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PROFESSIONAL LEARNING

WHAT TEACHERS WANT TO LEARN

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PROFESSIONAL LEARNING: WHAT TEACHERS WANT TO LEARN

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Monika Leonie Louws
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INTRODUCTION

1.1 INTRODUCTION AND CONTEXT

Teachers matter. They matter for schools and for students (Day, Sammons, Stobart, Kington, & Gu, 2007). From research on teachers' professional learning and school effectiveness, teachers are recognized to be key in the success of schools (Muijs et al., 2014; Timperley & Alton-Lee, 2008). In addition, policy makers and school managers are becoming increasingly aware of the teacher being the key to students' development in schools. As a consequence, teacher professional development has received considerable attention in research and practice as a way to maintain high teaching standards.

At the same time, teacher learning is inherent to the teaching profession because teaching is a complex profession with changing demands (from students, parents, school boards, governments) and changing curriculum standards requiring continuous development. Teachers are learning throughout their careers because of teaching day in and day out, because of changing school contexts and curricula, because of national and local school reform, or because changes in tasks and responsibilities. An example of this continuous development is that teachers are expected to stay informed and up-to-date on current insights into students' learning processes and how their subject can best be taught.

Although teachers are recognized as key figures in developing high quality education for students, they are hardly involved in school's policy making and professional development initiatives (Ball & Cohen, 1999; Czerniawski, 2013; Lieberman & Mace, 2008; Van Veen, Zwart, & Meirink, 2012). Furthermore, teachers are not owners of their own professional development and are sometimes portrayed as having difficulties to assess their own teaching competences. More specifically, several studies show that teachers do not always direct their learning in the most effective or meaningful manner (Abrami, Poulsen, & Chambers, 2004; Fox, Muccio, White, & Tian, 2015; Garet, Porter, Desimone, Birman, & Yoon, 2001; Mansvelder-Longayroux, 2006; Van Eekelen, Vermunt, & Boshuizen, 2006; Vermunt & Endedijk, 2011).

Research on teacher professional development and teacher learning has rarely focused on what teachers themselves say they want to learn. The general aim of this dissertation is to contribute to the current literature on teacher professional development and teacher learning by taking a teacher-centered perspective, guided by the question of what, how and why teachers themselves want to learn.

1.1.1 THE CONTEXT OF PROFESSIONAL LEARNING IN THE NETHERLANDS

The studies addressed in this dissertation on teachers' professional development (PD) took place in the Netherlands. Throughout this dissertation, findings were compared with studies from other PD scholars. It seems appropriate to issue a notion of caution here, since the work of PD scholars is strongly contextualized in Anglo-Saxon countries, such as the United Kingdom, the United States and New Zealand, that seem to cope with strong accountability pressures from the government. Their system of PD and national policies differs greatly from the Dutch context.

In general, schools in the Netherlands do not have a strong culture of performance evaluation of teachers, nor is there a mandatory national system of continuous evaluation or qualification (points) for teachers[1]. In contrast with other countries (e.g., Spain, UK,

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[1] Note: the government has recently initiated a national register for teachers, to which all teachers need to have signed up by 2017. This register had not been implemented while the research reported on in this dissertation was being conducted.

USA), Dutch teachers have professional autonomy to engage in professional development and participation in PD is voluntary and not linked to salary or career incentives. The Dutch context is characterized by great variation in the extent to which teachers engage in PD (Bakkenes, Vermunt & Wubbels, 2010; De Vries, Jansen & Van de Grift, 2013; Diepstraten et al., 2011).

Although the national inspectorate made a statement in 2012 that teachers are lagging behind in their competencies to teach all levels of students, their basic instructional and pedagogical competencies are good and the Netherlands is among the top ten performing education systems worldwide (OECD, 2014). As a consequence, PD in the Netherlands looks quite different from PD in, for example, the United States, where teaching competencies are much more variable and students score rather low on PISA rankings. In low-performing countries, improving teaching skills seems a more urgent issue. Dutch teachers do not have to follow a performance agenda, nor are they tied to yearly performance evaluations. They are asked to use their time for professional development (i.e., 10 percent of their time) wisely, time which is partly taken up with obligatory school-based professional development. Schools are held responsible for high teaching quality[2] which is monitored by the national inspectorate. Consequently, schools differ in the resources they have at their disposal for teacher professional development and in their learning cultures.

