Chapter 1

1.
General introduction

> *"I wanted to have a bond with them, what I said before [about this class with subdued students, how they were quietly at work in the classroom], that it is not how I want it to be, I really dislike it. I don't want to just be there, with them working and me doing nothing; to me that's just not it. With my other class, it was absolutely the opposite, they were very spontaneous and enthusiastic, I loved that, that they just said things and told things about themselves and that they dared to do things."*
>
> (Darryl, a 27 year old student teacher)

Research has shown that the classroom climate is a significant determinant of student learning (Fraser, 1994): students perform better and have more positive attitudes toward the subject taught when they perceive the classroom climate positively (den Brok, Fisher, Rickards, & Bull, 2006). Pianta and Hamre (2006) summarized a number of studies in which it was demonstrated that variance in student outcomes was in large part explained at a classroom level. As they put it: it is classrooms, and teachers, that matter (Pianta & Hamre, 2009). The focus on social aspects of the classroom climate has its roots in the premise that teaching and learning are inherently social processes (Goodenow, 1991; Pianta, 2006). The teacher-class relationship, but also classroom discipline are fundamental elements of these processes (Pianta, 2006; Pianta & Hamre, 2009). In this thesis, the teacher-class relationship and classroom discipline are considered as components of classroom climate.

The importance of the teacher-class relationship for learning achievement and motivation of students has been emphasised and demonstrated by several educational researchers (Cornelius-White, 2007; Davis, 2003; Pianta, 2006;

Pianta & Hamre, 2009; Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006). There are other benefits of this relationship as well, such as for teachers' wellbeing. Spilt, Koomen and Thijs (2011) found for example that the teacher-class relationship could have a negative impact on the wellbeing of the teacher. Unfortunately, according to the large scaled longitudinal study of Brekelmans, Wubbels and van Tartwijk (2005) by the time student teachers graduate from the teacher education programme, the majority of them have not been successful in establishing a positive teacher-class relationship.

Besides the teacher-class relationship, also classroom discipline is fundamental for the experience of the classroom climate, from both students' and teachers' perspective (Pianta, 2006). According to Woolfolk Hoy and Weinstein (2006) classroom management is often used as an umbrella term for the different teaching functions of classroom management (actions taken to elicit a productive learning environment), discipline (actions taken to elicit changes in students' behaviour) and socialization (actions to help students fulfil their responsibilities). In this thesis the focus is on classroom discipline, more specifically on discipline strategies with which the teacher aims to prevent or restrain students' misbehaviour. Unlike Darryl, the student teacher with whom we started this chapter, many student teachers experience problems with classroom discipline. Strikingly, among the most cited and highest ranked reasons for leaving the profession are problems with classroom discipline (Evertson & Weinstein, 2006; Walker, 2009). Rates of teacher attrition in secondary education are alarmingly high: 87% of teachers leave the profession before they have ten years' experience (Pianta & Hamre, 2009), with 50% of beginning teachers leaving the field within the first five years (Walker, 2009). Not only is teacher attrition problematic, but for teachers who start the profession, classroom discipline is a crucial and often precarious matter. Research has repeatedly shown that student and beginning teachers list maintaining classroom discipline and building positive and constructive teacher-class relationships among their major concerns (Fuller & Bown, 1975; Ghaith & Shaaban, 1999; Liston, Whitcomb, & Borko, 2006; Veenman, 1984).

Besides concerns, student teachers have differentiated beliefs about classroom management, discipline and socialization (Woolfolk Hoy

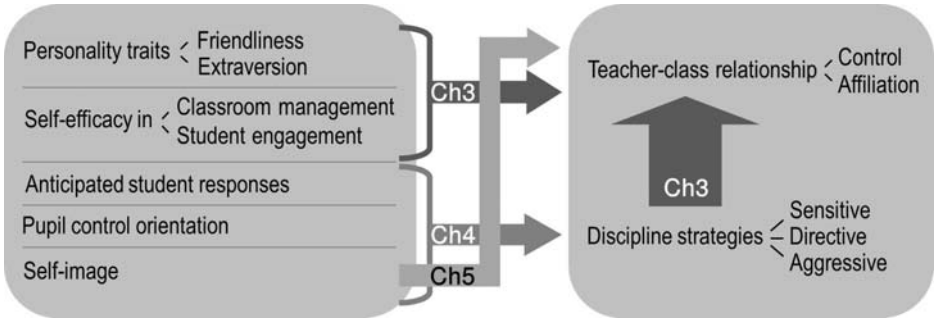
&Weinstein, 2006). For knowledge and beliefs about classroom discipline we have chosen to use the umbrella term of practical knowledge, defined as all knowledge at the disposal of the teacher and underlying his or her actions (Carter, 1990). Teacher practical knowledge in the broadest sense of the word interacts reciprocally with teacher practice: teachers' knowledge influences teacher actions but is also itself influenced by teacher actions and reflection upon these actions (Verloop, Van Driel, & Meijer, 2001). This reciprocity between teacher practical knowledge and teacher practice makes the investigation of teacher practical knowledge worthwhile. As it has become clear that most of teacher practical knowledge is related to specific domains or contexts (Verloop et al., 2001), in the case of this thesis the focus is on classroom discipline. Generally, when it comes to sources of teacher knowledge and beliefs about classroom management, three categories of experiences (Richardson, 1996) are distinguished: personal experiences; experiences with school; and experience with formal knowledge. Experiences with formal knowledge include knowledge on academic or pedagogical knowledge, as usual encountered in formal teacher preparation programmes. In this thesis formal knowledge is not included, since none of our respondents had any formal education into teaching and just started the teacher education programme. Personal experiences include beliefs about self and others, in this thesis operationalised as relational schemas (Moskowitz, 2005). School experiences include Lortie's (1975) "apprenticeship of observation", providing student teachers with beliefs about what it means to teach, manage and learn. In this thesis, we investigated specific teacher practical knowledge based on personal experiences and school experiences, and of relevance in connection to the teacher-class relationship and classroom discipline.

