransitive use: "teacher X changes." The former use of the verb to change implies that there is an external pressure, however subtle, put on the teacher. The latter sentence refers to change directed by the teacher himself or herself. I agree with McIntyre and Hagger (1992, p. 271) that "teachers should develop, not that other people should develop teachers." They also state that

"'Development' takes what is there as a valuable starting point, not as something to be replaced, but a useful platform on which to build. To do so is to recognise not only that teachers do have valuable existing expertise but also that, if teachers are forced to choose, they will usually revert to their secure established ways of doing things. The metaphor of 'building on what is already there' is not, however, satisfactory because it suggests adding on something separate to what is there, something extra on top. The concept of development, in contrast, implies that whatever is added, whatever is new, will be integrated with what is there already, and will indeed grow from what is there." (McIntyre & Hagger, 1992, p. 271)

I think that a major mistake of many attempts to implement innovations in education has been that the wish to change came from the outside and did not meet the needs and concerns of the teachers and the circumstances in which they worked. Although an author such as McLaughlin (1998, p. 72) is aware of the fact that "the presence of the will or motivation to embrace policy objectives or strategies is essential to generate the effort and energy necessary to a successful project", such a statement still looks at the problem of change from the vantage point of the outsider wishing to change teachers. Holmes (1998, p. 250) states it even more clearly:

"Despite the rhetoric, school change projects are inevitably topdown. For all the talk of democratic decision making, collaboration, and recognizing the importance of teachers, change projects are and must be implemented from the top. Occasionally, teachers may exercise the right of veto, but more usually any resistance will see them being accused of being afraid of change and defenders of the status quo, the most grievous sin in Fullan's moral code."

The problem may be that for a long time we did not know what other possibilities there were to initiate developments in education. This is clarified through Holmes' statement that

"... there is an admitted problem in trying to train teachers like seals, but there is little chance of their implementing the desired changes if left alone" (Holmes, 1998, p. 254).

The dichotomy between "training like seals" and "leaving teachers alone" is an example of what Watzlawick, Weakland, and Fisch (1974, p. 90) call "the illusion of alternatives": if we accept this dichotomy we are trapped in the idea that these are the only two possibilities. This is symptomatic of the approach towards educational change that has for a long time dominated the thinking of reformers. As Hargreaves (1994, p. 6) notes, these reformers in fact often showed disrespect for teachers.

The realistic approach to teacher training, developed at the IVLOS Institute of Education at Utrecht University, shows a third possibility, which is to take teachers seriously, work with them on the basis of *their concerns*, even to train them in the use of certain skills, but only on the basis of *their wish* to develop these skills. This means neither to train them like seals nor leaving them alone. It implies taking account of the moral purposes of teachers (Day, 1999, p. 15).
Important in the view behind the realistic approach is the emphasis on *the process character of change*. More than the technical-rationality approach, the realistic approach draws our attention towards the process of professional development and change itself. This has been a neglected area for a long time: "... there is almost a complete lack of account of how the changes come about. This is a significant deficit for those interested in teacher education because programmes need to be based on an understanding of the mechanism of change rather than milestones" (Desforges, 1995, p. 388; see also Fullan & Hargreaves, 1992, p. 1). Burden (1990) says: "There needs to be clarification of the nature of teacher changes and the process by which this change is brought about".

Less rational ways of information processing
One of the things that receives much attention in the realistic approach to teacher education, is that we cannot understand teacher change if considered merely from a cognitive stance. Teaching is a profession in which feelings and emotions play an essential role (Nias, 1996; Hargreaves, 1998a):

"One of the most neglected dimensions of educational change is the emotional one. Educational and organizational change are often treated as rational, cognitive processes in pursuit of rational, cognitive ends. (.....) The more unpredictable passionate aspects of learning, teaching and leading, however, are usually left out of the change picture." (Hargreaves, 1998b, p. 558)

The problem of educational change, and particularly of teacher education, is first of all a problem of dealing with the natural emotional reactions of human beings to the threat of losing certainty, predictability or stability. This affective dimension is too much neglected in the technical-rationality approach. For example, most literature on the role of preconceptions guiding student teachers' actions tend to focus on just one type of human information processing (for example Hollingsworth, 1989; Weinstein, 1989). This type of information processing - mostly focused on by teacher educators - can be described as rational or logical. For example, student teachers are asked to analyze the goals of a lesson they gave, the way they worked towards these goals and the effects. The impact of such approaches on the student teachers' preconceptions is relatively low, as the situations these student teachers are confronted with during their teaching practice, elicit a lot of feelings (for example feelings of fear), concerns, value conflicts, etcetera, which are certainly not only rational, logical, cognitive or conscious and easily remain outside the analysis.