In 2013, a national teacher agenda was initiated by the Dutch Ministry of Education, which aimed to raise the standard of teaching, reduce teacher attrition, and improve initial teacher education. Another aim of the teacher agenda is to strive for a 'strong profession', because a self-aware profession can develop from 'within' and thereby make teaching more attractive to future students. For this reason much emphasis is placed on the 'voice' of teachers in this agenda: teachers are experts on teaching and should be involved in decision-making on all aspects of their profession.

In the light of this context, it is relevant to study how teachers engage in professional learning and what their professional autonomy looks like in practice. The Dutch context lends itself to teachers steering their own learning, but very little research has been done on how teachers get involved in this process of self-directed learning.

1.2 TEACHER PROFESSIONAL DEVELOPMENT AND TEACHER PROFESSIONAL LEARNING

Teacher learning can take different forms: as teachers teach and learn from and in practice (Ball & Cohen, 1999; Horn & Little, 2010); as they engage in formally organized learning activities such as coursework, seminars, or school-based group sessions (Kwakman, 2003; Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011); as they make sense of or negotiate ongoing educational reforms (Hoban, 2002; Van Veen & Sleegers, 2009); and as they are part of their broader school community or a smaller designated professional learning community (Little, 2012). The level of planning and consciousness of teacher learning may differ across these settings. As with any type of professional learning, teacher learning can be implicit and reactive, as well as deliberate (Eraut, 2000), and the settings in which teacher learning occurs vary from out-of-school training settings to local classroom

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[2] Under the Education Professions Act, it's schools' responsibility to keep teaching quality high (Dutch: wet BIO)

practices. As a result, teacher learning has been viewed as 'a patchwork of opportunities – formal and informal, mandatory and voluntary, serendipitous and planned – stitched together into a fragmented and incoherent "curriculum"' (Wilson & Berne, 1999, p. 174 quoting Ball & Cohen, 1999). As a consequence, scholars have addressed the importance of conceptualizing effective professional development that supports teacher learning throughout their careers (Borko, Jacobs, & Koellner, 2010; Opfer & Pedder, 2011; Van Veen & Kooy, 2012), because teachers' professional learning is not confined to their initial teacher education and induction programs but is an integrated aspect of their work and lives (Day & Gu, 2007; Feiman-Nemser, 2001)

Prevailing ideas on teacher professional development include the idea that it can have an instrumental function to 'fix' problems if student results are declining, or the idea that it can support national policy changes, innovations or school reforms that need to be adopted by classroom teachers. In this approach teachers are perceived as recipients of knowledge which only needs to be enacted in teaching practice (cf. deficiency perspective, Clarke & Hollingsworth, 2002). Consequently, PD is misaligned with the problems of practice and often does not meet the requirements of effective PD (Van Veen et al., 2012). PD programs often do not fit teachers' own learning preferences or their specific concerns when it comes to their own professional development. They may see it as irrelevant to their classroom practice (Borko, 2004; Opfer & Pedder, 2011; Webster-Wright, 2009). Teachers then experience PD initiatives as 'next to useless' because the PD was misaligned with their particular professional learning needs. Ball (1996), therefore, argues for 'professional autonomy', since teacher learning is especially productive when teachers are in charge of the PD agenda, when they determine the shape and course of their own development, and when they experience a high level of ownership. In addition, Borko et al. (2010) explain that active involvement of teachers in professional development is an important feature of effective professional development. Or, as Day (1999, p. 16) puts it:

> Teachers cannot be developed (passively). They develop (actively). It is vital, therefore, that they are centrally involved in decisions concerning the direction and processes of their own learning.