1.1 Research aim and design

The aim of this thesis is to gain more understanding of the classroom climate as it is established by student teachers. The relation between student teachers' characteristics and the quality of the classroom climate is still largely unexplored. Some research has been done on the relations between teacher

characteristics, such as personality traits and self-efficacy, and aspects of the teacher-class relationship (Mainhard, Brekelmans, Wubbels, & den Brok, 2008), but these studies were about in-service teachers, not student teachers as in this thesis. With the teacher-class relationship and discipline strategies as important contributors to the classroom climate, the general question of this thesis was how student teachers' characteristics, in particular their practical knowledge, is connected to discipline strategies and the teacher-class relationship.

Figure 1.1. Overview of the study



In Figure 1.1, the box on the left portrays teacher characteristics, and the box on the right depicts classroom climate. The arrows indicate the specific relations as they have been investigated in the course of this thesis.

To answer the general question we conducted two studies. The first, not represented in Figure 1.1, concerned an exploratory study in which 46 teachers in secondary education responded to a newly developed open ended questionnaire with which teachers' interpersonal expectations were measured (**chapter 2**).

In the second study, over 100 student teachers answered several questionnaires (**chapter 3 and 4**, respectively the arrows "Ch3" and "Ch4" in Figure 1.1). Some of these questionnaires had to be translated; others had already been adapted by others to the Dutch educational context. Also, the questionnaire that was developed in the first study was adapted to a questionnaire with fixed answer categories so it could be used in a larger scaled study (**chapter 4**). Of the student teachers in this sample, 35 were willing to

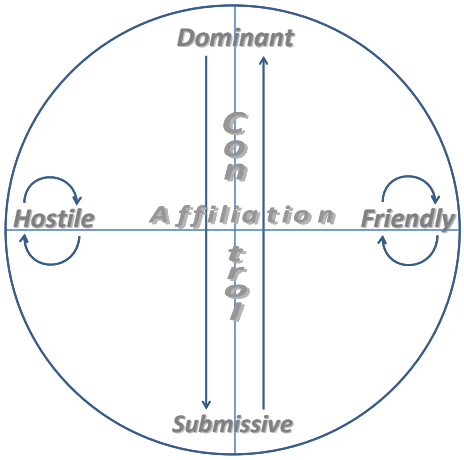
participate in the study at two moments in the education programme, namely the beginning and end of the internship (**chapter 5**, the arrow "Ch5" in Figure 1.1). Their participation entailed that they answered questionnaires, and that the students of one of their classes answered a questionnaire.

In the remainder of this chapter, we will first describe the two concepts of which classroom climate is comprised (the right box in Figure 1.1). Then, whilst describing the subsequent chapters, the concepts in the left box will be introduced.

1.2 The teacher-class relationship

In the work presented in this thesis, the teacher-class relationship is conceptualised based on interpersonal theory (Leary, 1957; Kiesler, 1987). Interpersonal relationships can be described with two dimensions: control, involving dominance versus submission; and affiliation, involving hostility versus affection (Fiske, Cuddy, & Glick, 2007). Interpersonal theorists (Kiesler, 1983; Tracey, 1994) posited that these two dimensions are both necessary and sufficient to describe the interpersonal meaning of all human behaviour and interaction. The dimensions have been given various but comparable names but we refer to these dimensions with 'control' and 'affiliation' since these are most commonly used (Dryer & Horowitz, 1997; Moskowitz, Ringo Ho, & Turcotte-Tremblay, 2007; Tiedens & Jimenez, 2003). The word pairs submissive-dominant and hostile-friendly are generally used in psychological literature (Tiedens & Fragale, 2003) as well as in educational literature (Wubbels et al., 2006). In the Netherlands, Créton and Wubbels (1984) developed the model of interpersonal teacher behaviour (Wubbels & Levy, 1991; Wubbels et al., 2006) that includes a *control* dimension (the extent to which the teacher determines what happens in the classroom, on a scale ranging from submissive to dominant) and an *affiliation* dimension (the emotional distance between teacher and students, scale ranging from hostile to friendly).

