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### Through the teacher's mind

*Understanding and improving teacher-child relationships in elementary school*

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# Chapter 1

*General introduction*



## GENERAL INTRODUCTION

*“Impatient. Demanding. Challenging”. These are the three words that teacher Tom, an experienced sixth grade teacher, used to describe his relationship with Jake. Why did he pick these words? “I am constantly busy correcting Jake, helping him stay focused on his tasks. Usually that is easy with children, I have all these tricks that I use when children are unfocused or impulsive. But that is not the main problem in my relationship with Jake, he always lies to me about things that happen in class and there are moments in which he ignores me completely. I do not understand what is going on in his mind, despite all my efforts trying to connect with him. He gets under my skin, I am getting impatient in dealing with him. During my forty years of teaching, I have never felt so powerless in dealing with a child (...) I think this is my last year of teaching”.*

The example above illustrates the difficulties and challenges that teachers can face with children in elementary school. In this example, the strained relationship with Jake places an incredible burden on teacher Tom, even up to a level in which he feels helpless and thinks about leaving the teaching profession. Negative teacher–child relationship quality, characterized by conflict, disrespect, and a lack of trust (Pianta, 2001), has found to be related to more negative emotions and poorer self-efficacy beliefs of teachers (Yeo, Ang, Chong, Huan, & Quek, 2008; Yoon, 2002), and can even influence their decision to stay or leave the profession (Hargreaves, 1998; O’Connor, 2008). When teachers perceive their relationships as positive, characterized by warmth, trust, and support, they seem to get intrinsic rewards from teaching (Mashburn, Hamre, Downer, & Pianta, 2006).

Next to research into the consequences of poor-quality relationships for teachers, even more studies have focused on the importance of high-quality affective teacher–child relationships for children’s development (e.g., Hamre & Pianta, 2001; Pianta, Hamre, & Stuhlman, 2003). Meta-analyses have shown that the quality of children’s affective relationship with teachers is important for their school engagement, academic achievement, executive functioning, and social and emotional development (Lei, Cui, & Chiu, 2016; Roorda, Jak, Zee,

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Oort, & Koomen, 2017; Roorda, Koomen, Spilt, & Oort, 2011; Vandenbroucke, Spilt, Verschueren, Piccinin, & Baeyens, 2018). In the example above, it may be that Jake's impulsive behavior and lies undermine teacher Tom's authority in the classroom, resulting in conflict or misunderstandings in their mutual relationship. Such poor-quality teacher-child relationships may enhance Jake's problematic behavior even further (Silver, Measelle, Armstrong, & Essex, 2005) or can have a negative effect on Jake's school functioning (Stipek & Miles, 2008).

Thus far, many studies have emphasized the importance of teacher-child relationship quality. However, there remain several gaps in current knowledge that need to be addressed. First, given the correlational nature of most studies in this area, there is still a lack of information about the longitudinal development of teacher-child relationship quality from kindergarten through the end of elementary school (e.g., Ly, Zhou, Chu, & Chen, 2012). The longitudinal studies that have thus far been carried out span a relatively short time period (e.g., Hughes, 2011; Rudasill, 2011). A first aim of this dissertation, therefore, is to identify trajectories of teacher-child relationship quality, regarding closeness, conflict, and dependency, from kindergarten through upper elementary school, and to explore whether certain child characteristics increase the risk of developing a problematic teacher-child relationship trajectory. Second, most research have focused on examining teachers' cognitive perceptions of relationship quality, without focusing on feelings, beliefs, and attitudes about relationships that may explain more about why teachers experience relationships with certain children to be of poor quality. To date, the most important risk factor for developing poor-quality teacher-child relationships is children's externalizing behavior (e.g., Lei et al., 2016). However, most research have not differentiated between subtypes of externalizing behaviors, such as hyperactivity and conduct problems. As hyperactivity and conduct problems appear to affect children's school outcomes differently (e.g., Brophy & McCaslin, 1992; DuPaul & Stoner, 2003), they may also have a different association with teacher-child relationship quality. A second aim, therefore, is to identify underlying reasons of why teachers experience negative relationships with children that display several types of externalizing behavior. Third, researchers have called for interventions that specifically aim to improve poor-quality dyadic teacher-child relationships (e.g., Sabol & Pianta, 2012). Therefore, the third aim is to find an effective way of how teachers' perceptions of poor-quality relationships can be altered into more neutral or even positive relationship perceptions. In what follows, a theoretical framework of teacher-child relationship quality is outlined, and after that, each of these three aims are described in more detail.