For professional development to better address teachers' problems in practice, there is a need for a change in terminology that is 'congruent with a notion of professionals as engaged, agentic individuals, capable of self-directed learning' (Webster-Wright, 2009, p. 724). Instead of using the word 'professional development' that is *done* to teachers, professional *learning* seems more apt, as it recognizes learning as professional growth and perceives teachers as agents in this developmental process (Loughran, 2006; Nilsson, 2012; Timperley, Wilson, Barrar, & Fung, 2008; Webster-Wright, 2009). Nilsson (2012, p. 239) explains professional learning as occurring:

> when teachers take control of their own professional knowledge development and conduct their learning in response to their perceived needs, issues and concerns. In considering professional learning from this perspective it suggests that such learning is directed by an initial need in the learner. The learning occurs with and by the teachers … not to or for the teachers and the teachers themselves have an active role in that learning process.

The discourse of professional learning also differs from professional development in that it recognizes the ongoing, situated nature of teacher learning. Most teacher learning occurs in the workplace and is initiated by teachers themselves (Hoekstra, Beijaard, Brekelmans, & Korthagen, 2007; Lohman & Woolf, 2001). In recent decades, much emphasis has been on how teacher learning can best be supported in and outside the workplace. There has been an emphasis on the types of learning activities that teachers engage in and leadership practices supporting teacher learning. To add to this body of understanding of teacher learning, we focus in this thesis on what teachers themselves want to learn and how the workplace environment is experienced as supportive when they are choosing their learning goals.

This dissertation attempts to relate teachers' learning to their teaching experience to inform a coherent curriculum of teachers' professional learning across a teaching career.

1.3 CONCEPTUAL FRAMEWORK
1.3.1 SELF-DIRECTED PROFESSIONAL LEARNING

Learning is defined in this thesis as a change in behavior or cognition (Bakkenes et al.,2010; Fenstermacher, 1994; Meijer, Verloop, & Beijaard, 1999; Putnam & Borko, 2000). Teacher learning does not only involve behavioral change, but also changes in teachers' attitudes and beliefs (Hargreaves & Fullan, 1992). Thus, in our definition of learning, cognition is understood as 'the integrated whole of theoretical and practical insights, beliefs, and orientations on the part of the individual' (Zwart, Wubbels, Bolhuis, & Bergen, 2008, p. 983). Taking teacher professional learning from a normative re-educative perspective, teacher change is regarded as a complex process in which teachers' beliefs and practices interact with school context and cultures (Richardson & Placier, 2001; Sleegers & Leithwood, 2010). In this light, change is being 'driven by personal beliefs, interests, motivations and social/historical contexts and processes rather than solely through rational and logical accumulations of knowledge and skills via participation in a learning activity' (Opfer, Pedder, & Lavicza, 2011, p. 446). More specifically, teachers' learning is understood as influenced by both self-perceptions (e.g., self-efficacy, career aspirations), specific task characteristics and responsibilities, and teachers' perception of the context (i.e., as situated in practice, influenced by current classroom or school-wide issues) (Borko et al., 2010; Imants & Van Veen, 2010; Opfer & Pedder, 2011; Tynjälä, 2008).

The concept of *self-directed learning* is used to refer to teachers' active role in deciding what, how and why to learn. The research tradition on self-directed learning is derived from theories on adult learning that emphasize that adults have a sense of personal autonomy in their learning. This means that learners take control of the goals and purposes of learning and assume ownership of it (Garrison, 1997; Knowles, 1970; Merriam, 2001). Self-directed learning seems especially relevant for teachers as learners, because teachers are generally held responsible for their own professional learning and high quality education. We understand that this focus is a very particular perspective on teacher learning, because it is narrowed down to deliberate teacher learning and learning initiated by teachers themselves. We acknowledge, however, that learning can also take place from spontaneous, reflective and implicit learning processes (Eraut, 2000) and as a consequence of organizational change (Tynjälä, 2008), but these are much harder to take

into account in planning (individual) teachers' professional learning.

Different phases can be distinguished in self-directed learning (Knowles, 1970; Tough, 1979). These phases generally comprise a needs assessment, planning, engaging in learning, and an evaluation phase. We studied teachers' professional learning goals and learning activities as the initial steps in teachers' self-directed learning (Tough, 1979). The needs assessment phase is important for determining learning goals and thus for the direction of what is to be learnt. The content of teachers' learning goals may vary according to different learning domains (e.g., classroom management, assessing students, within-classroom differentiation). Other scholars have found that teachers may experience difficulty in articulating clear learning goals[3] for themselves (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012; Mansvelder-Longayroux, 2006; Van Eekelen et al., 2006), because their own learning is not a topic teachers talk about much in their school context.