People do not act solely on the basis of logical and rational analysis. Feelings of fear can be very influential, "washing out" any rational intentions formulated before the lesson. Very often one sees such a student teacher fall back on very old patterns, partly influenced by survival behavior developed during the student teacher's own personal history, and partly influenced by stored images of other teachers handling severe classroom problems.

Role models

Koster, Korthagen, and Schrijnemakers (1995) studied the influence of former teachers on the way student teachers teach. They showed that certain former teachers can serve both as a positive and as a negative role model to student teachers. For example one student teacher in their study, called Ita, said:

"When I was in the first year of my secondary school, we had a gentle and sweet teacher, who controlled the class very well. I think about her all the time. I have to be careful that students don't play tricks on me. And then I keep thinking of her. Her name is miss Hapé."

Although Ita may be aware of certain specific characteristics of her former teacher which she would like to copy, we believe that in a situation like this it is more adequate to say that Ita has a *gestalt* of her former teacher, consisting of not only a visual image but also of the feelings, values, and behavioral aspects linked to this image.
Crow (1987, p. 10) presents another example. Coleen, a secondary student teacher says about a former English teacher:

"She was extremely knowledgeable about literature and grammar. She stimulated me to want to know more... I wanted to read and read and understand... She was always an English teacher and we all liked it... She had quite an influence on me... I definitely will use a lot of different things like she did".

Ross (1987) notes that previous teachers can also serve as negative role models. Koster, Korthagen, and Schrijnemakers (1995) also found such examples of negative role models. Jeanine, a student teacher in biology says:

"I want to maintain a nice atmosphere between me and the students. I don't want a struggle like I have witnessed a lot of times when I was a student. (....) For example, I had an English teacher who would walk out of the classroom because she couldn't take it any more, and the next time she would bring us candy. We laughed our heads off then, but looking back I pity her."

Such experiences made her feel that contact with students was important to her and helped her develop her ideas of how she wanted to be with the children.

These were examples of role models consciously influencing student teachers. However, Zeichner, Tabachnick and Densmore (1987) emphasize that this influence of former teachers can also take place on a less conscious level, which is also shown by McEvoy (1986). She addressed the issue of role models in a paper with the intriguing title "She is still with me". McEvoy interviewed nine teachers of which seven could easily describe striking characteristics of impressive former teachers. Often it was a shock to these teachers to realize that they were describing characteristics that were now very obvious in their own way of teaching, although they had not consciously been aware of the modeling process. In line with this finding, Britzman (1986) argues that it can be important to have student teachers examine the values embedded in such role models in order to avoid that they influence their teaching behavior in an unconscious way.

Gestalts

In sum, feelings, images, role models, values, and so forth, may all play a role in shaping teaching behavior in the here-and-now of classroom experiences, and often unconsciously or only partly consciously. As we wish to take the role of less rational and less cognitive ways of information processing seriously, we use the term *gestalts* to indicate the internal entities that - often unconsciously - guide human behavior. With the term gestalts, we want to refer to the personal conglomerates of needs, concerns, values, meanings, preferences, feelings and behavioral tendencies, united into one inseparable whole. As we saw, they often evolve as a result of a person's earlier experiences in life, for example with other important persons in early childhood and in school.

We believe that one of the reasons that program impact is sometimes limited in scope is that the role of gestalts and less rational information processing is often neglected.

The gestalts influencing student teachers' perceptions of and behavior in practice can only become clear to them if there are sufficient practical experiences within the teacher education program. Thus, long student teaching periods or early entrance into the field can be proposed as contributions to a solution for the problematic relation between theoretical and practical components of teacher education (compare for example Sandlin, Young, & Karge, 1992). We think that starting from practical experiences can be a viable avenue in teacher education to help integrate theoretical notions into teacher actions and to help take into account both types of human information processing. Such an approach to teacher education does, however, not guarantee success. Long student teaching periods can be a socializing factor rather than offering an opportunity for professional development. Wideen, Mayer-Smith and Moon (1993), for example, conclude from a review of studies on effects of teacher education programs that "… the student teaching experiences were so devastating that little learning seemed to take place". This is why Korthagen et al. (2001) describe guidelines for careful planning, structuring, and supervision to make practical experiences indeed a learning experience. Underlying these guidelines are the following principles describing the intended learning processes in student teachers.

Experiential learning and the role of reflection

Learning in student teaching can be seen as a form of *experiential learning* (Jamieson, 1994). The process of experiential learning may for example be described by the model developed by Kolb and Fry (1975) as a cyclical process of concrete experience, reflective observation, abstract conceptualization and active experimentation. This model, however, does not account for the non-reflective learning that is an important part of learning (Bandura, 1978; De Jong, Korthagen, & Wubbels, 1998). It suggests on the one hand, that learning from experience is a natural, almost autonomous process leaving little room for guided learning. On the other hand, it overemphasizes the role of abstract concepts at the cost of concrete and more individual concepts, images, feelings or needs. Moreover, "it fails to take account of the need for developmental link between cognitive, emotional, social and personal development in the journey towards expertise in teaching" (Day, 1999, p. 69). To develop teacher education programs, other descriptions of the processes during learning from experience are needed.