## **A theoretical framework of teacher–child relationships**

One of the dominant models for investigating teacher–child relationships is the theoretical framework of Pianta (Pianta, 1999; Pianta et al., 2003). This theoretical framework, based on developmental systems theory and attachment theory, is composed of several factors that determine how relationships between teachers and children develop (Pianta et al., 2003). The most basic level comprises the interactive behaviors between the teacher and the child. These are the processes by which information is exchanged between teachers and individual children (Lerner, 1998). All these interactive behaviors are influenced by relatively stable characteristics that the teacher and the child each bring to the relationship. Interactive behaviors are also influenced by the teacher’s and the child’s unique views of the relationship, defined as the mental representational model of the dyadic relationship (Bowlby, 1982; Stuhlman & Pianta, 2002). These three components – interactive behaviors, individual characteristics, and mental representations – each contribute to relationship quality and seem to influence each other in a reciprocal way (Pianta et al., 2003).

First, interactive behaviors, or interactions, occur in reciprocal exchanges, thereby functioning as feedback loops in which information is exchanged between the teacher and the child (Lerner, 1989; Pianta et al., 2003). Interactions differ from relationships as they fluctuate from one day to another and from moment to moment. Relationships, in contrast, are considered more stable entities that are constructed based on many interactions occurring over time (Birch & Ladd, 1996; Pianta, 1994). The quantity of these interactions between a teacher and a child, as well as the quality of these interactions (Pianta, 1994), both contribute to teacher–child relationship quality.

A second important aspect of the theoretical framework is the individual characteristics of the teacher and the child that each uniquely contribute to relationship quality (Pianta et al., 2003). These characteristics can either be biologically predisposed, such as temperament and gender, or include aspects that develop over time, such as self-perceptions, intelligence, or motivation (Pianta et al., 2003). Each of these aspects, which also include developmental history, affect interactions with others that, in turn, determine relationship quality over time (Fonagy, Steele, & Steele, 1991). For example, in the case above, not only Jake’s problems, but also Tom’s gender or his beliefs and teaching experience may color the perceptions that Tom and

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Jake have about their mutual relationships. It is therefore important to investigate how child characteristics, or the interplay between teacher and child characteristics, may inform teachers' and children's perceptions of their dyadic relationship.

Third, the theoretical framework of teacher–child relationships include several important notions derived from attachment theory, such as mental representations of relationships, that need further mentioning. Attachment theory postulates that positive parent–child relationships promote emotional security in the child, which is a necessary precondition for the child to explore his or her environment. Through exploration, the child gains new experiences and is able to develop (Bowlby, 1969/1982). All interactions and experiences, of both the parent and the child, become internalized into each person's mental representation of the relationship, from which future interactions and relationships develop.

Bowlby's attachment perspective has also been extended to affective teacher–child relationships (Birch & Ladd, 1997; Pianta, 1999; Verschueren & Koomen, 2012). According to this extended attachment theory, a sensitive teacher can function as a secure base from which children can explore and learn in school. The teacher may help the child to feel more comfortable and to explore the learning environment. Also, children may seek support and comfort from their teacher in times of stress, which reflects the teacher's availability for the child as a safe haven. However, a negative teacher–child relationship, characterized by a lack of teacher sensitivity, reflects insecurity and can interfere with a child's functioning in school. Researchers usually operationalize teacher–child relationships in three attachment-related dimensions. A positive attachment-related dimension of the relationship is closeness, which refers to warmth, trust, and open communication in the relationship. A negative attachment-related dimensions is conflict, which refers to resistance and disharmony in the relationship. In a relationship characterized by conflict, there are often coercive and discordant interactions between the teacher and the child. Another negative attachment-related dimension is dependency, which generally reflects teachers' concerns about a child's overreliance on them. This overreliance is usually manifested by overly clingy behavior, strong reactions to separation from the teacher, and requests for help when not necessary.