In the planning phase, teachers choose learning activities that help them to achieve their learning goals. An additional focus was on how teachers choose to learn in their everyday work, which was investigated by asking them about their preferred learning activities.

Teachers' self-directed learning should not be understood as a solely individual activity, but is informed by the successes and problems they experience in practice, by school climate, tasks and responsibilities, and national and school policies (Confessore & Kops, 1998; Horn & Little, 2010; Kwakman, 2003; Mushayikwa & Lubben, 2009; Wilson & Berne, 1999). When teachers assess their own learning needs, their decision-making can be influenced by a combination of these different internal and external factors (Merriam, Caffarella, & Baumgartner, 2007). For self-directed learners to arrive at learning goals, it is necessary for them to weigh external goals set by the educational institution or their organization in the light of their own learning goals (Billett, 2011; Ellinger, 2004). Internal factors relate to what personal or professional considerations drive teachers to engage in self-directed learning. Previous studies have addressed what motivates people to choose teaching as career (Hildebrandt & Eom, 2011; Mansfield & Beltman, 2014; Ng, 2010), but rarely have they addressed teachers' motivation for engaging in professional learning, which seems especially relevant in a context where teachers are expected to direct their own learning. In the self-directed learning process of deciding what and how to learn, we were interested in understanding what underlies this decision-making and focused on the question of why teachers want to learn.

1.3.2 TEACHING EXPERIENCE IN TEACHER LEARNING
Working towards a coherent curriculum for teacher professional learning requires differences in teaching experience to be taken into account (Van Veen & Kooy, 2012). Previous studies indicate that teaching experience seems to matter: for student-teacher relationships (Brekelmans, Wubbels, & Van Tartwijk, 2005; Veldman, Van Tartwijk, Brekelmans, & Wubbels, 2013); for general job satisfaction and engagement (Parker, Martin, Colmar, & Liem, 2012); commitment to teaching (Day & Gu, 2007); uptake of professional learning activities (Richter et al., 2011); growth of practical knowledge (Meijer, 2010); motivation for certification (Hildebrandt & Eom, 2011); and effectiveness in teaching (Day,

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[3] *In this thesis, the terms 'professional learning goals' and 'learning goals' were used interchangeably to refer to this first step in teachers' self-directed learning.*

Stobart, Sammons, & Kington, 2006; Van de Grift, Van der Wal, & Torenbeek, 2011). In general, the observed trend seems to be that practical and/or experiential knowledge and skills increase, whereas participation in professional learning and the motivation to do so, job satisfaction and commitment decrease as teachers become more experienced.

Teachers at the beginning of their careers can be assumed to have different learning goals than mid- and late-career teachers due to differences in expertise and professional life phases (Anderson & Olsen, 2006; Berliner, 2004; Day et al., 2007). Teacher learning research taking teaching experience into account has mostly been done in settings for formal learning (e.g., participation in university courses), whereas most teachers' professional learning is found to occur in informal or workplace settings (Kwakman, 2003; Kyndt, Gijbels, Grosemans, & Donche, 2016). Different models of professional life phases can be distinguished from literature on teachers' professional lives. These phases combine teachers' professional, personal and contextual lives in order to understand their development (Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993) and they can be distinguished by years of teaching experience. Fessler & Rice (2010) explain these phases as 'sequential stages that mirrored the timeline of teachers' experiences' (Fessler & Rice, 2010, p. 582). These professional life phases models were designed based on extensive empirical quantitative and qualitative research with different perspectives on teacher development (i.e., describing trajectories for Huberman, explaining variation in effectiveness for Day, and understanding teachers' PD for Fessler & Christensen). As a consequence, these models have different assumptions about the relationships with teaching experience. For instance, the work of Christopher Day and colleagues sought to find key influences on teachers' work and effectiveness in different professional life phases, distinguished in situated, professional, and personal factors. As a consequence, the authors identified subgroups of teachers within each phase that differed in their perceived identity, motivation, commitment, and effectiveness. With the notion of professional and personal lives, the authors managed to form a holistic understanding of the complex relationships between different phases and the impact on teachers' work and effectiveness. Rather than holding on to teachers' exact years of experience, these authors have established a framework that tells how teachers' professional life phase, their professional identity together with contextual and personal factors influences teachers' commitment, resiliency, and effectiveness.

