CHAPTER 1

Introduction
Thomas—

“My students really pulled all the energy out of me. At a certain point I felt that I was useless for my family as well as for the school. I am better off choosing a different profession before I burn-out”.

(Citation from Thomas, a beginning teacher who quit teaching)
1. Introduction

Teaching is a highly stressful profession; many teachers from various countries report high levels of stress (e.g., Chaplain, 2008; Johnson & Birkeland, 2003; Johnson, Cooper, Cartwright, Donald, Taylor & Millet, 2005; Kyriacou, 2001; Newberry & Allsop, 2017; Skaalvik & Skaalvik, 2015). In the Netherlands specifically, the Centraal Bureau voor de Statistiek (2015) reports that teachers have the highest percentage of burnout symptoms of all professionals, indicating that one of five teachers experience these symptoms. Teachers also report higher workloads than other professionals (Hooftman, Mars, Janssen, de Vroome & Van den Bossche, 2015), and four of five Dutch secondary school teachers report heavy to extremely heavy workloads (van den Berg & Scheeren, 2017).

More particularly, beginning teachers (less than five years’ teaching experience) seem more vulnerable to the pressures of the profession than experienced teachers (Gavish & Friedman, 2010; Goddard, O’Brian & Goddard, 2006; Gold & Roth, 1993). A recent U.S. study showed that one-quarter of beginning teachers are at risk of stress in their first year of professional practice (Fitchet, McCarthy, Lambert & Boyle, 2018). High levels of stress among teachers can harm education in many ways; for example, it can have a negative influence on students’ perceptions of teachers’ teaching quality (Hanif, 2004), students’ achievement (Klusmann, Richter & Lüdtke, 2016; Ronfeldt, Loeb & Wyckoff, 2013) and students’ well-being (Oberle & Schonert-Reichl, 2016). In addition, teachers with high levels of stress are more likely to experience burnout and leave the teaching profession (Jones & Youngs, 2012; Klassen & Chiu, 2011; Newberry & Allsop, 2017; Perryman & Calvert, 2019), which can lead to teacher shortages. The shortage of teachers has been reported as a real, large and growing problem in many countries, including the Netherlands and United States (e.g., Ministerie van Onderwijs Cultuur en Wetenschap, 2015; Sutcher, Darling-Hammond & Carver-Thomason, 2016).

Taken together, these factors point to the necessity of decreasing stress levels among teachers, especially beginning teachers. In several countries (e.g., England, Scotland, United States), teachers are offered an additional training programme during their first years of teaching, also known as an induction programme. These more or less formalized programmes aim to support beginning teachers in their first years of teaching after their initial teacher education (Beijaard, Buitink & Kessels, 2010). These programmes seek to create a smoother transition, from initial teacher education to the first professional teaching job, and they usually include one or more of the following components (induction arrangements): (1) workload reduction (e.g., no mentor tasks, fewer teaching hours); (2) supporting effective teacher classroom behaviour (e.g., providing a coach/mentor to observe lessons and provide feedback); (3) supporting school enculturation (e.g., providing background information regarding the school culture/climate) and (4) supporting professional development (e.g., organising meetings/courses for beginning teachers).
In recent years, the Dutch Ministry of Education, Culture and Science has supported projects to stimulate the implementation of induction programmes at Dutch secondary schools. Given the supportive nature of induction programmes, it is expected that the programmes have a powerful impact in reducing the amount of stress beginning teachers experience. However, little is known about the impact of different elements of the induction programmes on beginning teachers’ stress (unique effects), and questions remain about which elements should be included in an induction programme to reduce beginning teachers’ stress in the future. Research assessing the effectiveness of particular intervention strategies to help teachers and schools reduce teacher stress is needed (Kyriacou, 2001). This knowledge can help schools provide sufficiently targeted and tailored support for beginning teachers.

This dissertation aims to investigate beginning secondary school teachers’ stress in the context of induction programmes. The following section presents the main research questions. The next section then explains how this dissertation conceptualizes and frames teachers’ stress and explicates extant research on teacher stress and the effectiveness of induction programmes for reducing it. The final section provides an overview of the studies that constitute this dissertation.

1.1 Research questions

Investigating beginning secondary school teachers’ stress in the context of induction programmes is complex. To provide structured insights into this topic, we conducted four separate studies. First, we investigated how to measure stress among beginning teachers. Second, upon establishing a robust, psychometric measurement of stress, we continued by examining how beginning teachers’ stress relates to their teaching behaviour and attrition (leaving the teaching profession). Third, we investigated the effects of induction arrangements on beginning teachers’ stress. Fourth, to understand how and why beginning teachers experience stress and how and why they respond the way they do, we examined differences in stress experiences between highly stressed leavers (beginning teachers who left the teaching profession within five years of teaching) and highly stressed stayers (beginning teachers who did not leave the teaching profession within five years of teaching). We conducted these investigations with the aim of answering the following research questions:

1. How can the stress experienced by beginning teachers be measured?
2. Do beginning teachers’ stress, teaching behaviours and attrition relate?
3. What are the longitudinal effects of induction arrangements on beginning teachers’ stress?
4. What are the differences between highly stressed leavers’ and stayers’ stress?

