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## 9 WORKING WITH GROUPS OF STUDENT TEACHERS

### Fred Korthagen

What is good, Phaedrus,  
And what is not good -  
Need we ask anyone to tell us these things?  
*Robert Persig, Zen and the art of motorcycle maintenance*

*Characteristic for the realistic approach is that teacher educators work with student teachers on the basis of their practical experiences. This is often done in groups of student teachers, since reflective interactions among students deepen the learning process. That is why in this chapter, the realistic approach is situated within the setting of group seminars in teacher education. First, a five-step procedure is discussed for working with practical experiences and integrating these with theoretical elements. Then four specific techniques are described for promoting reflection, which can be used in group seminars. An overview is presented of findings regarding the use of these techniques. Finally, further possibilities are discussed, for example the step towards peer supported learning, a structure within which student teachers learn to supervise each other.*

### 9.1. Introduction

In chapter 7, the process of promoting reflection in individual supervision has been described. Of course, teacher educators do not always have the time to work with student teachers on an individual basis. Moreover, group settings are even essential for promoting reflection: by sharing experiences, teachers are stimulated to structure these experiences and, by comparing their own analyses of practice with those of others, they may discover other possible ways of framing their experiences. They can also ask for and get feedback from peers. In sum, reflective interactions among student teachers deepen the intended process of professional learning (*collaborative reflection*). Northfield and Gunstone (1997, p. 49) state that:

“Learning about teaching is a collaborative activity and teacher education is best conducted in small groups and networks with ideas and experiences being shared and discussed.”

Bell and Gilbert (1996, p. 57) discuss the consequences of constructivism for teacher development and conclude that:

“Social interaction - for example, in dialogues, accounting and narratives - promotes learning of socially constructed knowledge, personal construction of meaning, and the reconstruction of social knowledge.”

However, it is remarkable that, although the promotion of reflection is generally accepted as an important goal in teacher education, there is a lack of descriptions of techniques or activities that can be used in seminars in teacher education in order to promote reflection in groups of

student teachers. Most program descriptions (e.g. Feiman, 1979; Zeichner & Liston, 1987) are quite general, and provide no detailed information about activities encouraging prospective teachers to subject their teaching practice to a critical analysis (a positive exception is Harvard, 1994). However, just putting students together is not sufficient to promote learning from practice. As we saw in the previous chapters, the presentation of theory to groups of student teachers may not help either. So the question remains: what can be effective ways of promoting reflection in groups and of linking practice to theory?

The ALACT model could again be of help here, as it describes the ideal reflection process in terms of cycles consisting of five phases. However, the ALACT model does not yield a direct answer to the question what teacher educator interventions are helpful to promote the intended spiral development in student teachers within the context of group meetings. This question will be dealt with in this chapter, which is comparable to chapter 7 in its focus on teacher educator interventions. The difference is that the present chapter deals with promoting reflection in groups, whereas chapter 7 focused on promoting reflection in individual supervision.

In section 9.2, a five-step procedure will be described, which offers guidelines for working with groups of student teachers bringing in practical experiences. The procedure can for example be used in group seminars organized around teaching practice periods. Ideally, the student teachers come back to the institute after some experience, have a group meeting under the supervision of the teacher educator, go back to their practice schools, come back again, etcetera. Such an arrangement is called *a commuting model* (Van der Valk, Somers, Wubbels, & Korthagen, 1996). But even if there is little ‘commuting’, it may be important for teacher educators to be able to link teaching practice periods with theory. In 9.3 the five-step procedure described in 9.2, will be illustrated using the transcript of a real seminar.

After that, in 9.4, four concrete techniques for promoting reflection will be discussed, which can even be used in very large groups, say up to 200 people. In 9.5 research findings in using these techniques are reported. In 9.6 a logical next step will be discussed in making student teachers independent learners: through a structure of *peer supported learning* student teachers can learn to supervise each other. In 9.7 some conclusions will be drawn.

## **9.2. A five-step procedure**

We have developed a five-step procedure to structure learning by reflection in group seminars in teacher education (Hermans, Créton, & Korthagen, 1993). This five-step procedure may help teacher educators who wish to take their students’ experiences seriously and build theory on practice. The five-step procedure is a pedagogical structure, a method to promote learning. As such, it differs fundamentally from the ALACT model, which also has five phases, but which is a model describing the ideal learning process of a student teacher. The connection is that by applying the five-step procedure, teacher educators can stimulate student teachers to pass through the phases of the ALACT model.

1. In the first step of the five-step procedure student teachers get assignments *prestructuring* the experiences that they will have. These could be both experiences in class, at the institute or in teaching in a school. Ideally, these assignments are based on a concern or learning need of the student teachers. For example, they may be concerned about motivation problems with students at school. An assignment can then be to try and map the motivation of high school students from an interview with one or more of them. One could say that during this prestructuring step the student teachers receive ‘glasses’ to look through when at school.

It can be necessary to prepare the intended experiences by skills training on campus. If the student teachers lack experience with questioning other people on issues, they can practice conducting a seven minute interview with a fellow-student on what he or she wants to learn

from the seminar. The questioning techniques can then be reflected upon in the group and further training, let's say in using more open questions, can then be part of the prestructuring phase.

2. In step two, the student teachers go to a school to have *experiences*, in this example interviewing high school students. The crucial element in this step is that these experiences create more specific concerns and elicit *gestalts* (see 3.3) in the student teachers serving as the starting point for the next steps.
3. In the third step, the experiences are reported back by the student teachers so that the teacher educator, together with the student teachers, can *structure* the experiences and the elicited *gestalts* by clarification, classification and generalization. As we have seen before (see for example 4.5), structuring is an essential part of the reflection process. The students' reports can take the form of presentations in much detail with the help of video recordings, or it can be a more overall exchange within the group on the basis of questions of the teacher educator. The aim of structuring is to bring order into the 'chaos' of the different experiences that the students have had.

It is important for the teacher educator to realize that although 'motivation' and 'interviewing' were presented as points of attention, the student teachers' attention may be drawn by a completely different issue. For example, they may have started to become concerned with the behavior of high school students. The essence of the realistic approach is that the teacher educator then takes these concerns as the starting point for the structuring process. This implies that in such a situation the teacher educator must be willing to put aside the program he or she had prepared for the meeting. To put it a little less mildly: the induced experiences were not the most suitable ones to prepare for the intended program....

4. Fourthly, after (usually a wealth of) experiences have been structured, it is possible to *focus* on some aspects of these and the elicited *gestalts*, and analyze them in greater detail. It can be possible to focus on many different things such as commonly perceived learning needs of the student teachers (for example: how to create safety in an interview with a child?), essential aspects or generic features of the concept under study (for example: what kinds of motivation can be distinguished?), the *gestalts* embedded in the student teachers' reports on their experiences (for example *gestalts* about students of this age), the relation of these *gestalts* to the experiences (for example: how did the student teachers' *gestalts* about children of this age influence their questioning?), student teachers' strengths and weaknesses in relation to a particular competency (for example: how competent are you in being empathetic?), what they have learned, what their learning aims are for the next weeks, etcetera.

Careful application of the realistic approach requires that in choosing from all these options, the teacher educator tries to follow the concerns and *gestalts* put forward by the student teachers.