Themes that are present across the different professional life phase models are commitment to teaching, effectiveness, self-efficacy, ambition, work-life balance, managing tensions, and relating to students (see Table 1 for an overview of themes from three professional life phase models[4]). All the professional life phase models address an induction phase that characterizes the entrance into the profession and socialization in the teaching job. Beginning teachers face challenges in learning to deal with student behavior, trying to gain the respect of students and colleagues, struggling to develop a professional identity and trying to improve their instruction for their students (Rolls & Plauborg, 2009). After teachers have become established in the profession comes a mid-career phase. Here, the different models describe quite different pathways. The commonality in this mid-career phase is that teachers are becoming settled in their careers, committing themselves to teaching and trying to improve their effectiveness in teaching. On the other hand, teachers

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[4] The other two models that are sometimes referred to in this thesis, one from Berliner (2001) and one from Fuller (1969), were excluded from this overview because they do not address an entire teaching career but focus only on the first years in teaching. However, Fuller's concerns were included in the phase description of Huberman's trajectories because Huberman's model builds on Fuller's findings.

can become disillusioned because they realize that they cannot put their teaching ideals into practice or frustrated because of tensions in their work or personal lives (Day et al., 2007; Fessler & Christensen, 1992). The late-career phases are characterized by lessened commitment to school and job satisfaction as was the case earlier in the teachers' careers (Rolls & Plauborg, 2009). Teachers in their final years look back with confidence on their careers and at the same time are gradually withdrawing themselves from the profession.

Throughout the studies, we tried to use the themes and related research findings from the professional life phase models to understand variation in teachers' self-directing their learning related to teaching experience.

1.3.3 TEACHER PROFESSIONAL LEARNING AND THE SCHOOL AS LEARNING ENVIRONMENT

As explained earlier, teacher learning is not a solely individual (isolated) activity. Literature reviews indicate that the effectiveness of teachers' professional development is highly dependent upon the context in which the teacher is operating (Borko et al., 2010). Teachers' workplaces vary in the level of learning opportunities they provide in daily teaching practice (Borko et al., 2010; Horn & Little, 2010), in opportunities to learn together with colleagues (Little, 2012), and in opportunities to apply new knowledge and skills that are learned outside the school context. A range of studies have looked at relevant workplace conditions for teachers to work and learn (Ellström, 2001; Eraut, 1995; Rosenholtz, Bassler, & Hoover-Dempsey, 1986; Sleegers & Leithwood, 2010; Smith & Gillespie, 2007; Smylie, 1995) and they produced similar findings on what constitutes important workplace conditions in terms of employee learning. In our research, structural (e.g., learning resources, PD policies), cultural workplace (e.g., culture of collaboration, shared school vision) conditions and leadership practices were distinguished as keys to how teachers direct their own learning.

It is assumed that the objective workplace conditions alone do not influence teachers' learning, it is how teachers make sense of their workplace as a learning environment, and, as a consequence, how they act in response to their environment (Coburn, 2005; Hoekstra, Brekelmans, Beijaard, & Korthagen, 2009; Imants, Wubbels, & Vermunt, 2013; Tynjälä, 2012). In this sense-making approach teachers are seen as individuals who compare school-organizational messages with their preexisting framework and decide whether to act upon school policy or not (Coburn, 2001; Luttenberg, Imants, & Van Veen, 2013). We studied the relationships between what a school organization offers teachers to learn in terms of professional learning (affordances), and how teachers make sense of what they are offered and how and to what extent they act upon it (agency) (Billett, 2011).