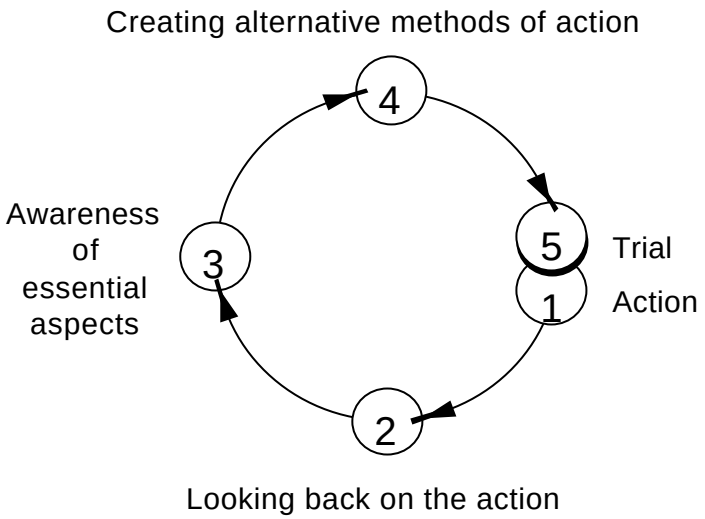

Figure 1: The ALACT model describing the ideal process of reflection.

We describe the ideal process of experiential learning as an alternation between action and reflection. Korthagen (1985) distinguishes five phases in this process: (1) action, (2) looking back on the action, (3) awareness of essential aspects, (4) creating alternative methods of action, and (5) trial, which itself is a new action and therefore the starting point of a new cycle (see figure 1). This five phase model is called the *ALACT model* (after the first letters of the five phases).
In phase 2, the questions presented in figure 2 can be helpful in promoting concreteness in the reflctive process:

0. What is the context?	
1. What did you want?	5. What did the students want?
2. What did you do?	6. What did the students do?
3. What were you thinking?	7. What were the students thinking?
4. How did you feel?	8. How did the students feel?

Figure 2: Concretizing questions for phase 2 of the ALACT model.

Finding answers to all of these questions is often difficult to student teachers. Especially the right hand questions are often problematic: sometimes they have no idea about their students' thinking or feeling. Of course that is a good starting point for discussing the question what the student teacher could do in the next lesson to find answers.
The important final step in phase 2 is connecting the answers to the questions 1-8, in other words analyzing the circular process going on between the teacher and the students. For example: how did the student teacher's own feelings influence his or her actions during the lesson, how did these actions influence what his or her students felt and wanted, how did that influence their behavior, what was the effect of that behavior on the teacher's feelings, etcetera. In this way the essential aspects of the process during the lesson become clear, which brings the reflection into phase 3.

theory and Theory

In phase 3, a need for more theoretical elements can come up and these can be brought in by a supervisor, but they are tailored to the specific needs and concerns of the teacher and the situation under reflection. We call this theory with a small t. Important is that it should help the teacher to perceive those characteristics of the situation that are important to the question of how to *act* in the situation. This is a major difference with Theory with capital T, formal academic theory, which aims at *understanding* a situation. This means that theory with a small t is not a reduction or simplificiation of formal academic knowledge, but fundamentally different in nature. Theory with capital T is conceptual knowledge, generalized over many situations, theory with a small t is perceptual knowledge, personally relevant and closely linked to concrete contexts. (See Kessels & Korthagen, 1996, or Korthagen et al., 2001, chapter 2, for a more thorough discussion of these concepts. Kessels & Korthagen, 1996, relate them to the Aristotelean terms *episteme* and *phronesis*).

Promoting reflection on experiences

Here is an example of a student teacher, Judith, going through the phases of the ALACT model, under the supervision of a teacher educator:

Judith is irritated about a student, named Jim. She has the feeling that Jim always tries to avoid having to do any work. Today she noticed this again. In the preceding lesson the children received an assignment for three lessons to work on in pairs and hand-in a written report at the end. Today, during the second lesson, Judith had expected everyone to work hard on the assignment and to use this second lesson as an opportunity to ask her help. However, Jim appeared to be busy with something completely different. In the lesson she reacted by saying: "Oh, so again you are not doing what you should do.... I think the two of you will again end up with an insufficient result!" (*Phase 1: action*)

During the supervision, Judith becomes more aware of her irritation and how this influenced her action. When the supervisor asks her what could have been the effect on Jim of her reaction, she realizes that her irritated reaction may, in turn, have caused irritation in Jim, probably causing him to be even more demotivated to work on the assignment. (*Phase 2: looking back*)