5. Already during step four, the teacher educator may not only label experiences or things student teachers have said on a more abstract level, but can also point to theoretical interpretations, connections between different categories and causal relationships. The presentation of theoretical concepts and principles is step five. It is important to emphasize that preferably the form of theory in this step is not as usually found in books (for example theory emphasizing descriptions of theoretical constructs and conceptual networks or research reports): the theoretical elements presented should still be directly connected to the student teachers' experiences or future plans. In terms of chapter 2, theory in step 5 takes the form of *phronesis* instead of *episteme*. Step 5 is called the step of *introducing theory with a small t*.

In order to offer the students more background, the teacher educator may of course also

add Theories (with capital T) from the literature in a more traditional form such as a chapter on motivation in a book on educational psychology (this is called *episteme* in chapter 2). The introduction can for example be in the form of a short lecture or a written presentation. If a standard text is used, it will usually be necessary to make explicit what the connection is between the theory and the experiences of the student teachers. Sometimes, however, it may even be better to stick to the theory with a small t, linked to the student teachers' own practical experiences, and skip the introduction of more formal scientific theories. Later, in chapter 10, we will analyze more thoroughly why it is often better not to include too much Theory with capital T in the fifth step. Chapter 10 will also provide us with guidelines for deciding about the degree of emphasis on Theory that is fruitful at a certain stage.

Then, of course, the cycle repeats itself and a new step of prestructuring can start. Often the steps 4 (focusing) and 5 (theory with a small t) almost automatically lead to step 1 (prestructuring): that which has been the focus today becomes the issue to be practiced in tomorrow's teaching experience.

For an overview of the five-step procedure, see figure 9.1.

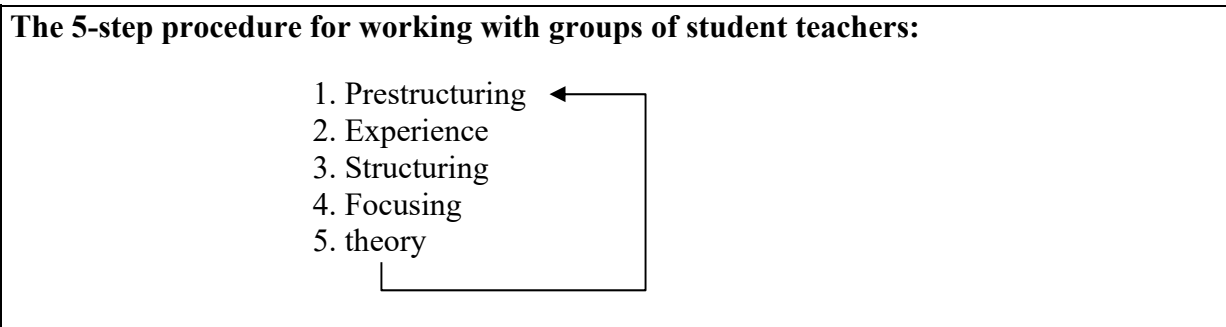


FIG. 9.1. Overview of the five-step procedure for working with groups of student teachers within a realistic approach.

### 9.3. An illustration of the five-step procedure

In this section the five-step procedure will be illustrated by means of an excerpt from a two-hour seminar given at the IVLOS Institute of Education at Utrecht University.<sup>1</sup> The participants were members of a so-called inservice group, consisting of student teachers who, after graduating in their subject matter studies, had a brief training of one week at IVLOS before they began teaching at a school for secondary education. Such teachers work roughly half the number of hours involved in a full-time appointment. Though unqualified, they teach independently from the start, and the cooperating teacher who is responsible for supervising their work is not present during their lessons. In addition, the student teachers spend two days a week at the institute. An institute day consists mainly in an exchange of experiences; various themes are covered, all of which are keyed to the questions and experiences of the student teachers. They indicate which particular subjects they are interested in, and theme sessions are then planned around the chosen topics. For example, one theme that was brought up after they had been teaching for about four months was the after-class talk with a student who had been 'troublesome' during a lesson. The student teachers indicated that they found such talks difficult. Concerns of this nature are quite common among beginning secondary school teachers, who are confronted with problems which affect the atmosphere in the class. Most of them are not yet able to prevent such problems from arising, and one of the instruments to improve the atmosphere in

the class is a private talk with individual students or small groups of students. If properly conducted, these talks can bring about a considerable improvement in the relationship between teacher and student. Because the distance between them is smaller, the teacher often finds the atmosphere less tense and confrontational than a discussion with a large group of students. Moreover, such talks can also be used for metacommunication, i.e., discussing the way teacher and students communicate with one another in the classroom; in this way they have proved helpful in altering undesirable patterns in the teacher-student relationship (Watzlawick, Beavin, & Jackson, 1967).

The greater part of the institute work which takes place within the framework of in-service teacher education is carried out by one regular teacher educator. He is responsible for those components in which the student teachers exchange experiences, arrive at solutions for their problems, acquire theoretical insights, formulate personal learning goals, and indicate their preferences for the form and content of the training provided by the institute, according to their own school experiences. If there is a specific subject which the regular teacher educator feels less qualified to discuss, he asks a guest teacher educator who specializes in that subject to deal with that component.

When the chosen topic was the after-class talk, a guest teacher was invited. After a brief personal introduction, this teacher educator began the seminar as follows:

Important phases in reflection consist in looking back and becoming aware of exactly what the difficulty is *for you*. Often this results in a highly personal answer. And I think that might be a good starting point for this meeting. I'd like each of you to consider just what the crux of the problem is when you think about these after-class talks. I'm not looking for general or abstract answers that are valid for everyone. I want to know how you feel yourself. A good exercise in reflection is to try to see how concisely you can formulate the answer. Give me just one sentence that says 'That's it! That's the problem for me.' You may not be able to do that yet, but perhaps you could give me some idea of the area that's giving you trouble. Something like 'When I think about these talks, this or that problem or difficulty comes to mind' or, conversely, you think of aspects that you enjoy. I'd like to ask you to concentrate for a minute and then write down, in one sentence, 'What comes to mind when I think about after-class talks.'

This is Step 1, *prestructuring*: the attention of the student teachers is directed towards what is to come and they are stimulated to select a focus for themselves within the theme of 'after-class talks'. In this particular case, the assignment led to a brief round of exchanges, which included such concerns as how to motivate students, how to deal with resistance, how to reduce the distance between teacher and students, how to resolve a conflict with a student, how to learn to put your problems into perspective, and the question of how seriously to take a student.

Then two sessions of role-playing were staged, on the basis of role descriptions (Step 2: *experience*). One of the student teachers played the teacher, the other a student. These sessions, which lasted 5-10 minutes, were conducted according to specific role descriptions, formulated in such a way that certain conflicts and breakdowns in communication were bound to occur.

Below the role descriptions provided before the first talk are summarized. The other student teachers were asked to observe the role-playing while keeping in mind their own particular problem or focus (formulated in step 1).