Table 1.1 *Thematic summary of professional life phase models*

PHASE	DAY ET AL (2007)*	HUBERMAN (1993)	FESSLER & CHRISTENSEN (1992)
1 **Day** **0-3 years** **Huberman** **0-3 years** **F&C** **0-2 years**	Commitment: support and challenge a) developing sense of efficacy b) reduced sense of efficacy	Exploration phase period of survival and discovery - "reality shock", trial-and-error, easy or painful beginnings - preoccupation with self (*Fuller's self concerns*) - combining instruction with management - enthusiasm, responsibility - starting professional (colleagues)	Induction - socialization into the system: strives for acceptance by students, peers, and supervisors - attempts to achieve a comfort and security level in dealing with everyday problems and issues - phase may also be experienced when shifting to another grade level, another school - some disillusionment when reality conflicts with ideals
2 **Day** **4-7 years** **Huberman** **2-10 years** **F&C** **2-4 years**	Identity and efficacy in the classroom a) sustaining a strong sense of identity, self-efficacy, and effectiveness b) sustaining identity, efficacy and effectiveness c) identity, efficacy and effectiveness at risk	Stabilization phase Professional commitment - choosing teaching as career - feelings of independence & autonomy - consolidation of basic pedagogical mastery (*Fuller's instructional concerns*) - relaxation, natural authority	Competency building - striving to improve teaching skills and abilities - receptive to new ideas and seeks out new materials, methods, and strategies - attend workshops and conferences and enroll in graduate programs through their own initiative - job is seen as challenging, and eager to improve their repertoire.
3 **Day** **8-15 years** **Huberman** **>10 years**	Managing changes in role and identity: growing tensions and transitions a) sustained engagement b) detachment/loss of motivation	Experimentation and diversification - consolidated pedagogical mastery > attempts to increase impact by experimenting in class (*Fuller's impact concerns*) - highly motivated and dynamic, personal ambitions - search for new challenges	Enthusiastic and growing - teachers have reached a high level of competence in their jobs but continue to progress as professionals - enthusiasm and high levels of job satisfaction and commitment: love their jobs and the interaction with their students - constantly seek new ways to enrich their teaching - supportive and helpful in identifying appropriate in-service education activities for their schools

Table 1.1 *Continued*

PHASE	DAY ET AL (2007)*	HUBERMAN (1993)	FESSLER & CHRISTENSEN (1992)
4 **Day** **16-23 years** **Huberman** **15-20 years**	Work-life tensions: challenges to motivation and commitment a) further career advancement and good pupil results have led to increased motivation/commitment b) sustained motivation, commitment and effectiveness c) workload/managing competing tensions/career stagnation have led to decreased motivation, commitment and effectiveness	Reassessment (not everyone!) - stage of self-doubt e.g. sense of routines (mild vs. extreme crises) - occurs at mid-career: drawing a balance sheet of their professional lives up to now	Career frustration - frustration and disillusionment with teaching: Teachers feel locked into an unfulfilling job - teachers begin to question why they are doing this work (burn-out occurs in this phase) - frequently at mid-point in one's career, but also increasing incidence of such feelings among teachers in relatively early years of their careers
5 **Day** **24-30 years** **Huberman** **>20**	Challenges to sustaining motivation a) sustained a strong sense of motivation and commitment b) holding on but losing motivation	1. Serenity and relational distance - 'ease in the classroom' - less professional investment (low level of ambition, less need to prove oneself) - relational distance to students 2. Conservatism and complaints - increased rigidity & dogmatism - more resistance to innovations	Stability - reached a plateau in their careers - "a fair day's work for a fair day's pay": they are not committed to the pursuit of excellence and growth - others at this stable stage can be characterized as maintaining, with selective enthusiasm for teaching. - teachers at this stable stage are in the process of disengaging from their commitment to teaching
6 **Day** **31+ years** **Huberman** **>30** **F&C** **30+ years**	Sustaining/declining motivation, ability to cope with change, looking to retire a) maintaining commitment b) tired and trapped	Disengagement - gradual withdrawal - prepare for retirement	Career wind-down - preparing to leave the profession. - for some: a pleasant period in which they reflect on the many positive experiences they have - for others: a bitter period, one in which a teacher resents the forced job termination or perhaps, cannot wait to leave an unrewarding job.

Note. * Day et al. (2007) distinguish sub groups of teachers in each phase; those teachers that are able to remain committed, motivated and/or effective and those who experience challenges in their commitment, motivation and/or effectiveness.