Through this analysis she becomes aware of the escalating negativity which is evolving between her and Jim and she starts to realize how this leads into a dead-end road (*Phase 3: awareness of essential aspects*). However, she does not see a way out of the escalation. Her supervisor shows understanding of Judith's struggle. She also brings in some theoretical notions about escalating processes in the relationship between teachers and students, such as the often occurring pattern of 'more of the same' (see for the underlying Theory with capital T: Watzlawick, Weakland, & Fisch, 1974) and the guidelines to de-escalate by changing this pattern and being more empathetic or by deliberately giving a positive reaction (theory with a small t). This is the start of *phase 4: creating alternative methods of action*. She compares these guidelines with her impulse to be even more strict and put more constraints on Jim. Finally, she decides to *try out (phase 5)* a more positive and empathetic approach, that starts with asking Jim about his plans. This is first done in the supervision session: the supervisor asks Judith to practice such reactions and includes a mini-training in using 'feeling-words'. If the results of this new approach are reflected on after the try-out in the real situation with Jim, phase 5 becomes the first phase of the next cycle of the ALACT model, thus creating a spiral of professional development.

This example shows how the student teacher's reflection is organized on the basis of the ALACT model. An *inductive* approach is followed that builds on the student teachers' own perceptions, their thinking and feeling about concrete teaching situations in which they were actively involved, their needs and concerns. In sum, realistic teacher education starts from student teachers' experiences and their gestalts rather than from the objective theories on learning and teaching from the literature. Student teachers go to schools for observations, teaching experiences and other assignments very early. In this way, experiences are created that can be used in the reflection process to help investigate the gestalts that student teachers have developed in experiences earlier in their lives. Next, for example images, feelings, needs,

behavioral tendencies, and so forth, triggered by small teaching experiences can be brought into awareness, and the relationship between the gestalts evoked by taking the teacher's role can be related to the student's experiences as a child in school. Through this, also inner conflicts and concerns about how to deal with teaching may surface in the student teachers. These concerns are a more productive starting point for learning about teaching than theories coming from outside the student teachers.

Interpreting student teacher learning as learning by reflection on can be taken a step further by also applying this idea to other components of teacher education, such as group seminars on campus. The realistic approach can be used at the level of a class on campus by creating an experience in that class which is the basis for learning for a whole group. One example is the idea of organizing 10-minutes lessons given by student teachers to their fellow students. (See Korthagen et al., 2001 for other examples and a discussion of the question of how the attuning of theory to the specific needs and concerns of individual student teachers can still take place if the teacher educators works with larger groups.)

Program organization

The realistic approach to teacher education not only has consequences for the types of interventions teacher educators should use to promote the intended learning process in the student teachers, but there are also consequences on the organizational level of teacher education curricula.

First of all linking theory and practice with the aid of the ALACT model requires frequent alternation of school teaching days and meetings at the teacher education institute.

Secondly, in order to harmonize the interventions of school-based mentors and institute-based teacher educators, close cooperation between the schools and the institute is necessary. Not every school may be suitable as a practicum site: the school must be able to offer a sound balance between safety and challenge and a balance between the goal of serving student teachers' learning and the interests of the school.

Thirdly, the approach advocated here implies that it is impossible to make a clear distinction between different subjects in the teacher education program. As Korthagen & Lagerwerf (1996) note, the realistic approach "is not compatible with a program structure showing separate modules such as 'subject matter methods', 'general education', 'psychology of learning', etc. Teacher knowledge which is assumed to function in practice is knowledge based on experiences; and teaching experiences are not as fragmented as the programs of many teacher education institutes would suggest."

Finally, the realistic approach in teacher education requires specific competencies from both teacher educators and cooperating teachers.This implies the need for professional development of teacher education staff and cooperating teachers in the school. A staff training has been developed and implemented in many institutions for teacher education in Europe, causing a shift in the approaches of many teacher education programs. The training is described in more detail in Korthagen et al. (2001, p. 239-253).

A summary: The basic tenets of the realistic approach

We will now summarize the basic tenets of realistic teacher education.

The realistic approach is based on the following tenets:

- It starts from concrete practical problems and the concerns experienced by (student) teachers in real contexts.

- It aims at the promotion of systematic reflection of (student) teachers on their own and their students' wanting, feeling, thinking and acting, on the role of context, and on the relationships between those aspects.
- It builds on the personal interaction between the teacher educator and the (student) teacher and on the interaction amongst the (student) teachers.
- It takes gestalts of teacher as the starting point for professional learning, which has consequences for the kind of theory that is offered (Theory with capital T versus theory with a small t).
- It has a strongly integrated character. Two types of integration are involved: integration of theory and practice and integration of several disciplines.