#### **The role-playing instructions**

The instructions for the first talk state that the student in question is in grade 9. The student's school performance is erratic, only just sufficient for a passing grade in the student teacher's subject, a tendency which is also seen in other subjects. According to the teacher, the student is capable of much better work, and the colleague teachers confirm that with a bit more effort, he could probably reach a high level. In class today, the student was not

paying attention and was continually fooling with a pocket calculator. The decision to ask the student to remain after class was triggered by the following incident. It was clear that the student had not done his homework. Moreover, he was constantly talking to his neighbors next to him and behind him. When asked about a point that had just been explained, the student was unable to answer the - very simple - question. It was at this point that the teacher asked him to stay after class for a talk (during the lunch break).

The descriptions of the role of the teacher and the role of the student depict the same situation from two different viewpoints. In that of the student, there is a good reason for not having done the homework, while the student also finds this teacher's lessons extremely dull. The role description of the teacher emphasizes that this student has the capacity to do much better work, but displays extremely irritating behavior.

The role-playing is discussed according to a fixed pattern (Step 3: *structuring*). First the student teacher who played the role of the teacher talks about his experiences during the role-playing, with special reference to his own problem issue. Then the other student teachers contribute their own observations, and the person who played the student says how he felt about the experience.<sup>2</sup>

We are now going to take a closer look at the discussion of the first role-playing session, because it provides an illustration of steps 3, 4 and 5 of the five-step procedure. In this session (step 2: *experience*), the teacher's role was played by a student teacher named Brigit, who had formulated her problem point as follows:

"I've had a couple of talks where the student just says what he thinks you want him to say. He's polite and agrees with you, so he can get out of there as fast as possible. I keep wondering what's going on in his head. Have I really accomplished anything? How can you tell?"

She says that she experienced the role play in which she played the teacher and another student teacher the student as very true to life, because it illustrated her own problem. Several excerpts from the follow-up discussion are given below.

Teacher educator: "Okay, Brigit, what did you think of it?"

Brigit: "I have a feeling that there's a barrier that I'm trying to overcome by getting him to calm down, to begin with, just to sit down. I said something like: Concentrate on me, and try to understand that I really want to talk to you. But it was difficult because he actually had a good argument: he's not actually failing the subject. I wanted to say something about his attitude in the classroom, the fact that he's always looking around and that he distracts the others."

Teach.ed.: "So in the first place you were trying to calm him down?"

Brigit: "Well, I wanted to start by making it clear that there's a problem, not only during this lesson, but all the time. I want to tell him that I think he is smart enough for the assignments, but that I don't understand why once in a while he doesn't do it."

Teach.ed.: "Do you feel that your strategy has been successful up to now?"

Brigit: "Not really. I don't feel as if I've gotten through to him. It could take me the whole break. ... No, somehow or other I've got to find a way to get my point across. Maybe I should just ask him point blank: What do you think of the subject I teach, what is it like for you sitting in my class, how does it make you feel?"

Teach.ed.: "There's something you said that I think is really important: I can't get through to him." [And he draws an arrow on the blackboard from teacher to student.]

Brigit: "I can't even make a dent."

Teach.ed.: "You can't make a dent. There is an interesting rule about making a dent. It says that the harder you try, the less you succeed."

Brigit: "Yes."

Astrid: "There also an old saying about catching more flies with honey than with vinegar, or something like that."

Teach.ed.: "Oh, yes, that's pretty much the same thing, isn't it? Okay, so the harder you try to catch your fly with vinegar ... the harder you try to get through to him, the more difficult it becomes. [The teacher educator writes all this down on the blackboard.] How can you tell that it's getting more difficult?"

Brigit: "You mean a certain stage when he begins to disconnect? I can't get him to stay seated, I can't get him calmed down. And he doesn't take me seriously."

...

Teach.ed: “Astrid concentrated on the issue of resistance and reducing the distance between her and the student. I have an idea that that could have a lot to do with what we're talking about here.”

Astrid: “Yes, I definitely saw an attempt, even non-verbally. She really tried to sort of reach out to him, across the table. And he kept moving further and further away from the table. ... You let him eat his sandwiches. That was a good idea. You were trying to let him know that you understood that he was much more interested in the lunch break than in a talk with you.”

Teach.ed: “Yes, I'd like to look at that point, because it's important: showing people that you understand their problem, what concerns them. [The teacher educator writes on the blackboard: 'let the other see that you understand his problem']. ... This probably isn't the first time that you've talked about this, since I know that your group has already had quite a bit of discussion technique when discussing peer supported learning: trying to empathize with the other person, put into words what the other is thinking and feeling. That's what we mean by discussion technique, isn't it?”

Group: “Yes.”

Astrid: “Letting the other person know that you've been listening.”

Teach.ed: “Letting the other person know that you've been listening. [The teacher educator writes this on the blackboard.] Of course, you can do that literally, but sometimes you can do it by 'listening between the lines', so to speak, or trying to see what's on his mind. Putting that into words is one way of reaching someone, because then the other person feels that you understand him. That's exactly the opposite of using *your* message to try to get through to someone. Here, you're trying to pick up the message the other person is sending and using it to make contact ...”

What the teacher educator is doing is, first of all, making use of the principle of tuning in on the concerns and gestalts of the student teachers. In his own words (recorded after the meeting):

“I didn't know the group, so I considered it even more important to use an inductive approach: let the group make the first move, and then introduce a few elements of theory, trying to find the spot where the energy is. And what I was really interested in was discovering their concerns, experiencing them. Finding out what was going through their minds when they thought about the subject, what they saw as the problem? That helps me to understand their language and use that as a starting point. That's why I almost always start with a reflection assignment: think about a recent example of the kind of talk we're focusing on here and formulate what you see as the problem. I remember that I also tried to make the link back to a previous occasion, when a student teacher gave a lesson on reflection, but that resulted in a few glassy-eyed looks.”

It will be clear from this explanation why the teacher educator began the meeting as he did. He was trying to find out what was in the minds of the student teachers by asking them what the crux of the problem was for them personally, so that he could key his remarks to their individual concerns. During the introduction he immediately tries out various approaches in an effort to discover the concerns of the student teachers and how they cope with those concerns. He refers back to a shared experience (discussion on reflection in which the phases of the ALACT model had been presented), and asks them to indicate their own problems in the area, and then to make them more concrete ('For me, the core of the problem is ...'). This produced a statement for each student teacher, which he then translated into an observation assignment for the role-playing sessions. In this way he ensured that all the individual concerns of the student teachers were addressed during the discussion. This is an example of how step 1 (*prestructuring*) can prepare the way for step 3 (*structuring*). The teacher educator used the concerns of the student teachers as a point of departure for the final component of the meeting, the exercises based on individual concerns. Somewhat to his disappointment, his effort to create a link with an earlier lesson on reflection made it clear that the student teachers did not have any real sense of involvement with the theme of reflection. As a result, he felt that it would not be fruitful to explore that relationship any further. Here it is important to note that he did not attempt to force the discussion in a direction where the interest and energy of the student teachers apparently did not lie.