Similar to parent–child relationships, teachers and children are believed to construct their own mental representations of the relationship, that comprises internalized affect and cognitions about the self in relationship to others (Pianta et al., 2003). These mental representations of relationships

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are believed to guide future interactions between the teacher and the child. Teachers' mental representations include a set of rules for behavior that are based on previous and current experiences in relationships (Pianta, 1999). These mental representations reflect teachers' images of a specific child, including feelings, attitudes, and self-efficacy beliefs about the child (Zee, de Jong, & Koomen, 2017). Notably, teachers are usually not actively aware of how previous relationship experiences affect their current relationship perceptions (Pianta, 1999). Mental representations can function as filters for information on the other's behavior. For instance, teacher Tom states: 'He always lies to me about things that happen in class'. Tom is then only focused on what he already knows about Jake, without being open to new information about Jake. These filters or interpretations can function as self-fulfilling prophecies over time, as teachers are more focused on behavior that is similar to the beliefs they already have (Bandura, 1997; Pianta, 1999).

It is important to note that certain child characteristics may 'trigger' certain responses of teachers. For instance, in the case example, it may be mainly Jake's lying that Tom cannot appropriately deal with, leading repeatedly to frustration or even anger. Teacher Tom may feel less effective in managing Jake's behavior. Thus, teachers' perceptions, feelings, and attitudes about the relationship and the child in this relationship matter, as they can have an influence on teachers' behaviors and the relationship (Chang & Davis, 2009). Therefore, generating insights into teachers' mental representations may be an essential step in determining how teacher-child relationships emerge and how they can be improved.

In this dissertation, the focus is entirely on teachers' perceptions and mental representational models of dyadic relationships. By focusing on teachers' perceptions of relationships, we can increase knowledge on how teachers' mental representations relate to children's behavior and how we can influence these representations to improve relationship quality.

### **Examining the development of teacher-child relationship quality**

Relationships are a result of many interactions that happen over time on multiple occasions (Pianta et al., 2003). Developmental research has shown that there is no single factor or moment in time that automatically leads to poor development (e.g., Egeland, Pianta, & OGawa, 1996). Instead, problems that occur over time in one specific area may increase and spread to affect

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later outcomes through transactional effects (Masten, Burt, & Coatsworth, 2006). Therefore, there is a need for understanding the developmental pathways, and the processes within those developmental pathways, that may reduce risks of poor development. Extending this view of teacher–child relationships, negative relationships during several school years may have a greater negative impact on children’s school adjustment than having a negative relationship with a teacher in one (part of the) school year. Therefore, it is important to investigate how teacher–child relationships, characterized by teachers’ perceptions of closeness, conflict, and dependency, develop from kindergarten through the end of elementary school, and how they affect children’s motivation and academic achievement. If long-term negative teacher–child relationships during elementary school are indeed harmful for children’s functioning, it seems even more important to develop effective interventions that diminish teacher–child relationship problems.

To date, most previous relationship research has been done in kindergarten or the early years of elementary school (e.g., Doumen et al., 2008; McCormick & O’Connor, 2014). Longitudinal research examining teacher–child relationship quality over a longer period of time, as measured by conflict, closeness, and occasionally dependency, usually ended in middle school, with a few exceptions (e.g., Hamre & Pianta, 2001; Jerome et al., 2009). Psychological risk and stress theories underscore the importance of studying relationship quality for a longer period of time, as a sustained exposure to poor-quality relationships may have an effect on children’s functioning (Ladd, Herald-Brown, & Reiser, 2008). For example, when children are continuously exposed to poor-quality relationships instead of during one moment in time, children are likely to be at greater risk of maladjustment in school (Ladd & Troop-Gordon, 2003). In contrast, continuous exposure to supportive relationships may be more beneficial for children’s development than experiencing support at one moment during a school career (Spilt, Hughes, Wu, & Kwok, 2012a). The few studies that investigated teacher–child relationship quality longitudinally, however, found either decreases (Pianta & Stuhlman, 2004) or increases (Jerome, Hamre, & Pianta, 2009) in teacher–child relationship quality during elementary school, indicating that there is still no consensus on how children’s relationship with teachers, in general, develop over time. These contradictory findings suggest that there is a large variability in relationship trajectories over time: Different groups of children may have a different relationship trajectory with their teachers during the elementary school years.