Empirical support of the realistic approach in teacher education

Since the mid-eighties, the teacher education program at Utrecht University preparing for secondary education, has gradually developed more and more towards the approach described in this article. Of course, an important question is: what are the results? Focusing especially on this question, we will briefly present an overview of several evaluative studies of the Utrecht program, which have been published before.

An national evaluation study carried out by an external research office (Research voor Beleid; see Luijten et al., 1995 and Samson & Luijten, 1996) of all Dutch teacher education programs preparing for secondary education has shown that 71% of a sample of graduates of the Utrecht program (n=81) scored their professional preparation as good or very good (the two highest scores on a five-point scale). This is a remarkable result, as in the total sample of graduates from all Dutch teacher education programs preparing for secondary education (n = 5135) this percentage was only 41% ($p < 0.001$).

In the light of the present article, a fundamental question is: Does the realistic approach indeed reduce the gap between theory and practice? Several studies focused on this more specific question.

In 1991, an evaluative overall study among all graduates of the Utrecht University program between 1987 and 1991 showed that 86% of the respondents considered their preparation program as relevant or highly relevant to their present work as a teacher (Koetsier et al., 1997). Hermans et al. (1993) illustrate this finding with more qualitative data of an experiment with a group of 12 student teachers strictly incorporating all the principles of a realistic approach. All 12 student teachers reported a seamless connection between theory and practice, a noteworthy result, given the many research reports from all over the world showing the problematic relationship between theory and practice. Some quotes from student teachers' evaluations are: "The integration theory/practice to my mind was perfect"; "Come to think of it, I have seen and/or used all of the theory in practice"; "The things dealt with in the course are always apparent in school practice".

Brouwer (1989) studied the relationship between program design and effects of 24 teacher education curricula (related to 12 different school subjects), in use at Utrecht University during the eighties, i.e. the years in which the realistic approach started to develop. At various moments during these programs and during the first two years in which the graduates worked as teachers, quantitative and qualitative data were collected among 357 student teachers, 31 teacher educators and 128 cooperating teachers. Concrete learning effects on the work of the graduates during their first year in the profession (measured by means of 14 criterion variables) appeared to depend primarily on the degree to which theoretical elements in their preparation program were perceived by the student teachers as functional for practice at the time of their student teaching, and on the cyclical alternation between school-based and university-based periods in the program. Also, a gradual increase in the complexity of

activities and demands on the student teachers appeared to be a crucial factor in integrating theory and practice.
Another fundamental question is whether the professional community would consider the knowledge base offered to the student teachers at Utrecht University to be sufficient. Some valuable indications may be derived from two external evaluations, in 1992 and 1997, by two official committees of experts in teacher education, researchers and representatives of secondary education, instituted by the Association of Dutch Universities (VSNU). The program received very positive assessments. For example, in 1997 the program scored 'good to excellent" on 25 out of 34 criterion variables, including the criteria 'value of program content' and 'professional quality of the graduates'. On the other 9 criteria it received the assessment "sufficient". No other Dutch university teacher education program received such high scores.
However, the 1992 committee did comment on the fact that the final objectives of the program were not formulated at an explicitly concrete level. This was recognized by the program staff. It is a difficulty almost inherent to the realistic approach that it is hard and perhaps even counterproductive to state in advance what the reinvention process should lead to. Perhaps this is the price to be paid for the shift from an emphasis on *episteme* towards the development of knowledge, skills and attitudes which are really being used in practice. On the other hand, after 1992, years of experience with the realistic approach have helped the program staff to become able to predict rather precisely what types of problems and concerns are generated by what kinds of practical experiences of student teachers as well as what kind of "theory" can effectively be connected to these problems and concerns. This made it possible to formulate the program objectives more precisely in advance and to not only follow the student teachers' concerns, but also generate them (Van der Valk et al., 1996). This led the 1997 committee to score the degree of "completeness and clarity of the program goals" as good to excellent as well as the degree to which the program goals were achieved. We believe that this is another indication that a new and sound "pedagogy of realistic teacher education" is now evolving.

A final reflection

One may wonder what aspects of the realistic approach are really new. This question may come up because many characteristics of the approach seem to build on older foundations. For example, the whole idea of learning-by-doing is in fact an old one, as is the notion of gestalts, which goes back to early gestalt psychology (see for example Köhler, 1947). As these gestalts are considered to be linked to early experiences in life, one might even sense influences from a psycho-analytical perspective. The realistic approach also shows a strong emphasis on a holistic view of the individual development of the student teacher and the personal factors involved. This holistic view brings back memories of humanistic psychology (Rogers, 1969; Maslow, 1971) or its educational branch, confluent education (Brown, 1971). Humanistic psychologists included the development of the *self* as a central aspect of teacher education (see for example Combs, Blume, Newman, & Wass, 1974) and the realistic approach is in line with their view of the teacher as "a unique human being who has learned to use himself effectively and efficiently to carry out his own and society's purposes in the education of others" (Combs, 1965, p. 9). Even a behavioristic view comes to the fore as skills training is considered to be important, as long as it is linked to the teachers' concerns (see the end of the example of Judith). Finally, more recent developments in learning psychology play an important role, such as the attention to the role of mental structures and the way in which these structures are grounded in the social contexts in which they developed (Cobb & Bowers, 1999).