Figure 1.2. Interpersonal circle, straight arrows indicating complementarity on control and circular arrows indicating complementarity on affiliation



The dimensions can also be represented in an orthogonal co-ordinate system: the interpersonal circle (Leary, 1957; Kiesler, 1983), in which the teacher-class relationship can be plotted with a position on the y-axis for the value of control and on the x-axis the value of affiliation (see Figure 1.2).

Research has revealed specific interaction patterns that are created by the fact that the particular interpersonal significance of behaviour rewards or constrains the reactions of the other person in a specific manner (Carson, 1969; Tracey, 2004). Generally, behaviour on the affiliation dimension was found to invite similar responses: friendly behaviour, for instance, triggers a friendly reaction, and hostile behaviour evokes a hostile reaction. Behaviour on the control dimension on average invites opposite responses: dominant behaviour, for instance, invites a submissive reaction, and submissive behaviour invites the other person to take control (Dryer & Horowitz, 1997; Markey, Funder, & Ozer, 2003). Sequences of behaviour in interactions are called complementary if they proceed according to these patterns (i.e., the arrows in Figure 1.2). A typical example of complementarity on control is one person talking (high control), while the other responds by listening (low control). An example of complementarity on affiliation is that of a stranger who gives you a smile

whilst passing by on the street: before you realise it, you will probably have smiled back.

In the context of educational research the two dimensions are recognised as a valuable tool for measuring the quality of the teacher-class relationship (Ertesvåg, 2011; Walker, 2009; Wentzel, 2002; Wubbels et al., 2006). The teacher-class relationship can be conceptualized in terms of interpersonal perceptions students have of their teachers and for this purpose both individual and collective perceptions can be used, depending on the research questions. Individual students' interpersonal perceptions of a teacher may be more indicative for the personal ideas of this student and the specific relationship of this student with the teacher (cf. Kenny, 2004). On the other hand, the collective or consensual part of students' interpersonal perceptions of a teacher may be more indicative of the teacher as a person and his or her behaviour towards the students as a group. Students are considered as multiple and appropriate informants of this relationship and the collective students' perceptions of their teacher can be utilized as an indicator of the teacher-class relationship (cf. den Brok, Brekelmans, & Wubbels, 2006; Lüdtke, Robitzsch, Trautwein, & Kunter, 2009).

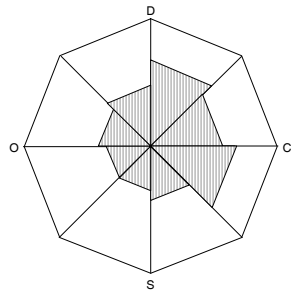
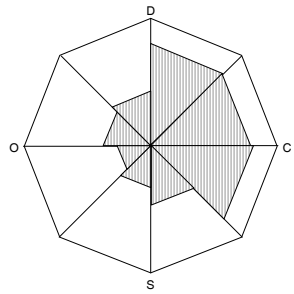
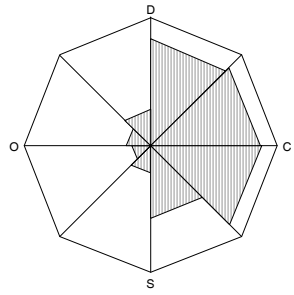
Students can perceive the teacher-class relationship with the teacher as high on the control dimension (dominant), and high on affiliation (warm), resulting in a perception of a friendly teacher who is in charge; but it is equally possible that students view the relationship with the teacher as high on control and low on affiliation, resulting in perception of a corrective, strict teacher. Brekelmans and colleagues developed a typology of interpersonal styles or profiles (Brekelmans, 1989; Brekelmans, Levy, & Rodriguez, 1993), describing the behavioural patterns of the teacher as perceived by students. These profiles are named directive; authoritative; tolerant-authoritative; tolerant; uncertain-tolerant; uncertain-aggressive; repressive and drudging. Both teachers and students view the authoritative interpersonal style as the ideal interpersonal style (Brekelmans et al., 2005), however all profiles where the teacher is perceived as both dominant and warm (i.e., authoritative, directive and tolerant-authoritative) are seen as preferable profiles since we know that student outcomes are higher when teachers are both dominant and

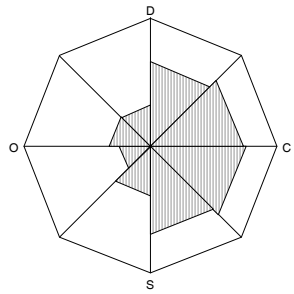
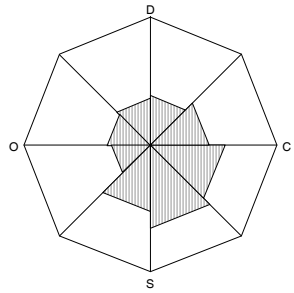
warm (Ertesvåg, 2011; Wentzel, 2002). The control dimension is mainly associated with cognitive, and the affiliation dimension with affective learning outcomes (Brekelmans, 1989; Walker, 2009; Woolfolk Hoy & Weinstein, 2006).