1.4 OUTLINE OF THIS DISSERTATION

The general aim of this dissertation is to explore what, how and why teachers want to learn and how this relates to teaching experience and their workplace experiences. This research was based on the following assumptions:

a) teachers are active agents who self-direct their learning, set learning goals and plan learning activities as the initial steps in directing their own learning; (chapter 2, 3, 4 and 5)
b) teachers' current professional concerns are an important source for their learning goals; (chapter 3)
c) there is a relationship between teachers making sense of their workplace context when selecting their learning goals and the workplace affording them learning opportunities; (chapter 4) and
d) teachers with different years of experience may vary in their learning goals, learning activities and motivation for learning. (chapter 2, 3 and 5)

The studies described in this dissertation were designed based on these assumptions. This meant that a design close to teaching practice was necessary to ensure ecological validity when trying to understand what teachers choose as their learning goals and what professional concerns and contextual factors influence this decision-making. With the qualitative studies, described in chapters 2, 3 and 4, we were first and foremost interested in learning about how teachers direct their professional learning at their workplaces. We assumed that getting acquainted with the schools and their teachers would make it easier to understand teachers' ongoing professional learning, their professional concerns, and their perceptions of the school context. This is why each qualitative study started with an extended three to four-month (internship) period of classroom visits and informal talks with teachers and school management prior to actual 'data collection' (i.e., interviewing teachers) (see Appendix A for a detailed description of these internships). With the questionnaire study, described in chapter 5, we wanted to study teachers' self-directed learning in a larger population of teachers. This large-scale study made it possible to draw inferences about whether variation in teachers' self-directed learning can be ascribed to differences in their levels of teaching experience.

1.4.1 DESCRIPTION OF SCHOOL CONTEXTS

Because the qualitative studies took place in two schools, a short description of each school context is included here.

School 1 has approximately 1,200 students and 100 teachers, is located in an urban area, and offers two levels of schooling (5- or 6-year programs, preparing students for vocational and university education, respectively). Three teachers recently went to a conference abroad to learn about ICT innovations in the classroom, for example the use of social and new media, and electronic learning environments. These teachers were asked to inform their colleagues in a meeting about the use of ICT to get students more involved.

Moreover, the school was investing in an induction program for pre-service and beginning teachers as part of a school-university partnership. Over the last two years, ten teachers had been invited to participate in a course on coaching beginning teachers and to obtain a coaching certificate. The school offers teachers the opportunity to spend 10 percent of their working hours on professional development, part of which is filled automatically with required school-based professional development activities, and the remaining hours with professional development activities chosen by the teachers themselves. According to the school's managing director, there is no explicit plan for teachers' professional development, so school leaders can react to changes in the school as and when necessary. The school's personnel policy does not include formal performance interviews.

School 2 has approximately 1,700 students and 120 teachers, is located in a suburban area, and offers the same two levels of schooling as School 1. School leaders recently held performance interviews with their teaching staff that included a lesson visit, feedback, student questionnaires and a conversation on current performance. In addition, school leaders organized a short survey to understand the causes and consequences of their teachers' work load experiences. For the past three years, the school's plenary study days (compulsory for all teachers) have focused on ICT use in classrooms, primarily on implementing laptop education for the lower grades and on teachers' skills regarding the use of the digital whiteboards in the classroom. School 2 is part of a larger school partnership which organizes professional development for beginning teachers. This school's professional development policy is that PD is considered part of a teacher's regular task, that there is a budget for PD (roughly 600 dollars/year), and that it is up to the teacher to take up new PD initiatives. Although there is no explicit plan for PD, most school-wide learning activities focus on learning about ICT in the classroom.

1.4.2 OVERVIEW OF CHAPTERS
Chapter 2: Teachers' professional learning goals in relation to teaching experience
In the first small-scale qualitative study in one secondary school (School 1), 16 teachers were interviewed about their professional learning goals. We explored relationships between teachers' learning goals and their years of experience, guided by the following research question:
What is the relationship between teachers' professional learning goals and their years of teaching experience?
This question was answered through semi-structured interviews about teachers' learning goals. After that teachers' learning goals were mapped onto varying levels of teaching experience in a cross table. This allowed us to explore how teachers with different teaching backgrounds differed to the extent they wanted to learn about specific learning domains. The results are explained by relating the content-specific differences with models of professional life phases.