During the summing-up round, Brigit had formulated her problem with one of her students as

follows: “I keep wondering what's going on in his head. Have I really accomplished anything? How can you tell?” Now we see the teacher educator using various ways of connecting up with what is bothering Brigit and how she feels about the problem. First he lets Brigit describe how the talk with her student went. While she is talking, he backtracks to make sure he understands what she was trying to do (“So in the first place you were trying to calm him down?”), and then asks her whether her strategy was successful (“Do you feel that your strategy has been successful up to now?”). At that point Brigit comes up with a more precise description: “I don't feel as if I've gotten through to him”. As a kind of check, the teacher educator writes the sentence on the blackboard, and Brigit responds with “I can't get through to him.” Here we see step 4: *focusing*.

The teacher then tries to formulate a general rule: the harder you try, the less successful you are. This is step 5: *theory with a small t*. In his own reflection on the course of this group meeting, he later indicated that during the preparation for this meeting he had planned on introducing communication rules. One such rule emphasizes the importance of 'less of the same during an escalation' (Watzlawick, Weakland, & Fisch, 1974). The teacher educator gives an example of a related rule, which says that more of the same has no effect, and may even be counterproductive. In any case, it does nothing to help you accomplish what you are trying to do. It would be better to try less of the same, or even something totally different.

Brigit's statement that she “can't get through to him” bears a close resemblance to what Astrid said during the summing-up round: “I want to break down his resistance, and reduce the distance between teacher and student.” Then we see how the teacher educator tries to connect with Astrid's gestalts by relating Brigit's experience and observations to those of Astrid. He then turns to the group as a whole and, as he formulates the rule, he goes back to related experiences in the past where the rules also played a role.

In this way the teacher educator recommends these rules to the student teachers, making use of their experiences in the role-playing session, and the gestalts which this calls up. The most important skills which he uses here are addressing both the group and the individual, listening, asking questions and getting them to make their remarks more concrete, and then checking back to make sure he has correctly understood them. In the first place he is trying to be receptive to what is occupying the student teachers. Through his approach and his relationship to the student teachers, he models, as it were, the attitude and the skills which forms the central theme of this meeting devoted to after-school talks with students as a means of improving the teacher-student relationship.

In view of Astrid's reaction, the teacher educator felt that it might be helpful to examine her concern. She came up with a formulation of the rule which says more or less the same thing. Apparently Brigit does not take the teacher educator's suggestion any further, falling back on her original version. It is possible that her main concern is slightly different. This illustrates how difficult it can be to find precisely the right approach for each individual student teacher, and help him or her a step further.

The teacher educator is more successful in finding the right approach when he introduces the second principle ('show that you understand the other person's problem'), and tries to create a link with a topic that has probably been dealt with earlier in the course. To that end, he has the student teachers formulate how they talk about empathy, and then writes down their exact words. But he also adds something to what they already know: he links this term to a new experience which was part of the role-playing. This term was probably known to the student teachers only in the context of peer supported learning (a regular component of the teacher education program, see 9.6). Now it is made applicable to the after-school talks with students. Now the secret of linking up with the concerns and gestalts of the students is to go just a bit further than where they are, and then to get them to move forward along with you. During the



introduction of the first rule, the teacher educator probably succeeded in getting Astrid to move forward, but he may have lost Brigit. When the second rule was introduced, the transcript does not indicate whether he succeeded in getting the student teachers to move forward.

In any case the teacher educator tried to optimize the link between himself and the student teachers by deliberately refraining from presenting them with a Theory with capital T. Instead, he gave them phronesis (theory with a small t): simple concrete principles that are very close to their own experience and help them to perceive the situation in such a way that it helps them to decide how to act. Using everyday words (show that you understand the other person, let the other person know that you heard what he said, etc.), he tried to get across to them the theoretical notions 'acceptance' and 'empathy'. This is in line the guideline formulated by McIntyre and Hagger (1992, p. 272):

“.. teachers’ professional development must stem not only from their own energy and motivation but also from their own understandings of their existing practices.”

It is characteristic of the realistic approach used in this example that while the teacher educator had prepared a number of theoretical notions, he made limited use of them. In effect he used only those concepts which coincided with the reflections of the student teachers on their experiences. We also saw that at times he adapted or revised those notions to fit in with the gestalts of the student teachers. The fact that the teacher educator decided not put forward a number of theoretical principles, because they did not appear to be appropriate at that particular moment, is an essential component of his strategy. For example, he chose not to discuss the concept of the self-image of the student (a topic he prepared), on the grounds that the student teachers were apparently more concerned about their own 'survival' and their own behavior than about improving the self-image of their students. It is a logical consequence of the above that the teacher educator must accept that he will not always be able to make use of all his 'beautiful theories'. There may be a temptation to quickly reel off yet another rule on the basis of a superficial link with the experience under discussion. In most cases, this is a waste of energy.

A disadvantage of this method is that it may be some time before certain theories are dealt with. The guiding principle is that it is useless to discuss a theoretical point unless there are experiences which give rise to concerns and gestalts to which it can fruitfully be linked. At the same time, by helping to create the appropriate experiences, the teacher educator can steer the concerns put forward by the student teachers. The training component dealt with here is a case in point: the role-playing was prestructured (by means of the role descriptions given by the teacher educator) in such a way that themes like getting your message across, resistance, empathy, etc. were likely to be put forward.

Thus far the illustration of the five-step procedure. The description of the concrete group meeting shows how the basic principles of the realistic approach are applied:

1. The teacher educator helps the student teachers to become aware of their learning needs.
2. He creates useful experiences in the here-and-now.
3. He helps the student teachers to reflect on these experiences in detail.

These were the three central principles introduced in chapter 5. The third principle is important, as it helps the student teachers to *perceive* more in practical situations, which is considered more important than knowing more about such situations. In fact, the idea is that the development of conceptual knowledge (*episteme*, or Theory with capital T) follows the development of more detailed perceptual knowledge (*phronesis*, to be improved by theory with a small t). In other words, learning about teaching should, in my view, start with becoming aware of one's gestalts, by reflecting on these gestalts in detail, before the step

towards concepts and relationships between concepts is made. (This is a central theme in the next chapter).

In the reflection process, the reader can recognize the phases of the ALACT model: after looking back on the situation (phase 2), some essential aspects are formulated (phase 3), and alternative methods of action are put forward (phase 4). The phase of trial (phase 5) will not only take place when the student teachers have their next real after-class talk: in the second part of the group meeting, the teacher educator created brief roleplays in which each student teacher got an opportunity to practice.

The example also shows the importance of the group setting. First, it makes roleplaying possible, and thus concrete experiences in the here-and-now. Second, it stimulates discussion about these experiences, an important ingredient of promoting reflection.

#### **9.4. Four concrete techniques**

There are other, more specific techniques that also help to stimulate reflection in groups. Four of these will now be introduced.

The idea behind these techniques is that prospective teachers often enter a preparation program with gestalts that need to be restructured to be able to adopt new educational theories. Let us take as an example a student teacher who regards teaching as 'telling facts to students', perhaps because of her own experience as a student at school, or perhaps because other ways of viewing teaching would make her uncertain and afraid of losing control of the class. The educational literature emphasizes other views of teaching, based on the important role of learner activities and the promotion of understanding of relationships within the subject matter. How could a teacher educator, within the context of a group seminar, promote the restructuring of the student teacher's gestalt of teaching and promote the internalization of empirically based educational theory? It will be clear that this is no simple task confronting teacher education, as people's mental structures generally resist change (Turk & Speers, 1983), even when confronted with incompatible information (Fiske & Taylor, 1984, p. 171).