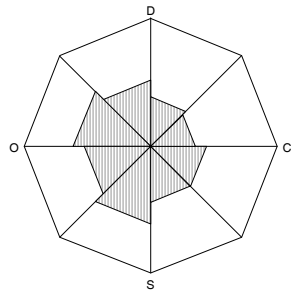
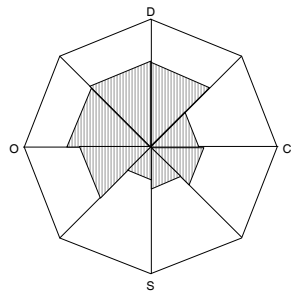
THE QUESTIONNAIRE ON INTERPERSONAL TEACHER BEHAVIOUR

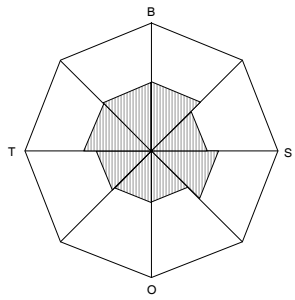
Both teachers' self-images and student perceptions about the teacher-class relationship have been examined with the Questionnaire on Teacher Interaction (QTI, Créton & Wubbels, 1984). The QTI was originally developed in the Netherlands, and an American version was constructed in 1988 (Wubbels & Levy, 1991). As a student questionnaire the QTI has been reliably and extensively used in a host of countries, such as The Netherlands, Australia, USA, Israel, Korea, Singapore, Brunei, Indonesia, India, and so forth (Wubbels et al., 2006). Results can be reported on the basis of dimension scores or as interpersonal profiles. In both cases, QTI scores can be aggregated on class level. If results are presented as dimensions scores it means that the higher the class mean scores on control and affiliation, the more dominance or warmth students perceive in the relationship with the teacher. The interpersonal profiles (Brekelmans, 1989; Brekelmans et al., 1993) are based on composite scores of affiliation and control in eight so called sections of the interpersonal circle. Table 1.1 shows the representations of the eight interpersonal profiles along with a short description of the classroom climate. In the representations part of a section is shaded so that the degree of shading is a measure of the height of the section-scores.

Table 1.1. Interpersonal profiles with corresponding classroom environments

Interpersonal profile	**Classroom environment**
 1. Directive	The learning environment in a class with a teacher with a directive profile is well-structured and task-oriented. The Directive teacher is organized efficiently and normally completes all lessons on time. S/he dominates class discussion, but generally holds students' interest. The teacher usually isn't really close to the students, though s/he is occasionally friendly and understanding. S/he has high standards and is seen as demanding. While things seem businesslike, the teacher continually has to work at it. S/he gets angry at times and has to remind the class that they are there to work. S/he likes to call on students who misbehave and are inattentive. This normally straightens them up quickly.
 2. Authoritative	The Authoritative atmosphere is well-structured, pleasant and task-oriented. Rules and procedures are clear and students don't need to be reminded. They are attentive, and generally produce better work than their peers in the Directive teacher's classes. The Authoritative teacher is enthusiastic and open to students' needs. S/he takes a personal interest in them, and this comes through in the lessons. While his/her favourite method is the lecture, the authoritative teacher frequently uses other techniques. The lessons are well planned and logically structured.
 3. Tolerant-authoritative	Tolerant-authoritative teachers maintain a structure which supports student responsibility and freedom. They use a variety of methods, to which students respond well. They frequently organize their lessons around small group work. While the class environment resembles Type 2, the Tolerant-authoritative teacher develops closer relationships with students. They enjoy the class and are highly involved in most lessons. Both students and teacher can occasionally be seen laughing, and there is very little need to enforce the rules. The teacher ignores minor disruptions, choosing instead to concentrate on the lesson. Students work to reach their own and the

	teacher's instructional goals with little or no complaints.
 4. Tolerant	There seem to be separate Dutch and American views of the Tolerant teacher. To the Dutch, the atmosphere is pleasant and supportive and students enjoy attending class. They have more freedom in Type 4 classes than in those above, and have some real power to influence curriculum and instruction. Students appreciate the teacher's personal involvement and his/her ability to match the subject matter with their learning styles. They often work at their own pace and the class atmosphere sometimes may be a little confused as a result. In the U.S., however, the Tolerant teacher is seen to be disorganized. His/her lessons are not prepared well and they don't challenge students. The teacher often begins the lesson with an explanation and then sends the students off to individually complete an assignment. While the teacher is interested in students' personal lives, his/her academic expectations for them aren't evident.
 5. Uncertain-tolerant	Uncertain-tolerant teachers are highly cooperative but don't show much leadership in class. Their lessons are poorly structured, are not introduced completely and don't have much follow-through. They generally tolerate disorder, and students are not task-oriented. The Uncertain-tolerant teacher is quite concerned about the class, and is willing to explain things repeatedly to students who haven't been listening. The atmosphere is so unstructured, however, that only the students in front are attentive while the others play games, do homework, and the like. They are not provocative, however, and the teacher manages to ignore them while loudly and quickly covering the subject. The Uncertain-tolerant teacher's rules of behaviour are arbitrary, and students don't know what to expect when infractions occur. The teacher's few efforts to stop the misbehaviour are delivered without emphasis and have little effect on the class. Sometimes the teacher reacts quickly, and at other times completely ignores