Central to studying teacher–child relationship longitudinally is the

identification of the factors that affect certain developmental pathways, and how these developmental pathways affect children's motivation and academic achievement. Several factors, such as individual children's characteristics, may influence long-term poor-quality teacher-child relationships (Pianta et al., 2003). Although few studies have investigated how children's characteristics influence long-term relationships in general (Hughes et al., 2008; Jerome et al., 2009), there is still a need for research on how individual characteristics, such as gender and behavioral dispositions, have an effect on the risk of developing problematic relationships during elementary school.

In this dissertation, the first aim is to identify possible trajectories of teacher-child relationship quality from kindergarten through elementary school, as indicated by trajectories of closeness, conflict, and dependency. Additionally, we aim to explore which particular characteristics of children increase the risk of developing a poor-quality relationship trajectory, and how such a poor-quality relationship trajectory influences children's motivation and academic achievement at the end of elementary school.

### **Teachers' mental representations and children's externalizing behavior**

Some children have an increased risk of developing a poor-quality relationship with their teacher. This poor-quality teacher-child relationship can be characterized as high in conflict, high in dependency, and/or low in closeness. When identifying the factors that lead to poor teacher-child relationships, the following question arises, which is related to our second aim: Why do teachers perceive their relationships with certain children to be of poor-quality? It is known that children's externalizing behavior is one of the most important risk factor for poor relationship quality (e.g., Lei et al., 2016). To examine why teachers experience poor-quality relationships with children displaying externalizing behavior, it is important to get insight into their feelings, attitudes, and (self-efficacy) beliefs (i.e., teachers' mental representations). Teachers' mental representations are usually not researched to the fullest extent. Mental representations are believed to include more than just the cognitive perceptions of teachers (Pianta, 1999). They also include teachers' feelings about a specific child, including positive feelings, feelings of anger, and feelings of helplessness. Such feelings are closely related to teachers' cognitions about being able to deal with a child effectively (i.e., self-efficacy beliefs), about being a secure base for a child and understanding the child's perspective, and about regulating the child's behavior in a sensitive

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way. All these factors contribute to teachers' images of the child and their approach of how to build a supportive relationship (Spilt & Koomen, 2009; Stuhlman & Pianta, 2002).

In teacher–child relationship research, questionnaires are commonly used to assess how teachers perceive their affective relationship with specific children. Although results from questionnaires usually contain important general information about perceptions of teacher–child relationship quality, they do not provide insight into teachers' unconscious thought processes that may precede certain teachers' behavior (Spilt & Koomen, 2009). There is a need for other instruments to capture teachers' mental representations. Thus far, implicit interview techniques are considered to be most suitable to gain insight into operating processes that people are unaware of (Maier, Bernier, Pekrun, Zimmermann, & Grossmann, 2004). Interview techniques are considered implicit when specific questions and related answers do not directly correspond with different psychological constructs (Furman & Wehner, 1994). Interviews and associated qualitative coding systems, where answers to interview questions are rated by independent coders using a description of the construct to assess, may uncover aspects that are not perceived directly by the person that is being interviewed.