The basic assumption underlying the techniques described below is that the effectiveness of the process of trying to (re)structure one's experiences (the process named reflection) will be determined by the degree to which the relationships within one's gestalts are considered. As already announced at the end of 9.3, this assumption will be more theoretically elaborated in the next chapter. In the example of the student teacher who considers teaching as 'transmission', she could for example try to formulate the relationship between her teaching activities and the cognitive and affective processes in the student. I believe that without such reflections by student teachers, educational theories taught in teacher education programs have little chance of becoming guidelines for student teacher behavior in the classroom.

Thus, each of the four techniques is based on the idea of encouraging student teachers to analyze relationships, either within their gestalts of teaching and learning or between their gestalts and their actual behavior.

##### *The wall<sup>3</sup>*

This technique aims at formulating the relationships between different educational goals or values, which often remain implicit if the student teachers' gestalts are not reflected on.

Each student teacher in the group receives a number of paper 'bricks' with statements about educational goals or values. Some of the bricks are blank and have to be filled in by the prospective teacher. The assignment is to build your own 'teaching wall'; placing the bricks with the most important principles at the bottom, and the others on top (figure 9.2). The wall is glued onto a piece of paper. The student teacher can also draw a 'waste-paper basket' in which useless bricks are deposited.

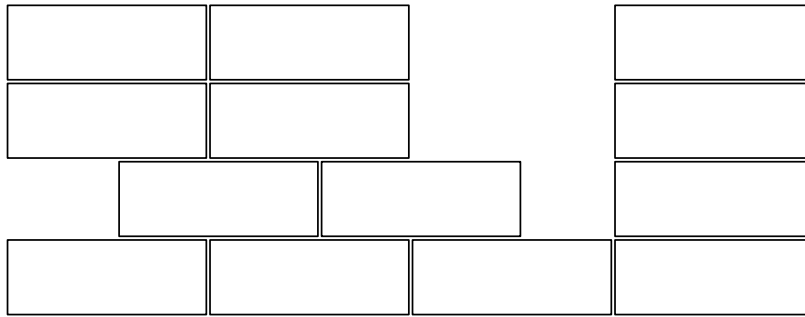


FIG. 9.2. A wall.

This is the first step in a process of reflection on one's goals and guiding principles in teaching. A comparison of the various walls constructed by the members of the group stimulates the student teachers to give voice to their own views, but also to reflect critically on those views.

As some of the bricks are filled in beforehand, the teacher educator is able to channel the discussion towards topics that he or she thinks are important and that reflect educational theory. For example, as in the IVLOS program considerable significance is attached to process goals in education, often bricks are used with such statements as "students should learn to reflect on their work", "it is important for children to become self-confident", but also "I want to prepare the students for their examinations" and "students should listen to me". Other examples of bricks are:

- it must be quiet in the classroom;
- the students should see relationships between subject matter and everyday life;
- the students should develop a critical attitude towards social issues;
- students should be given a sense of the 'beauty' of the subject matter.

It is helpful to use one or two subject-specific bricks, especially bricks containing a basic goal, conditional on other subject-specific goals. In the field of mathematics, for instance, this could be 'learning to solve quadratic equations'. Such subject-specific bricks help to integrate general pedagogical thinking and subject-specific views.

### *Columns*

This technique is designed to promote reflection on the relationships between educational goals and actual teaching behavior.

Each student teacher chooses one class he or she often teaches in. Where possible, these classes of the student teachers should preferably be on the same grade level, or being taught similar subject matter. Four columns are drawn on a large sheet of paper (figure 9.3). In the first column, the student teacher enters a general goal he or she thinks is important in education. This goal can be selected from the 'wall'. In the second column, the student teacher writes a specific goal for the next series of lessons in that class, derived from the general goal in the first column. In the third column, the student teacher puts down a further specification of the goal to be achieved in the next lesson. The fourth and last column is filled in after the lesson. A particular piece of interaction is entered - say, from an audio recording of the lesson - which shows how the student teacher went about achieving the goal. It is emphasized that this last column should show evidence that the students really achieved the goal described in the third column.

Back on campus, the student teachers show to each other their columns, discuss them and prepare the columns for the next lesson, which are written below the previous ones. This often results in changes in the third, second or even the first column: the realization that there may be a

conflict between one's goals and one's actual teaching can lead student teachers to alter their view on education or their own role in the teaching-learning process. The teacher educator or fellow students in the group can be helpful in finding ways to overcome obstacles which prevent the student teacher from achieving the formulated goal. This often requires a careful formulation of long-term and short-term strategies.

The whole process towards which this activity is directed, is illustrated by the successive rows referring to the various lessons. I often ask the student teachers to write down their rows and columns on a large sheet of paper, which makes it easier to present their 'story' to their fellow students. These fellow students are then stimulated to ask 'why-questions' over and over again, thus forcing the person telling the 'story' to make his ideas as explicit as possible.

| general educational goal | goal for the series of lessons in class ... | specific goal for lesson # <i>n</i> | particular episode from lesson # <i>n</i> |
|--------------------------|---|-------------------------------------|---|
|                          |   |                                     |   |

FIG. 9.3. The columns.

### *The repertory grid*

This technique involves relationships between teacher behavior and student characteristics, as perceived by the student teacher. The activity is based on Kelly's (1955) technique for inquiring into the constructs people use when dealing with their environment.

Repeatedly, each student teacher receives three cards, each containing the name of one high school student (figure 9.4). These students are all in the same class, well-known to the student teacher. Without thinking about it too long, the student teacher must choose one of the three students whom he or she thinks is different from the other two. Next, the teacher must formulate the characteristic, or construct describing the difference. In this way, a list of personal constructs is generated. The repertory grid technique helps teachers to discover the ways in which their behavior is shaped by subjective perceptions of high school students.

For this activity, it is advisable to divide the group of student teachers into pairs. One shuffles the cards and offers three of them to the other student teacher. The first student teacher also writes down the construct mentioned by his fellow student. Then the cards are shuffled once again, etcetera. When a list of about 10 constructs has been drawn up, the two student teachers change roles.



FIG. 9.4. Three cards in the repertory grid procedure.

It may promote the reflection process to realize that all the characteristics are at one pole of a dichotomy, which is why I also ask the student teachers to name the opposite of each characteristic on their list. It is important that the student teachers formulate the characteristics and their opposites in their own words, because the strength of the method is in the fact that these self-chosen terms have a particular significance to the individual.<sup>4</sup>

In order to reflect on the relationships between the student teachers' lists of constructs and their teaching behavior, they are asked to explain how they think their reactions to students with the various characteristics differ. This question becomes especially interesting when they start to compare their reactions to students with opposite characteristics, which can lead to critical reflection on their behavior and the underlying teaching strategies. An example is given in section 9.5, where some results are described that I found with the techniques.

### *Arrows*

This technique focuses on relationships between goals, student characteristics as perceived by the student teacher, and teaching strategies. The activity 'arrows' may be seen as an integration of the wall and the repertory grid and should be introduced after these techniques, as it can then build on the previous results.