	inattentiveness. Class performance expectations are minimal and mostly immediate rather than long-range. The overall effect is of an unproductive equilibrium in which teacher and students seem to go their own way.
 6. Uncertain-aggressive	These classes are characterized by an aggressive kind of disorder. Teacher and students regard each other as opponents and spend almost all their time in symmetrically escalating conflicts. Students seize nearly every opportunity to be disruptive, and continually provoke the teacher by jumping up, laughing and shouting out. This generally brings a panicked over-reaction from the teacher which is met by even greater student misbehaviour. An observer in this class might see the teacher and student fighting over a book which the student has been reading. The teacher grabs the book in an effort to force the student to pay attention. The student resists because s/he thinks the teacher has no right to his/her property. Since neither one backs down, the situation often escalates out of control. In the middle of the confusion the Uncertain-aggressive teacher may suddenly try to discipline a few students, but often manages to miss the real culprits. Because of the teacher's unpredictable and unbalanced behaviour, the students feel that s/he is to blame. Rules of behaviour aren't communicated or explained properly. The teacher spends most of his/her time trying to manage the class, yet seems unwilling to experiment with different instructional techniques. S/he prefers to think `first, they'll have to behave'. Learning is the least important aspect of the class, unfortunately.
	Students in the Repressive teacher's class are uninvolved and extremely docile. They follow the rules and are afraid of the teacher's angry outbursts. S/he seems to overreact to small transgressions, frequently making sarcastic remarks or giving failing grades. The Repressive teacher is the epitome of complementary rigidity. The Repressive teacher's lessons are structured but not well-organized. While directions and background information are provided, few questions are allowed or encouraged.

7. Repressive	Occasionally, students will work on individual assignments, for which they receive precious little help from the teacher. The atmosphere is guarded and unpleasant, and the students are apprehensive and fearful. Since the Repressive teacher's expectations are competition-oriented and inflated, students worry alot about their exams. The teacher seems to repress student initiative, preferring to lecture while the students sit still. They perceive the teacher as unhappy and inpatient and their silence seems like the calm before the storm.
 8. Drudging	The atmosphere in a Drudging teacher's class varies between Type 5 and 6 disorder. One thing is constant, however: the teacher continually struggles to manage the class. S/he usually succeeds (unlike Types 5 and 6), but not before expending a great deal of energy. Students pay attention as long as the teacher actively tries to motivate them. When they do get involved, the atmosphere is oriented toward the subject matter and the teacher doesn't generate much warmth. S/he generally follows a routine in which s/he does most of the talking and avoids experimenting with new methods. The Drudging teacher always seems to be going downhill and the class is neither enthusiastic nor supportive nor competitive. Unfortunately, because of the continual concern with class management the teacher sometimes looks as though s/he's on the verge of burnout.

1.3 Discipline strategies

In this thesis, the teacher-class relationship and classroom discipline are regarded important indicators of the classroom climate. Student teachers are not fully skilled teachers yet, which is reflected in the quality of the teacher-class relationship they create (Brekelmans et al., 2005) and also in their skills in the area of classroom management, such as discipline strategies (Jones, 2006). In general, as Jones (2006) found, student teachers have not developed

adequate classroom discipline skills yet. Teachers' strategies to prevent or restrain students misbehaviour, we call discipline strategies (Lewis, 2001).

In a large-scale longitudinal study Brekelmans et al. (2005) found that teachers' behaviour in terms of control on average increases in the first six (mainly first three) years of the teaching career. Meanwhile, students might try to push the limits, play cat and mouse with the teacher, urging the teacher to enforce discipline strategies. Kounin (1970) identified several strategies that teachers use to elicit high levels of work involvement and low levels of misbehaviour. Student teachers have to learn strategies such as "withitness" (communicating awareness of student behaviour), overlapping (doing more than one thing at once) and providing engaging lessons (Gump, 1982; Kounin, 1970). Meanwhile, ready or not, at some point they have to respond to student misbehaviour. Then, sometimes teachers' reactions to students' provocations may be calm and reasonable; at other times inappropriate in the sense that they might harm students educationally or psychologically or that they might harm the classroom climate (Lewis & Riley, 2009). Jamieson and Thomas (1974), building upon French and Raven's (1959) typology of interpersonal power, found that teachers' use of directive and aggressive strategies was negatively related to student satisfaction, learning, and teacher control on students' out-of-class behaviour and attitudes. Lewis (2001) and Lewis, Romi, Qui and Katz (2005) found something similar when they examined the relationship between coercive (punishment and aggressive actions) and sensitive (hints, discussion, involvement in decision making and reinforcing positive behaviour) discipline strategies on the one hand, and students' misbehaviour on the other. Romi, Lewis, Roache, & Riley (2011) investigated the impact of teachers' aggressive discipline strategies on students' attitudes to schoolwork. They found that aggressive discipline strategies were related to students' negativity towards the teacher, and to the extent students were distracted from their work. In recent work Roache and Lewis (2011) reported that in terms of impact on for instance students' wellbeing and motivation, punishment seemed to be ambivalent in its effects; aggression turned out to be a functionally negative set of strategies, whereas the sensitive strategies had positive effects (Roache & Lewis, 2011). Given that student teachers are still developing their own teaching style, we