The following section explains how this dissertation conceptualizes teachers’ stress, as well as how beginning teachers’ stress, teaching behaviours, attrition and induction arrangements relate theoretically, according to a general stress model.
1.2 Theoretical framework

To date, experts in the field have provided no consistent definition of (teacher) stress. Competing bodies of literature on teacher stress originate from different fields (e.g., Izawa, Saito, Shirotuki, Sugaya & Nomura 2012; Klassen & Chiu 2010). In general, two general perspectives on (teacher) stress can be distinguished. One perspective views stress responses (e.g., negative emotions) as a result of external factors, beyond the individual (e.g., heavy workload). The other perspective theorises that stress is internal; it pertains to what goes on inside individuals as they interpret or react to what is going on around them (Gold & Roth, 1993). For example, the transactional model of stress (Folkman, 2013; Lazarus & Folkman, 1984) depicts work stress as a result of an interaction and appraisal process between employees and their environment. Due to the on-going debate about the definition of stress and the varying usage of the term ‘teacher stress’, this dissertation uses the term more as a label indicating a specific field of (applied) research.

Following van Veldhoven (1996), we divide teacher stress into (1) stress causes, (2) stress responses and (3) stress outcomes. Stress causes are all the aspects of the work content and the work situation that influence teachers at the cognitive, motivational and emotional levels. For example, student misbehaviour is a stress cause. Stress responses refer to the teachers’ mental interpretation when experiencing stress causes, such as feeling negative emotions (van Veldhoven, 1996). Finally, stress outcomes are the organizational outcomes resulting from persistent stress causes and responses. Leaving the teaching profession (attrition) is a stress outcome.

1.3 Stress model

To shed light on the relationships among beginning teachers’ stress causes, stress responses and stress outcomes, we use a framework based on the transactional model of stress (Lazarus & Folkman, 1987; Lazarus, 2006) and the job demands–resources model (JD-R model; Bakker & Demerouti, 2007), as depicted in Figure 1.1. In this framework, stress outcomes like teacher attrition and less effective teaching behaviour result from the interaction and appraisal process between a person (i.e., teacher) and his or her environment (i.e., school/classroom). The stress model in Figure 1.1 has several elements. The first is a person, who has certain beliefs and individual resources (Lazarus, 2006). Beliefs relate to how a person views him- or herself and his or her place in the environment. They form a person’s expectations about what is likely to happen, as well as what she or he fears or hopes for. Individual resources affect what a person is able and unable to do. In general, resources are social, organizational, psychical or psychological aspects that are useful in achieving work goals; reducing job demands and the associated psychological and physiological costs; and stimulating development, learning and personal growth (Bakker & Demerouti, 2007). Some examples of individual resources include self-care, effective coping skills, effective teaching skills and personal attributes (e.g., sense of...
humour).

The next element is *environment*, which involves job demands and contextual resources. Job demands are the organizational, social, physical and psychological aspects of the job that require continual investments of psychological and/or physical effort or skills (Bakker & Demerouti, 2007). Contextual resources can help teachers cope with the stress caused by job demands. Some examples of such resources include school/administrative support, support from a mentor or support from colleagues (Beltman, Mansfield & Price, 2011).

According to the model, the person and the environment interact, in a person–environment relationship (Lazarus, 2006). This interaction leads to a *primary appraisal*, in which the teacher assesses whether the situation needs his or her attention and whether it appears negative. For example, if a teacher believes that students can only learn in a quiet environment but notices that students are talking in the classroom, she or he will appraise the situation negatively, and it becomes a potential stress cause. Next, a *secondary appraisal* takes place, in which the teacher evaluates whether he or she has the resources (individual or contextual) to cope with this stress cause (Mansfield, Beltman & Price, 2014). The teacher could, for example, have received advice from a mentor for how to deal with such a situation.

The third element of the model, *strain/stress responses*, can be physiological, affective or behavioural. Stress causes lead to stress responses, though resources can mitigate this relationship. For example, if advice from a mentor gives the teacher the ability to quiet the students, the teacher experiences less tension than if students had continued talking. Finally, the model posits that stress responses can lead to negative stress outcomes. If the teacher continuously experiences discontent due to the challenges of the teaching job, she or he ultimately might leave the teaching profession.
Figure 1.1 Proposed conceptual model of stress based on the JD-R model (Bakker & Demerouti, 2007) and the transactional model of stress (Lazarus, 2006; Lazarus & Folkman, 1984, 1987).
1.4 What is known