For this exercise, paper cards and arrows are used. A particular student characteristic, say, 'dependent' is taken together with an educational goal which one finds important, such as 'seeing relationships between the subject matter and everyday life'. Both are written down on separate cards. Then a paper arrow is placed between the two cards and the student teacher has to fill in the strategy he or she would use in order to attain that goal in the case of a student with that specific characteristic (figure 9.5).

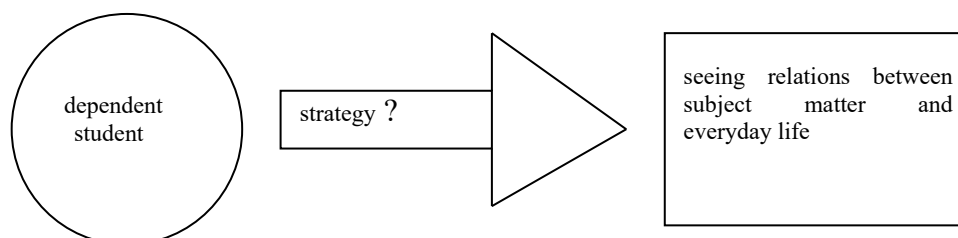


FIG. 9.5. Working with the "arrows" technique.

The same question can also be asked with respect to the opposite characteristic, for example: how do you work towards the goal of seeing relationships between subject matter and everyday life with an 'independent' student? This procedure is repeated several times, using various other goals and student characteristics. Group discussions on the strategies formulated will, of course, promote further reflection. The student teachers are then challenged to discover the teaching strategies of their fellow students by asking questions about the how and why of the strategies written on the arrows and questions about the advantages of the strategies when compared with alternatives. This is, in fact, the most important part of the technique, as it often leads to the restructuring of the student teachers' strategies or their gestalts about high school students, about student learning or about teaching.

### **9.5. A study of the effects of the four techniques**

The techniques described above were gradually developed over a period of several years, in which they were used in many groups of student teachers, as well as in professional training

groups of teacher educators. I decided to investigate these techniques more thoroughly in a group of student teachers in a teacher education program at a Dutch university. The group consisted of 18 student teachers of a variety of subjects, such as economics, biology, mathematics and history (but excluding languages). I studied the results of the techniques, and examined in depth the accompanying learning processes in a smaller sample of five student teachers. This smaller sample was chosen not because it was representative, but rather for practical reasons: it included two mathematics and three biology students, who had been supervised and taught as a group throughout a large part of the program. Although there is no reason to assume that these student teachers were not individually representative, I must point out that this group was characterized by an atmosphere of safety and mutual concern, which was undoubtedly beneficial to the work involving the techniques. As the effects of these techniques will invariably depend on factors such as these, and on the individual teacher educator using the techniques, the goal was not to *prove* that the techniques work or show how impressive the results were, but to investigate *how* they work and whether they are *capable* of changing mental structures, in particular with regard to the four relationships formulated above.

The 'wall' technique was used in the group of 18 student teachers right at the start of their teacher preparation program, which is a one-year program, following on a four-year subject-oriented university curriculum. The 'wall' was repeated in the smaller group of five student teachers after six months, about 400 hours of study on campus and 400 hours of field experience. The students themselves had by then taught for about 80 hours in secondary school classes.

The 'columns' technique was used in the first and second month of the program, during the first field experience of the small sample of five student teachers, which was a one-to-one teaching experience: for six weeks each student teacher worked with one high school student for one hour a week, and reflected on these lessons with the aid of audio recordings of the sessions. The audio recordings resulted in verbatim transcripts of small episodes from the lessons in the fourth column. The student teachers' learning processes during this stage of the program were assessed with the aid of interviews and group discussions. Like the 'wall', the 'columns' assignment was repeated after six months, when the Individual Final Teaching Practice period started, in which the student teachers work as regular teachers of two secondary school classes, i.e. without the cooperating teachers or fellow students being present and with full responsibility for such matters as grades, parental contact, etcetera. For purposes of the 'columns' assignment, the student teachers had to choose one of these two classes.

At this stage, the 'repertory grid' and 'arrows' were introduced, in both the larger and the smaller group of student teachers. Interviews and group discussions were used to assess the learning processes induced by these techniques.

The four techniques were also evaluated by means of a questionnaire using open questions, asking for cognitive and affective learning outcomes and for criticism.

I will now present the results of this study.

### *The wall*

In working with the 'wall', the student teachers were found to have no difficulty in choosing those bricks matching their views on education, and discarding the others. Arranging the bricks to form a wall was more difficult. It led to considerable reflection, since one cannot place one brick on top of another without manifesting certain ideas about relationships between the various goals and values. When asked about the reasons behind their choices, the student teachers clarified their teaching strategies in a more explicit way, using sentences like: "in order to reach goal X you need principle Y, and it is only later on that you reach Z, which I think will more or less solve itself". The arrangement of the bricks, together with such statements, often showed that there was one central underlying principle guiding the student teachers. In the small sample the five student teachers formulated these principles as follows:

- education should be directed towards promoting processes in students rather than towards products;
- it all boils down to a good atmosphere in the classroom;
- first of all, you have to be able to make the subject matter clear to students;
- there should be a proper balance between the demands made on the students and good teacher-student relationships;
- there must be a clear understanding about rules and discipline.

At the very beginning of the preparation program there were obviously more differences than similarities between the walls and the views on education expressed by the different student teachers. This supports the assumption that student teachers enter the program with quite different gestalts about teaching and learning.

An important discovery (not least for the student teachers themselves!) was that the guiding principles behind the students' walls were essentially the same the second time they made their walls, i.e. six months later. This is noteworthy, because in the meantime these student teachers had gained quite a bit of teaching experience; as explained, they had taught secondary school classes for about 80 hours and all of them had been allowed by their schools to take responsibility for two classes, which means that they were thought to have acquired the necessary basic competence as teachers. In addition to their field experiences, they had also had about 400 hours of study on campus, in which emphasis was put on the relationship between educational theory and practice, including much discussion about the way several educational goals might be translated into practice. This finding is in line with conclusions from other research about the stability of student teachers' conceptions about teaching and learning (compare Calderhead & Robson, 1991).

The questionnaire showed that the student teachers' assessment of the 'wall' was favorable. Typical answers to the question "What did you get out of it?" were: "I learned a lot from thinking about which things should take priority", and "It was an incentive and a help, and made it easier for me to think about my views on teaching".

### *Columns*

The most obvious result of the 'columns' activity was that it made the student teachers look at their teaching goals and behavior more closely and more critically.

This revealed things that had been implicit before. To take an example, the questionnaire produced statements, like:

- It is surprising to see that sometimes you choose goals that are unrealistic. When it becomes clear from the last column that you aren't going to reach your goal, you can choose a more realistic one.
- When your goal is not achieved, you start to make concrete plans to try to do better in the next lesson.
- It gives me a means for monitoring my progress.

The student teachers' columns showed that the technique had helped them to differentiate between general goals and sub-goals. A common observation made by the student teachers was that they had discovered that stating a goal is one thing, but that a lot of thinking, planning and careful evaluation is needed in order to realize it. Moreover, they were confronted with the fact that realizing a goal involves more than just a few comments during a lesson.