wanted to obtain a detailed picture of their discipline strategies. We therefore not only took sensitive and aggressive strategies into account, but also the more neutral strategies, e.g., punishment (Roache & Lewis, 2011).

Students' ideas about their teachers' disciplining them have been investigated by several researchers. According to Woolfolk Hoy and Weinstein (2006) students appreciate clarity, structure and rules, provided that these are imposed in a reasonable manner. Teachers who fail to use humour once in a while, who punish too often or too severely, or who adopt a superior attitude to their students eventually lose the students' respect. Students look up to teachers who do not use their authority to suppress, but for "the moral service of others" (Noblit, 1993, pp. 34, 35).

The explicit connection between the teacher-class relationship and teachers' discipline strategies has not been extensively investigated. For in-service teachers Mainhard, Brekelmans, and Wubbels (2011) looked into the connection between student perceptions of the teacher-class relationship in terms of control and affiliation, and student perceptions of coercive versus supportive teacher behaviour. Moreover, they investigated whether these associations occurred only *during* a lesson or also *across* lessons, so to find the association of coercive and supportive teacher behaviour with the teacher-class relationship one or two weeks later. They found that coercive teacher behaviour was associated with lower levels of affiliation, whereas supportive teacher behaviour was associated with higher levels of affiliation. These effects on the relation were still apparent one or two weeks later, so it seems the effect of these teacher behaviours on the relationship did not disappear in the continuous flow of teacher-class interactions. In this thesis we will investigate the connection between the teacher-class relationship in terms of control and affiliation, and discipline strategies. The matter of a two (sensitive and coercive) or three (sensitive, punishment and aggressive) factor structure of discipline strategies is considered important for the educational context, and is therefore more elaborately explained in the next section.

THE DISCIPLINE STRATEGIES QUESTIONNAIRE

Discipline strategies were measured with a Dutch version of the student questionnaire developed by Lewis (2001). The original questionnaire was also use used in cross-national studies where it proved its reliability and validity (Lewis et al., 2005). In the first version of the questionnaire, two main clusters of strategies were present: sensitive strategies (comprised of rewarding, discussion and negotiation, involvement in decision making, and hinting items); and coercive strategies (comprised of punishing and aggression items). Later Lewis (2009) reported that punishment might be a 'neutral' set of strategies given its lack of direct relationships with the other factors. In 2011, Roache and Lewis reported that in terms of impact on students, punishment did not seem to belong to either the sensitive or the coercive discipline cluster. Effects of punishment on for instance students' wellbeing and motivation seemed to be ambivalent; whereas aggression turned out to be a functionally negative set of strategies, and the sensitive strategies clearly had positive effects (Roache & Lewis, 2011). To our knowledge, since then there have not been any publications in which the factor structure of the questionnaire was reported. However, as Roache and Lewis (2011) discussed, it seems reasonable to interpret punishment as neutral, since it is essentially a universal given in the classroom when misbehaviour occurs. Sometimes teachers have to use punishment of some form to restrict or prevent behaviour that puts at risk the classroom climate. For the purposes of this thesis, we administered the Dutch version of the 24 item questionnaire among classes of the participating student teachers (with on average 22.6 students per class; 2,506 students in total). A factor analysis produced indeed three factors that explained 75% of the variance. The distribution of discipline strategies among the factors was in line with what Roache and Lewis (2011) indicated: all reward items belonged to the sensitive discipline scale; all punishment items belonged to directive discipline; and all aggressive items belonged to the third, aggressive discipline, scale. Based on this, we conclude that in the educational context it seems better to distinguish three clusters of discipline strategies, with directive strategies apart from the already acknowledged sensitive and aggressive strategies. Just as with

the QTI, scores can be aggregated on class level and are referred to as estimates of teachers' discipline strategies.

1.4 Outline

Chapter two

The aim of the study described in this chapter was to develop an instrument with which teachers' interpersonal expectations could be captured. The main research question that we wanted to answer was: What do teachers' expectations about teacher-class interaction look like?