Perhaps the fact that the realistic approach has its roots in many other important theoretical frameworks is precisely its most striking feature. What is new about realistic teacher education is that it represents a synthesis of those elements from a variety of theoretical frameworks that appear to be beneficial to practices in teacher education.
One important aspect of the realistic approach is that it builds on the notion of gestalts. Although at first sight it may seem unfamiliar, this framework, too, can be considered a synthesis of other, more well-known perspectives on learning, as will now be explained. Basic in the notion of a gestalt is the idea that much teacher behavior is guided by unconscious or only partly conscious gestalts and that professional learning involves the development of more awareness of and changes in these gestalts. This idea is certainly not completely new, but it builds on research on teachers' images, implicit theories, tacit knowledge, and so forth. It is also strongly connected to a view of knowledge as "situated" (Lave & Wenger, 1991; Brown, Collins, & Duguid, 1989). This view seems to represent a break with traditional perspectives characteristic of mainstream cognitive psychology, in which professional learning generally means the acquisition of theories about learning and teaching and the development of the capacity to apply these theories to practice. However, this more traditional view of learning also finds its place in the realistic approach. During the process of professional learning, the teacher may reflect on his or her gestalts and develop a conscious *schema* about a class of situations or even a *theory* that is logically consistent. During this process, teacher educators may well offer Theory with capital T (*episteme*). This leads to a three level model of professional learning (gestalt-schema-theory), further elaborated in previous publications (see for example Korthagen & Lagerwerf, 1996; Korthagen et al., 2001).
The three level model can be considered as a synthesis of the perspective of situated learning which views knowledge as embedded in contexts (Cobb & Bowers, 1999), and classical cognitive psychology, which views knowledge development as a process of abstraction from concrete situations. The view elaborated in the realistic approach is that both views are valid, but that it depends on the stage the teacher is in, which one best describes the process of learning about teaching or the kind of knowledge involved in this process.

In conclusion, both in its approach of teacher education and in its psychological foundations, the realistic approach presents a perspective that is not so much at odds with more traditional approaches, but a new synthesis of many helpful theories and practices, developed in the past. However, by stating this conclusion in this way, the danger may be that the practical consequences for teacher educators of the realistic approach remain somewhat concealed. Experiences that we now have with working with teacher education staff in many different institutions in a variety of countries show that they often have to pass through an intensive change process to become able to work in a realistic way. Most teacher educators are used to and happy with one particular view of teacher development, either a behavioristic, a cognitive psychological or yet another view. Over the years they have developed their personal way of working and feel comfortable with it. For example, in our training courses for teacher educators, we often witness supervisors of teaching practice telling student teachers as quickly as possible what they should improve on in their next lessons, generally in the most friendly wordings. It is not exceptional for teacher educators to explain to student teachers not to rely too much on explaining. As Russell (1999) puts it:

"The image of 'teaching as telling' permeates every move we make as teachers, far more deeply than we would ever care to admit to others or ourselves."

We also come across lecturers who keep believing that even if there is no short term effect of their lectures in teacher education, the theories they present will in the long run really influence practice. It can then be a giant step for such educators to work from basic principles such as listening to the perceptions of the student teacher, to really connect with his or her needs and concerns, to stimulate reflection within a safe atmosphere, and to a joint search for theory with a small t. As we apply these very same principles in our guidance of these teacher educators, the process of professional development necessary for the implementation of the realistic approach often takes time. I believe there is no shortcut to fundamental attitudinal change.

A final problem to mention is that, as soon as teacher educators start to change and become willing to adopt the realistic approach, they are confronted with institutional barriers that are sometimes hard to overcome. This is why we seldom give training courses for individual teacher educators from separate institutions, but try to involve the entire staff of departments of teacher education, often including deans or program coordinators.

References

Bandura, A. (1978). *Social learning theory*. Englewood Cliffs: Prentice Hall

Barone, T., Berliner, D. C., Blanchard, J., Casanova, U., & McGowan, T. (1996). A future for teacher education. In J. Siluka (Ed.), *Handbook of research on teacher education, 2nd ed.* (pp. 1108-1149). New York: Macmillan.