Pianta (1999) proposes that semi-structured interviews, such as the Teacher Relationship Interview (TRI) may help uncover teachers' mental representations. Previous research has indicated that the TRI, together with a qualitative coding system, generates a better understanding of teachers' information processes, affective experiences and feelings, and teachers' self-efficacy beliefs (Stuhlman & Pianta, 2002; Spilt & Koomen, 2009). Therefore, in this dissertation the TRI will be used to examine how teachers' mental representations of relationships are related to various externalizing child behaviors. Generating insight into teachers' mental representations may help increase knowledge on why teachers' relationships with children who display externalizing behaviors are considered to be of low-quality. Such information is needed to develop effective interventions that aim to improve teachers' relationship perceptions (Spilt & Koomen, 2009).

### **Improving teacher–child relationships**

Teachers' ability to perceive and understand the child's social and emotional needs, and in turn, to respond adequately to the child's signals, is central to teacher–child relationship quality (Pianta et al., 2003). Therefore, the teacher is usually seen as the central agent who has the opportunity to

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improve dyadic relationships (Goodlad, 1991; Sabol & Pianta, 2012). Most available interventions, however, are not specifically focused on improving teacher–child relationship quality, but on changing children’s behavior (Conray et al., 2015; Sutherland et al., 2018) or teachers’ relationship with the entire classroom (Capella et al., 2012; Cook et al., 2018). To date, only a few studies have examined the effects of several interventions that aim to improve dyadic teacher–child relationships (Driscoll & Pianta, 2010; Vancraeyveldt, Verschueren, Van Craeyevelt, Wouters, & Colpin, 2015). Most of these focus mainly on altering teachers’ behaviors in interactions with children. However, rather than starting with changing teachers’ practices, Pianta (1999) argues that interventions should start by influencing teachers’ mental representational models of relationships instead. The third aim of this dissertation is to evaluate an intervention that can possibly improve teachers’ poor-quality relationship perceptions by stimulating them to reflect on their mental representational models.

Pianta (1999) argues that teachers’ mental representations of relationships can act as self-fulfilling prophecies because they seem to reinforce themselves over time. Specifically, teachers are inclined to seek information consistent with the beliefs they already have about a child, leading to relatively constrained or rigid mental representations of relationships. Teachers should therefore be stimulated to pay attention to new information about the child instead of letting their previous experiences and perceptions constrain current interactions (Pianta, 1999). A way of stimulating a more open mindset or different perception of the relationship is to focus interventions explicitly on constructing more flexible mental representations of teachers (Pianta, 1999). Research about altering teachers’ mental representations is scarce, but parent–child research implies that stimulating more flexible mental representations of relationships can be achieved by letting parents reflect on thoughts, feelings, and beliefs about the relationship (Slade, Grienemberger, Bernbach, Levy, & Locker, 2005).

Reflection, or reflective functioning, refers to a process in which someone becomes aware of his or her mental state, including attitudes, feelings, and intentions (Fonagy & Target, 1998). One of the most relevant aspects of reflective functioning is the caregiver’s capacity to deviate from previous experiences and instead focus attention on new input from actions and behaviors during specific interactions in the here and now (Slade et al., 2005). Teachers can also be stimulated to reflect on their relationships with individual children, to create awareness of their mental representations (Pianta, 1999). A first step is to guide the teacher in narrating their representation of

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the relationship by using semistructured interviews: Giving words to beliefs and feelings of the relationship (Pianta, 1999). The TRI can be used as an assessment tool in research but is at the same time a tool to let teachers narrate their relationship representations in the context of an intervention (Pianta, 1999; Spilt, Koomen, Thijs, & Van Der Leij, 2012b). By giving labels to narrations using theoretically driven relationship constructs, new information about the relationship and an overview of the relationship can be presented to teachers. Subsequently, this overview of the relationship can help the teacher understand connections between feelings, beliefs, and behaviors toward a specific child and to find effective ways of how to improve (aspects) of the teacher–child relationship (Pianta, 1999; Spilt et al., 2012b).