As a theoretical framework relational schema theory was applied. In general, schemas help us process information as effortlessly as possible, thus help to efficiently and effectively adapt to our environment (Moskowitz, 2005). The schemas that relate specifically to interpersonal experiences are called relational schemas, consisting of images of self and others, together with scripted interpersonal expectations of what tends to happen in interactions (Baldwin, 1992; Baldwin, 1999). Teacher relational schemas about teacher-class interaction are regarded as specific aspects of teacher practical knowledge.

Until now, teachers' interpersonal expectations and their relation toteacher behaviour or the teacher-class relationship have not been explicitly targeted in research. However in a general sense, there is ample evidence that interpersonal expectations consciously and unconsciously guide the perceptions and subsequent behaviour of the people interacting (Baldwin, Kiviniemi & Snyder, 2009; Snyder & Stukas, 1999; Snyder & Klein, 2005). Interpersonal expectations are thought to be represented as if-then expectations (Baldwin &Dandeneau, 2005) and were investigated with the Interpersonal Schema Questionnaire, developed by Hill and Safran (1994). They operationalised interpersonal expectations as a prescribed situation starting with "If I.." and an anticipated response of the other ("then they…"). To be able to measure teachers' interpersonal expectations, the Hill and Safran (1994) questionnaire was translated and adapted to the context of teachers and students interacting in the classroom. This instrument was tested in an exploratory study of which the

results are described in this chapter. The specific research questions that were addressed are:

1. What student responses do teachers expect in particular teacher behaviour vignettes, e.g., what interpersonal expectations do teachers have?
2. Are there differences in interpersonal expectations for teachers with different levels of experience?
3. Are there gender differences in teachers' interpersonal expectations?

Chapter three

In this chapter we aimed to identify contributing factors to the teacher-class relationship by answering the following main research question: How are student teachers' personality traits, self-efficacy and discipline strategies related to the teacher-class relationship?

The personality traits friendliness and extraversion (Goldberg, 1990) affect how a person acts in a social context, and since education is in essence a social process, it is assumed that this would not be any different in the social context of the classroom. Extraversion is related to social impact, whereas friendliness concerns the motivation to create sustainable positive relationships with others (Jensen-Campbell & Graziano, 2001). Motives aimed at maintaining positive relationships with others may result in actual positive interpersonal behaviour towards others. At least, people in general think that friendly people function better in interpersonal relationships than less friendly people (Jensen-Campbell & Graziano, 2001). To our knowledge, the association between teachers' personality traits and their relationships with students has not been studied recently. Studies on burnout among teachers have shown that it is particularly friendliness and extraversion that are associated with positive interpersonal contact with students (Cano-Garcia, Padilla- Munoz, & Carasco-Ortiz, 2005; Kokkinos, 2007). In this thesis the personality traits openness, conscientiousness and emotional stability will not be taken into account, because there is insufficient theoretical or empirical evidence of how they might be related to the teacher-class relationship. The same applies to the relation between discipline strategies and friendliness and extraversion of the teacher.

In this chapter self-efficacy is taken into account as a specific aspect of teacher practical knowledge. It is acknowledged that via experiences with school (Richardson, 1996) and "apprenticeship of observation" (Lortie, 1975) student teachers develop beliefs about what it means to teach, manage and learn. Self-efficacy is defined as beliefs about one's capacity and skills that are relevant within the educational context (Bandura, 1997; Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). There are numerous studies that have demonstrated the relation between teachers' self-efficacy and their behaviour (Gibson & Dembo, 1984; Guskey, 1988; Ross & Bruce, 2001; Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2001; Woolfolk Hoy & Hoy, 1990). Tschannen-Moran and Hoy (2001) distinguished three major components of teachers' self-efficacy: self-efficacy in classroom management, instructional strategies and student engagement. Since self-efficacy in instructional strategies is not particularly associated with the pedagogical side of teaching such as student engagement or classroom management, we did not expect to find relations between self-efficacy in instructional strategies and the teacher-class relationship.

Until here, the focus was on relations between teacher characteristics in the left box in Figure 1.1, and the two components of classroom climate in the right box in Figure 1.1. From both students' and teachers' perspective, classroom discipline is fundamental for the classroom climate (Pianta, 2006), and so is the teacher-class relationship. Therefore, also the interrelatedness of the two components of classroom climate in the right box of figure 1.1 was investigated. Mainhard et al. (2011) found significant relations between in-service teachers' coercive and supportive behaviours, and the teacher-class relationship. However, unlike general theories on interpersonal power (French & Raven, 1959; Schrodt, Witt, Myers, Turman, Barton, & Jernberg, 2008) Mainhard et al. (2011) did not find relations between coercive and supportive behaviour and the teacher-class relationship in terms of control. In this thesis we explicitly looked into the connection between the three discipline strategies and the teacher-class relationship in terms of affiliation and control. The specific research questions that were investigated in this chapter are:

1. How are personality traits (i.e., friendliness and extraversion) related to the teacher-class relationship in terms of affiliation and control?
2. How is self-efficacy (i.e., in classroom management and student engagement) related to the teacher-class relationship in terms of affiliation and control?
3. How are discipline strategies (e.g., sensitive, directive and aggressive strategies) related to the teacher-class relationship in terms of affiliation and control?