Britzman, D. (1986). Cultural myths in the making of a teacher: biography and social structure in teacher education. *Harvard Educational Review, 56*(4), 442-456

Brouwer, C. N. (1989). *Geïntegreerde lerarenopleiding, principes en effecten* [Integrative teacher education, principles and effects]. Amsterdam: Brouwer

Brown, G. I. (1971). *Human Teaching for human learning: an introduction to confluent education.* New York: Viking

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32-42

Burden, P. (1990). Teacher development. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 311-328). New York: Macmillan

Clandinin, D. J. (1995). Still learning to teach. In T. Russell & F. Korthagen (Eds.), *Teachers who teach teachers* (pp. 25-31). London/Washington: Falmer Press

Cobb, P. & Bowers, J. (1999). Cognitive and situated learning perspectives in theory and practice. *Educational Researcher, 28*(2), 4-15

Cole, A. L., & Knowles, J. G. (1993). Teacher development partnership research: a focus on methods and issues. *American Educational Research Journal, 30*(3), 473-495.

Combs, A. W., Blume, R. A., Newman, A. J., & Wass, H. L. (1974). *The professional education of teachers: a humanistic approach to teacher preparation*. Boston: Allyn & Bacon.

Combs, A. W. (1965). *The professional education of teachers: a perceptual view of teacher preparation*. Boston: Allyn & Bacon

Crow, N. (1987). *Preservice teacher's biography: a case study.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans

Dann, H. D., Cloetta, B., Müller-Fohrbrodt, G., & Helmreich, R. (1978). *Umweltbedingungen innovativer Kompetenz*. [Contextual conditions of innovation competence.] Stuttgart: Klett-Cotta.

Dann, H. D., Müller-Forhbrodt, G., & Cloetta, B. (1981). Sozialization junger Lehrer im Beruf. Praxisschock drei Jahre später. [Professional Socialization of young teachers. The transition shock three years later.] *Zeitschrift für Entwicklungspsychologie und*

Pädagogische Psychologie, 13, 251-262
Day, C. (1999). *Developing teachers: the challenges of lifelong learning*. London/Philadelphia: Falmer Press
De Jong, J., Korthagen, F., & Wubbels, T. (1998). Learning from practice in teacher education. *Teachers and Teaching: Theory and Practice, 4*(1), 47-64.
Desforges, C. (1995). How does experience affect theoretical knowledge for teaching? *Learning and Instruction, 5*, 385-400
Fullan, M. (1998). The meaning of educational change: a quarter of a century of learning. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *International handbook of educational change* (pp. 242-260). Dordrecht/Boston/London: Kluwer
Fullan, M., & Hargreaves, A. (1992). *Teacher development and educational change*. London/Washington: Falmer
Goodlad, J.I. (1990). *Places where teachers are taught.* San Francisco: Jossey-Bass
Hargreaves, A. (1994). *Changing teachers, changing times: teachers' work and culture in the postmodern age*. Toronto: OISE Press
Hargreaves, A. (1998a). The emotional practice of teaching. *Teaching and Teacher Education, 14*(8), 835-854.
Hargreaves, A. (1998b). The emotions of teaching and educational change. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *International handbook of educational change* (pp. 558-575). Dordrecht/Boston/London: Kluwer
Hermans, J. J., Créton, H. A., & Korthagen, F. A. J. (1993). Reducing the gap between theory and practice in teacher education. In J. T. Voorbach (Ed.), *Teacher Education 9, Research and developments on teacher education in the Netherlands* (pp. 111-120). De Lier: Academisch Boeken Centrum.
Hinsch, R. (1979). *Einstellungswandel und Praxisschock bei jungen Lehrern, eine empirsche Längsschnittuntersuchung* [Attitudinal change and transition shock in beginning teachers, an empirical longitudinal study]. Weinheim: Beltz
Hollingworth, S. (1989). Prior beliefs and cognitive change in learning to teach. *American Educational Research Journal, 26*, 160-169
Holmes, M. (1998). Change and tradition in education: the loss of community. In A. Hargreaves, A. Lieberman, M. Fulland, & D. Hopkins (Eds.), *International handbook of educational change* (pp. 558-575). Dordrecht/Boston/London: Kluwer
Jamieson, I. (1994). Experimental learning in the context of teacher education. In G. Harvard & P. Hodkinson, *Action and reflection in teacher education* (pp 35-54). Norwood, NJ: Ablex.
Koetsier, C. P., Wubbels, T., & Korthagen, F. A. J. (1997). Learning from practice: the case of a Dutch post-graduate teacher education programme. In M. I. Fuller & A. J. Rosie (Eds.), *Teacher education and school partnerships* (pp. 113-132). New York (etc.): Edwin Mellen Press.
Köhler, W. (1947). *Gestalt Psychology.* New York: Liveright.
Kolb, D. A., & Fry, R. (1975). Towards an applied theory of experiential learning. In C. L. Cooper (Ed.), *Theories of group processes* (pp. 33-58). New York: Wiley
Korthagen, F. A. J. (1985). Reflective teaching and preservice teacher education in the Netherlands. *Journal of Teacher Education, 9*(3), 317-326
Korthagen, F.A.J., & Kessels, J.P.A.M. (1999). Linking theory and practice: changing the pedagogy of teacher education. *Educational Researcher 28*(4), 4-17.
Korthagen, F.A.J., Kessels, J., Koster, B., Lagerwerf, B., & Wubbels, T. (2001). *Linking practice and theory: The pedagogy of realistic teacher education.* Mahwah, NJ: Lawrence Erlbaum Associates.
Korthagen, F.A.J., & Lagerwerf, B. (1996). Reframing the relationship between teacher