I had the impression that use of the 'columns'-technique after the 'wall' elicited more critical reflection on the student teachers' goals than the 'wall' by itself. The 'columns' confront student teachers with the question why they do what they do and why other actions are *not* taken, although one might expect these actions on the basis of the student teachers' goals. Here is an example.

One student teacher observed that what he was doing in the classroom did not really match his own goals, but that he

was influenced far more by the need "to teach as other people think you ought to teach". This discovery made him look more critically at his cooperating teacher, whom he had originally admired somewhat uncritically. It helped him to go his own way. The student was so pleased with the 'columns' technique that he kept making his columns throughout the whole year of teacher preparation. Each weekend he evaluated his week of teaching, and adjusted the first three columns on the basis of the concrete classroom experiences which appeared in the fourth column. He reported that it helped him to find his own teaching style.

This is an example of the qualitative and quantitative changes in the relationships in the student teachers' mental structures that seemed to take place, changes that I saw in almost all of the student teachers that were involved. Gestalts, which beforehand unconsciously directed their behavior, became conscious and in that way could be critically examined and sometimes changed. I observed that the 'why-questions' from their peers were very influential in promoting processes of reframing. As mentioned above, more research is necessary in order to find more evidence of this observation. In such research pre- and post-tests seem to be necessary, but the question is how one could administer a pretest without already inducing reflection.

### *The repertory grid*

When this technique was used in the small group, it produced a great deal of joking and giggling, although the student teachers went about their task very seriously. It appears that the technique confronts student teachers with their own conceptions of students, and with the often quite idiosyncratic constructs they use. This may cause them to feel somewhat ashamed. The students had only a few constructs in common, such as 'clever', 'interested', 'diligent' and 'lively'. Some rather personal constructs were mentioned, such as 'crazy', 'plays the marimba' and 'uses her looks'.

The formulation of the constructs helped the student teachers to become aware of their subjective view of high school students and their preferences with regard to young people in general. The discussion about the ways in which the student teachers react to students with different characteristics was especially interesting when the interactions with high school students with opposite characteristics were compared. This helped the prospective teachers to reflect on the question of whether their behavior was adequate. This may be illustrated by the following example.

One student teacher formulated the construct 'interested-uninterested', and reported that she kept looking for stimulating examples and activities for the uninterested students. However, she did not make the same effort in the case of interested students: "I just start the ball rolling and expect them to take it from there". Reflection on these two different types of teaching behavior made her see that there was a danger that the uninterested students might become more and more dependent on the teacher's inspiration. The interested ones on the other hand, could become less motivated because of the lack of stimulating and challenging activities. This discovery created a moment of confusion, in which the adequacy of her strategy was being questioned by the student teacher herself.

Such a situation, when the status of existing ideas theory is lowered, is an ideal starting point for a discussion of principles from theories on motivation. I believe that this kind of theory is more likely to become part of the student teacher's mental structures after this type of analysis of her own teaching behavior, than without such reflection.

### *Arrows*

It seemed that in many cases the 'arrows' activity was the first time the student teachers had ever thought in a critical and analytic manner about the relationship between individual student characteristics, educational goals and their own teaching behavior. Such probing into the reasons for their behavior, makes explicit gestalts and teaching strategies which student teachers seemed never to have reflected on before. This may be inferred, for example, from the observation that the student teachers often had difficulty in formulating their teaching strategies in the case of one



certain type of high school student and one basic goal from their 'wall'. As one student teacher put it: "I discovered that I am so pre-occupied with trying to come across well, that everything else sort of gets forgotten." For others, the 'arrows' activity helped them to differentiate between their strategies for different students. Although I have no clear evidence to this effect, I had the distinct feeling that before this activity they saw the class more or less as an entity, with very little differentiation with regard to goals and teaching strategies. The 'arrows' technique can also deepen the student teachers' strategies. One example of this is the case of a student teacher who formulated his 'arrow' between the student characteristic 'rude' and the goal 'learning to interact with other students in a respectful manner'. He was already using the strategy of giving the class feedback about the way he perceived the students' conduct in concrete situations, but while formulating this strategy, the student teacher became aware of the fact that he should do this in a more respectful (less rude) way.....

Group discussion about the arrows resulted in a collaborative search for solutions to special situations, in learning from each others' strategies and, last but not least, in doubts about one's own strategies and the gestalts behind them. As said, such doubts can be important starting points for the next step in a learning process, a step in which the student teacher feels a natural need for educational theory. My own strategy, then, was to offer this in the form of theory with a small t, in close relation to the special situations with which the student teachers had to deal.

#### **9.6. Groups reflecting on their own**

Techniques such as the 'wall', the 'repgrid', 'arrows' and 'columns' have the advantage of strongly promoting reflection, and at the same time diminishing the amount of time and attention needed from the teacher educator. This shows that the promotion of reflective learning from real experiences need not always be a time-consuming enterprise, something which is important because many teacher educators, especially in North-America, have to work with large cohort groups in which close personal supervision of student teachers is not always feasible.

A logical next step is that student teachers learn to promote each other's reflections, so that the teacher educator's presence is not needed. To this purpose, two of my colleagues, Anke Tigchelaar and Ko Melief have developed a structure named *peer supported learning* (Tigchelaar & Melief, 2000). It is now used by almost the entire staff of the IVLOS teacher education program, with very positive results. As McIntyre and Hagger (1992, p. 276) state:

"Collegiality has been demonstrated to be a critical factor in helping individual teachers to develop their classroom practice."

Within the setting of a whole cohort group, the student teachers are trained in using the ALACT model, not only for structuring their own reflection, but also to help each other reflect. This means that they learn how to use many of the supervision skills described in chapter 7. <sup>5</sup> In small groups of about three, they practice these skills, and during teaching practice periods these groups of three meet on a regular basis for peer supported learning. Each small group is required to write brief reports on their meetings, in which they both evaluate the process of peer supported learning, and describe the content discussed in their small group. In the reports, they can also put forward issues on which they wish to receive further support from the teacher educator. Every two weeks, there are meetings of the whole cohort group facilitated by the teacher educator. These group meetings are partly devoted to further training in supervision skills, in order to support and further develop the processes of peer supported learning. In addition, on the basis of the problems and concerns that formed the content of the supervision sessions in the small groups, themes and issues are discussed in the whole group. This is where the teacher educator again takes the role of supporting the professional development of the student teachers, other than through developing their competency to support each other. The teacher educator can

introduce new content, based on the issues raised in the reports of the small groups.

Through this structure, a balanced sharing of the responsibility for professional learning is created between the teacher educator and the student teachers. The structure has many advantages. First, it further strengthens the capacity of student teachers to take responsibility for their own learning. An important aim behind the structure is also that it prepares them for peer supported learning during the rest of their careers, thus creating a counterbalance to what Feiman-Nemser and Floden (1986) call the highly individualistic and non-collaborative culture of teaching. As Putnam and Borko (1997, p. 1247) state:

“Just as students need to learn new ways of reasoning, communicating, and thinking, and to acquire dispositions of inquiry and sense-making through their participation in classroom discourse communities, teachers need to construct their complex new roles and ways of thinking about their teaching practice within the context of supportive learning communities.”