Chapter four

Considering the importance of discipline strategies for the teacher-class relationship, in this chapter we intended to find answers to the following main research question: How are components of student teachers' practical knowledge related to their discipline strategies?

In search for an explanation for the tendency of student teachers to view warmth and discipline as mutually exclusive categories, Weinstein (1998) found that student teachers have rather narrow and dichotomous conceptions of warmth and discipline. In their view, discipline consists of specific management strategies, and a warm, caring relationship is established through nurturing, willingness to listen and accessibility. In this thesis we explored student teachers' practical knowledge based on personal experiences (e.g., beliefs about self and others) as well as practical knowledge based on school experiences (e.g., pupil control orientation) in relation to sensitive, directive and aggressive discipline strategies.

As is described in chapter two, relational schemas consist of interpersonal expectations, together with images of self and others (Moskowitz, 2005). In this chapter we investigate images of self and others, since it is believed that these images consciously and unconsciously guide peoples' perceptions and subsequent behaviour (Baldwin et al., 2009; Snyder & Stukas, 1999; Snyder & Klein, 2005). In line with Pajares (1992), who stated that images of self are related to how persons perceive themselves in different contexts and situations, we investigated student teachers' *self-images* about themselves in the teacher-class relationship. Images of others are conceptualised as *anticipated student*

responses in reaction to the teacher in a given classroom situation. *Pupil control orientation* is conceptualised as beliefs about pupil control along a continuum, with custodial at one extreme and humanistic at the other (Willower, Eidell, & Hoy, 1967). A humanistic orientation indicates a teacher perspective stressing the importance of the individuality of each student and the creation of a climate to meet a wide range of student needs. Teachers with a humanistic orientation have an accepting, trusting view of students, and have confidence in students' ability to be self-disciplining and responsible. Teachers with a more custodial orientation tend to perceive students as irresponsible and undisciplined persons who must be managed through punitive measures (Woolfolk & Hoy, 1990). The research question that we addressed in this chapter is:

1. How are student teachers' self-images on control and affiliation, anticipated student responses in terms of control and affiliation, and pupil control orientation related to their sensitive, directive and aggressive discipline strategies?

Chapter five

An important purpose of internships during teacher education programmes is to offer student teachers an (often first) experience as a teacher through which they can develop specific competences. One of these competences is the ability to build a positive teacher-class relationship. A good relationship with students is a prerequisite for professional growth from a beginning to an experienced teacher (Beijaard, 1995; Huberman, 1993). However, Brekelmans et al. (2005) reported that according to students 69% of student teachers did not have a so called preferable interpersonal profile at the end of the teacher education programme. In the Netherlands a number of teacher education programmes have adopted the Model of Teacher Interaction (Créton & Wubbels, 1984) to guide student teachers in learning to develop positive teacher-class relationships. To this date, it is unknown with which profiles student teachers start the internship and if and how they change from one profile to another during the internship.

Most teacher preparation programmes pay explicit attention to reflecting on (self-)beliefs and how these beliefs relate to behaviour (Pajares & Schunk, 2002). Because of the research interest of this thesis, the focus was on beliefs about self-as-a-teacher in interaction with students, e.g., the previously introduced self-images. Self-images on control describe the extent to which teachers believed they were perceived by their students to be in control, while self-images on affiliation describe how emotionally close teachers believed they were seen by their students. The level of accuracy is defined as the difference between self-image and student perception. According to Wubbels, Brekelmans and Hooymayers (1993), about two third of teachers overestimate how they will be perceived by their students, another one third of the teachers believes to be perceived less warm and dominant than it was according to their students, a so called underestimation. More recently, Brekelmans et al. (2005) found that during the teaching career on average teachers believe their behaviour on control and affiliation is higher than students perceive it. Research (Kolar, Funding, & Colvin, 1996) has shown that self-images are less associated with actual behaviour than are ratings of others - students in our case. In that sense over or underestimations might hinder student teachers' development: unaware of their actual behaviour they might not acknowledge the need to change.

In this chapter we investigated student teachers' level of accuracy of self-images and their interpersonal profiles at the beginning and end of the internship. The research questions that were addressed are:

1. How do student teachers' interpersonal profiles differ at the beginning and end of the teacher education programme?
2. How is the accuracy of student teachers' self-images on control and affiliation at the end of the traineeship different from their accuracy at the beginning?
3. Do student teachers with preferable profiles or behaviour have more accurate self-images on control and affiliation?

Chapter six

In this chapter, we summarise the main findings and draw general conclusions of the studies that were conducted in the course of this thesis. We conclude with a discussion of the implications of these findings, in particular for teacher education. A summary of the main findings is provided in English and Dutch.

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