thinking and teacher behaviour: levels in learning about teaching. *Teachers and Teaching: theory and practice 2*(2), 161-190.

Koster, B., Korthagen, F. A. J., & Schrijnemakers, H. G. M. (1995). Between entry and exit: how student teachers change their educational values under the influence of teacher education. In F. Buffet & J. A. Tschoumy (Eds.), *Choc démocratique et formation des enseignants en Europe* [Democratic shock and the education of students in Europe] (pp. 156-168). Lyon: Presses Universitaires de Lyon

Lave, J., & Wenger, E. (1991). *Situated learning: legitimate peripheral participation* Cambridge: Cambridge University Press

Lieberman, A. (1998). The growth of educational change as a field of study: understanding its roots and branches. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *International handbook of educational change* (pp. 13-20). Dordrecht/Boston/London: Kluwer.

Lortie, S. (1975). *Schoolteacher: a sociological study*. Chicago: University of Chicago Press

Luijten, M. C. G., Marinus, J. E., & Bal, J. M. (1995). *Wie gaat er in het onderwijs werken?* [Who is going to work in education?] Leiden, The Netherlands: Research voor Beleid

Maslow, A. H. (1971). *The further reaches of human nature.* New York: Pinguin

McEvoy, B. (1986). *She is still with me: influences of former teachers on teacher practice* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco

McInyre, D., & Hagger, H. (1992). Professional development through the Oxford Internship Model. *British Journal of Educational Studies, 40*(3), 264-283

McLaughlin, M. (1998). Listening and learning form the field: tales of policy implementation and situated practice. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *International handbook of educational change* (pp. 70-84). Dordrecht/Boston/London: Kluwer.

Müller-Fohrbrodt, G., Cloetta, B., & Dann, H. D. (1978). *Der Praxisschock bei jungen Lehrern* [The transition shock in beginning teachers]. Stuttgart: Klett

Nias, J. (1996). Thinking about feeling: the emotions in teaching. *Cambridge Journal of Education, 26*(3), 293-306

Rogers, C. R. (1969). *Freedom to learn*. Columbus, Ohio: Merrill

Ross, D. D. (1987). *Teaching teacher effectiveness research to students; first steps in developing a reflective approach to teaching.* Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C.

Russell, T. (1999). *The challenge of change in teaching and teacher education*. In J.R. Baird (Ed.), *Reflecting, teaching, learning: Perspectives on educational improvement* (pp. 219-238). Cheltenham, Victoria: Hawker Brownlow Education.

Samson, L., & Luijten, R. (1996). *Wie gaat er in het onderwijs werken?* [Who is going to work in education?] *, Part of the research dealing with the teacher education program at Utrecht University.* Leiden, The Netherlands: Research voor Beleid

Sandlin, R. A., Young, B. L., & Karge, B. D. (1992). Regularly and alternatively credentialed beginning teachers: comparison and contrast of their development. *Action in Teacher Education, 14*(4), 16-23.

Van der Valk, T., Somers, T., Wubbels, T., & Korthagen, F. (1996). *Commuting between practice and theory in an immersion teacher program.* Paper presented at the Annual Meeting of the American Educational Research Association, New York

Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational research, 54*(2), 143-178

Watzlawick, P., Weakland, J. H., & Fisch, R. (1974). *Change: principles of problem*

formation and problem resolution. New York/London: Norton
Weinstein, C. S. (1989). Teacher education students' preconceptions of teaching. *Journal of Teacher Education, 39*, 53-60
Wideen, M. F., Mayer-Smith, J. A., & Moon, B. J. (1993). *The research on learning to teach prospects and problems*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta
Zeichner, K., & Tabachnik, B. R. (1981). Are the effects of university teacher education washed out by school experiences? *Journal of Teacher Education, 32*, 7-11
Zeichner, K., Tabachnick, B., & Densmore, K. (1987). Individual, institutional and cultural influences on the development of teacher's craft knowledge. In J. Calderhead (Ed.), *Exploring teachers' thinking* (pp. 21-59). London: Cassell