The process of learning how to support each other's reflection also promotes the students' insight into the ALACT model and thus their individual competency for reflection. Another advantage is the fact that, after an initial investment, the structure saves time for the teacher educator. Fellow-students can become valuable supervisors, thus taking over part of the role of the teacher educator (compare Little, 1982, and Hawkey, 1995). Moreover, through the reports of the small groups, the teacher educator receives concrete information about the learning processes going on and the concerns and problems that surface with the student teachers. This helps the teacher educator in choosing the topics to be dealt with in the group meetings and increases chances that these topics will be experienced as relevant by the student teachers. Finally, many of the supervision skills the student teachers acquire during their preparation for peer supported learning, are just as important in their guidance of their own students in school.

A development of the last couple of years is the use of a *listserv* to enable the student teachers to communicate by email during their teaching practice periods (Admiraal, Lockhorst, Wubbels, Korthagen, & Veen, 1998). Especially in cases where the student teachers do their teaching practice in schools far removed from each other (which is often the case during the Individual Final Teaching Practice period, see 3.2), this is an excellent means to create possibilities for exchange. Moreover, the teacher educator can easily monitor the email conversations, and, if needed, react to them, either with the purpose of improving the process of peer supported learning, or for supporting student teachers clearly in need of specific help. A study into the effects of this form of *teleguidance* in the IVLOS teacher education program, has shown that student teachers very much appreciate the opportunity to share experiences by email, but that their reactions to each other are often quite brief and remain stuck at a level of emotional support. In order to have them deepen their reflections, both their own and those of their fellow-students, *vis-à-vis* meetings seem to be necessary (Admiraal, Lockhorst, Wubbels, Korthagen, & Veen, 1998).

## **9.7. Final remarks**

The whole chapter points towards the fact that reflection and learning from experience is deepened by interaction among learners. Although this book emphasizes the need to build the pedagogy of teacher education on the individual concerns of student teachers, realistic teacher education does not aim at merely individual processes. On the contrary, the promotion of reflective interactions among student teachers is an essential feature of the approach. In the chapter it has been demonstrated that it is not only possible to take individual concerns and problems seriously within group settings, but that the application of specific group techniques and procedures also deepens the individual processes.

Now that we have dived so deeply into the practical work of the teacher educator with student teachers, both at an individual level (in chapter 7) and at group level (this chapter), it is time to describe an underlying theoretical framework with regard to professional learning and the relationship between teachers' mental structures and behavior. The principle of 'making implicit relationships explicit' is an essential ingredient of this framework, and will be the main focus of the next, more theoretically oriented chapter.

However, before making this step, it is important to end by emphasizing once more that the methods of working with groups of student teachers described in this chapter, require skills and attitudes in the teacher educator, which point towards the need of professional development programs for teacher education staff (an issue to be discussed in more detail in chapter 13). Especially if one is used to lecturing, it is a giant leap to really connect with the concerns of student teachers, to create useful experiences instead of introducing 'important' Theory, and to help student teachers reflect on their gestalts. In my experience, one of the greatest difficulties is to let go of the seemingly strong grip and safety well-prepared theoretical lectures offer to the teacher educator: one has to learn to live with the unexpected, to improvise, to make use of several theoretical backgrounds, translating them into concrete helpful guidelines for action. And all this can only be successful if one is really willing to relate to student teachers in a personal way, to *connect* with them, being acceptant, empathetic and genuine.

### **Summary**

In this chapter a five-step procedure to promote reflection in groups was presented. The steps are (1) prestructuring, (2) experience, (3) structuring, (4) focusing, and (5) theory. The use of this procedure was illustrated by means of a transcript of a authentic group meeting within a teacher education program. The description clarified how the principles of the realistic approach can be applied in practical situations in teacher education, for example how theory can be built on student teachers' concerns and on the gestalts elicited by their practical experiences.

Also four specific techniques were introduced (the 'wall', 'columns', 'repertory grid', and 'arrows'), which aim at reflection and can be used by student teachers without much intervention from the part of the teacher educator. They can thus even be used in very large groups. The techniques help student teachers to reflect on their gestalts and teaching strategies, and on the constructs they use in their perception of students. Each technique focuses on special types of relationships within the student teachers' mental structures, their perception and teaching behavior. Under the influence of the techniques, these mental structures often change from unconscious gestalts to more conscious cognitive schemata. This change process is very important, as it makes critical reflection and reframing possible.

A study into the functioning of the techniques showed that they promote lively group discussions about teaching practice, and create a need in student teachers for educational theory. However, the study also showed that basic elements in student teachers' gestalts, especially basic values are hard to change.

Both the five-step procedure and the four techniques can be seen as representative of the principles of realistic teacher education. They try to build on student teachers' concrete experiences and the concerns developed through these experiences, they try to make student teachers more aware of these concerns, and they stimulate reflection, using peer interaction. The description of the five-step procedure and the four techniques also showed how the process of promoting reflection often boils down to 'making implicit relationships explicit', especially the implicit relationships within student teachers' unconscious gestalts guiding their actions.

Finally, a structure was described for promoting peer supported learning within small groups, in which it is also possible to make use of email exchanges between student teachers. Through this structure, another fundamental step is made towards making student teachers become

independent learners. It is also a solution to the problem that careful individual supervision of student teachers often takes much time.

**Basic concepts:**

Five steps: (1) prestructuring, (2) experience, (3) structuring, (4) focusing, (5) theory

Techniques for reflection in groups (the wall, columns, repgrid, arrows)

Making implicit relationships explicit

Peer supported learning

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- <sup>1</sup> Large parts of this section have been derived from a Dutch publication (Wubbels, Korthagen, & Tigchelaar, 1999). The portions of text in italics are based on literal transcripts of tapes recorded during the session. Thanks go to Thom Somers, who made the transcripts. The text has been abridged and transposed from spoken to written language, while retaining the meaning of the contents. Where portions of text have been deleted, this is indicated by ".....".
  - <sup>2</sup> After two such sessions, the student teachers were asked to write down for themselves what they had learned, and which points they thought they should give particular attention to during such talks. The session was concluded with a number of short practice talks in which the guest teacher educator took the role of a high school student. In each role-play he tried to create a specific learning experience for each individual student teacher by first playing the student's role in such a way that the student teacher was confronted with his or her own problem or learning issue, and then providing coaching to help the teacher to find the appropriate behavior.
  - <sup>3</sup> The wall is based on an idea of Hans Pouw of the Dutch APS Institute.
  - <sup>4</sup> Kelly made use of this fact in developing the repertory grid technique as a research method designed to describe people's subjective perceptions of their environment. He showed that people have no trouble scoring others on the basis of the constructs they have formulated themselves, as opposed to those offered to them by others, for example a researcher. Using this same principle, at the end of the exercise the student teachers can score all students from the class under consideration on a five-point scale for each of the constructs from their personal list. The resulting matrix illustrates the role of the personal constructs in the student teachers' perception of the students.
  - <sup>5</sup> To get an idea of how this training in supervision skills is being carried out, see chapter 13, where a training course for teacher educators is described. In the training of student teachers preparing them for peer supported learning, we use similar procedures and structures. We also makes this congruence explicit to student teachers. That makes them also more aware of the way their teacher educators and cooperating teachers supervise them.