The theoretical ideas of Pianta (1999) have been the basis for LLInC (Leerkracht-Leerling Interactie Coaching in Dutch, or Teacher Student Interaction Coaching; Koomen & Spilt, 2010-2016). LLInC uses relationship-focused reflection and was previously referred to as the Relationship-Focused Reflection Program (Spilt et al., 2012b). In a first study, Spilt and colleagues (2012b) found that relationship-focused reflection improved kindergarten teachers' sensitive behaviors toward individual children. Mixed results were found regarding improvements in teachers' perceptions of relationship quality. In this dissertation, we examine the extent to which an intervention using relationship-focused reflection improves teachers' perceptions of relationship quality in upper elementary school.

### Chapter overview

A substantial body of research has emphasized the importance of affective teacher–child relationship quality in elementary school. In this dissertation, we aim to advance insight into the development of teacher–child relationship quality through elementary school, by identifying reasons for why teachers experience poor relationships with certain children, and exploring how poor-quality teacher–child relationships can be improved. To this end, we have formulated three central aims.

The first aim is to clarify how many children and which children experience longtime poor-quality relationships with their teacher. Cumulative experiences of poor-quality teacher–child relationships may have a longer lasting impact on children's development than temporary difficulties with a teacher at a specific moment during a school year. In Chapter 2, therefore, we will examine how children's relationships with teachers, as indicated by the level of teacher–child closeness, conflict, and dependency, develop during

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the entire elementary school period. In addition, we will examine whether child characteristics, such as gender or behavior problems, increase the risk of a poor-quality relationship trajectory during elementary school. Also, we will determine whether different relationship trajectories affected children's motivation and academic achievement in the last year of elementary school.

The second aim of this dissertation is to examine how individual children's behaviors affect teachers' mental representations of relationships. In Chapter 3, we will use a semi-structured, implicit interview technique to capture teachers' mental representations of the relationship with a specific child. Instead of asking teachers explicitly how they perceive a relationship with a specific child, teachers were asked about specific experiences and accompanying feelings in interactions with the child to uncover implicit aspects of teacher-child relationship quality. An important goal of Chapter 3 is to identify how different types of externalizing behaviors are related to teachers' mental representations of relationships with specific children. Most research to date employs a composite measure of children's externalizing behavior, whereas theorists have made a distinction between children's hyperactivity or impulsivity and conduct problems (Hinshaw, 1987). Importantly, hyperactive behavior and conduct problems are usually found to be related to different outcomes in school (DuPaul & Stoner, 2003; Snyder, Prichard, Schrepferman, Patrick, & Schoolmiller, 2004). Therefore, it is important to investigate how these types of externalizing behavior are related to teachers' feelings and beliefs about the relationship.

The third aim is to find an effective way of how teachers' perceptions of poor-quality relationships can be altered into more neutral or even positive relationship perceptions. Therefore, in Chapters 4 and 5, we will examine how teacher-child relationships can be improved through a teacher-based coaching intervention, called LLInC. More specifically, we test whether LLInC, which focuses on teachers' reflection on mental representations of relationships with specific children, enhances teachers' perceptions of relationship quality and teachers' student-specific self-efficacy beliefs. In a previous study into LLInC (Spilt et al., 2012b), kindergartners were selected based on a variation in disruptive behaviors rather than relationship problems. This way of selecting children may have influenced their mixed findings regarding improvements in teacher-child relationship quality. Children that participate in Chapter 4 and 5 have been selected based on teachers' perceptions of experienced relationship problems. In Chapter 4, we first evaluate LLInC in elementary school more exploratory. We will examine the usefulness of LLInC using a multiple baseline case study design, a single-

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subject method which is considered to offer a promising framework for improving practices for individual teachers (e.g., Horner et al., 2005). After examining the intervention more exploratory, we evaluate LLInC in Chapter 5 using a large sample of teachers and children in elementary schools in the Netherlands. We compare an intervention group, receiving LLInC, with a control group receiving no intervention. We additionally investigate whether effects of LLInC transfer to other poor-quality teacher–child relationships in the classroom.

Finally, the results of all chapters are integrated in Chapter 6. The findings are discussed in light of the aims of this dissertation and recent views in research and practice. Directions for future research and recommendations for practice are presented.