Induction programmes are well received and highly valued by beginning teachers (Draper, O’Brien & Christie, 2004; Hodkinson, 2006); research shows that they improve beginning teachers’ teaching quality and retention rates, as well as students’ achievement (e.g., Helms-Lorenz, van de Grift & Maulana, 2016; Hobson, Ashby, Malderez & Tomlinson, 2009; Ingersoll & Strong, 2011; Smith & Ingersoll, 2004). Therefore, it is likely that these supportive programmes have powerful impacts on reducing the stress that beginning teachers experience. However, little is known about the impact of different elements of induction programmes on beginning teachers’ stress (unique effects). To investigate the influence of induction arrangements on beginning teachers’ stress, it is important to establish ways to measure stress among beginning teachers, reliably and validly. Prior research shows that the main stress causes among teachers are education-specific workloads (e.g., large class size), student misbehaviour, poor relationships at work, role ambiguity, lack of job autonomy and poor school ethos (Borg & Riding, 1991; Chen & Miller, 1997; Hanif, 2004). Therefore, these stress causes are important to measure when investigating teacher stress. Although many (teacher) stress questionnaires exist, none of them include all these important stress causes. Therefore, one of them needs to be adjusted to cover a more comprehensive scope of important stress causes.

An appropriate stress questionnaire can support investigations of the relationships among beginning teachers’ stress, attrition and teaching behaviour. Although previous research on teacher stress has indicated the significant role of stress in relation to attrition and teaching behaviour (Gilboa, Shirom, Fried & Cooper, 2008; Montgomery & Rupp, 2005; Tubre & Collins, 2000), the results remain inconclusive due to the fragmented nature of the research that studies these variables. Moreover, research linking teachers’ stress to actual teacher attrition is scarce (Helms-Lorenz et al., 2016); most studies focus on teachers’ intentions to quit their job (e.g., Jones & Youngs, 2012).

Previous research has established the following elements as effective support for beginning teachers: (1) having a trained mentor who takes sufficient time to guide the teacher (Gaikhorst, Beishuizen, Korstjens & Volman, 2014; McCormack, Gore & Thomas, 2006), (2) positive relationships with colleagues (Pogodzinski, 2014), (3) positive relationships with peers (Le Cornu, 2013; McCormack et al., 2006), (4) a positive relationship with one’s supervisor (Pogodzinski, 2014) and (5) supportive family and friends (Le Cornu, 2013; Mansfield et al., 2014). Induction programmes include some of this support for beginning teachers, such as offering them a mentor/coach and organizing meetings with other beginning teachers (i.e., intervisio/peer coaching). Therefore, induction programmes should influence beginning teachers’ stress, but more research is needed to investigate this influence.

Finally, most research examining the relationships among teachers’ stress, attrition and professional support is quantitative and therefore lacks in-depth explanations of teachers’ experiences and interpretations regarding causality. In addition, Lazarus (2006) notes that stress cannot be solely understood from a person’s environment; rather, stress is the result of the interaction of a person and
his or her environment. Therefore, to shed light on the stress experiences of beginning teachers and add to a deeper understanding of the relationships among their stress, their experienced support and their decision to leave or stay in the teaching profession, qualitative research is needed to address how and why questions, as a complementary approach and to understand these relationships in more detail.

1.5 This thesis

The main aim of this dissertation is to investigate the complex subject of beginning secondary school teachers’ stress in the context of induction programmes. To provide structured insights into teacher stress and induction programmes, the dissertation describes four studies (Chapters 2–5), each conducted using (parts of) the conceptual model displayed in Figure 1.1.

Chapter 2 addresses research question 1, investigating how to measure the stress experienced by beginning teachers. This chapter describes two studies. The first study focuses on adjusting an existing stress questionnaire to make it appropriate to measure stress among beginning teachers. We tested existing items in terms of their relevance for the teaching context, then added relevant teacher-specific stress causes from previous research. The second study examines the factor structure, internal consistency, scalability, construct validity and criterion validity of the adjusted stress questionnaire.

Chapter 3 addresses research question 2, by investigating the relationships among beginning teachers’ stress, attrition and teaching behaviour. Using a structural equation modelling framework, we determine which stress causes are significantly and positively related to which stress responses and then which stress responses are significantly and positively related to attrition and teaching behaviour.

Chapter 4 aims to answer research question 3 by investigating the effects of induction on beginning teachers’ stress. To provide a general picture regarding changes in stress over time and the influence of individual induction arrangements on (changes in) stress causes and responses, we conducted longitudinal research. To this end, we collected data from 393 beginning teachers across three consecutive years and analysed them using multilevel latent growth curve modelling.

Although Chapters 2–4 provide valuable information regarding beginning secondary school teachers’ stress in the context of induction programmes, all three chapters are quantitative studies and focus on only parts of the stress model (Figure 1.1). To understand beginning teachers’ stress in the context of induction in more detail, we conducted qualitative research, focussing on the interaction between beginning teachers and their work environments, in Chapter 5. The aim of this study is to answer research question 4, or how and why beginning teachers experience stress and how and why they respond to it, by investigating the differences between highly stressed teachers who stayed in the profession (stayers) and highly stressed teachers who left the teaching profession within five years (leavers) via semi-structured interviews.
Finally, **Chapter 6** presents general conclusions and a discussion combining the findings of all the studies covered in this dissertation. In addition, we reflect on the limitations and theoretical and practical implications of the research and suggest avenues for further research.