Chapter 3: Understanding teachers' professional learning goals from their current professional concerns
In the second small-scale qualitative study in one secondary school (School 2), focusing on the relationships between teachers' learning goals and their professional concerns, 15

teachers were interviewed twice. The first interview addressed their professional learning goals (similar approach to chapter 2), and the second interview aimed to elicit teachers' current professional concerns that were influencing their daily work and the direction of their learning. For this second interview a card-sorting task was used. An important assumption in this study was that teachers' current experiences of their work situation reflected their professional life phase. This study tried to understand the decision-making of teachers in setting their own learning goals by zooming in on their underlying professional concerns and was guided by the following questions:

1. *How can teachers' learning goals be understood from their current professional concerns?*
2. *How do teachers' learning goals and their current professional concerns relate to their teaching experience?*

In the data analysis teachers' current professional concerns were related with their professional learning goals in order to understand what concerns underlie teachers' learning. Models of professional life phases were used to interpret the variation between teachers with different levels of teaching experience.

Chapter 4: Exploring the relation between teachers' perceptions of workplace conditions and their professional learning goals

For this study, the interview data on teachers' professional learning goals of both qualitative studies (School 1 and 2) were combined. We explored the relationship between individual teachers' learning goals and their perceptions of their workplace environment, guided by the following research question:

How do teachers' perceptions of workplace conditions relate to their professional learning goals?

Because of our specific focus on how teachers make sense of their workplace as a learning environment, a research design was needed which was sensitive to particularities in different school contexts. For this reason, we first summarized how 31 teachers in the two different school contexts perceived their workplace conditions. Of these 31 teachers, four teachers were selected based on their perceptions of the school as learning environment (two from each school): one teacher that perceived the school as enabling learning and one that perceived the school as constraining learning. For each teacher we described the relationship between their perception of the workplace conditions and their choice of learning goals.

Chapter 5: Teachers' self-directed learning and teaching experience: what, how, and why teachers want to learn?

In the large-scale questionnaire study 309 teachers were asked about what, how, and why they want to learn, guided by the following question:

To what extent does teachers' self-directed learning (what, how and why teachers want to learn) relate to their years of teaching experience?

In the analyses, different learning domains ('what'), different learning activities ('how'), and different reasons for learning about a particular learning domain ('why') were distinguished. When relating teachers' years of experience to their preferred learning domains, learning activities, and reasons for learning, we predicted that these relationships do not necessarily have to be linear, but tested for non-linear relationships as well.

TEACHERS' PROFESSIONAL LEARNING GOALS IN RELATION TO TEACHING EXPERIENCE

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TEACHERS' PROFESSIONAL LEARNING GOALS IN RELATION TO TEACHING EXPERIENCE[5]

ABSTRACT

In this study, we explored the relationships between teachers' self-articulated professional learning goals and their teaching experience. Although those relationships seem self-evident, in programs for teachers' professional development years of teaching experience are hardly taken into account. Sixteen teachers with varying years of experience and subjects were interviewed. The results show different professional learning goals, related to communication and organization, curriculum and instruction, innovation, responsibilities, and themselves as professional. Various relationships between professional learning goals and teaching experience emerged, which clearly reflect the development from early- to mid- and late-career teachers. Issues related to curriculum and instruction appeared to be learning goals for early- and mid-career teachers. This implies that regardless of increasing teaching expertise, curriculum and instruction (especially some subcategories related to Pedagogical Content Knowledge) remain central to teachers' continuous learning. Late-career teachers were interested in learning about extra-curricular tasks and innovations. Models of professional life phases (cf. Day et al., 2007) have been used to interpret these results.

2.1 INTRODUCTION

Teachers are expected to develop professionally throughout their career, due to constant changes in teachers' everyday contexts and changing policies and innovations in the field of education (Knight, 2002). This development is referred to as *continuous professional development*, and is considered a crucial factor for improving teacher quality, schools, and teachers' impact on student learning (Day, Sammons, Stobart, Kington, & Gu, 2007; Opfer & Pedder, 2011). A point of criticism with programs for teacher professional development is that teachers themselves are not involved in choosing the content (Van Veen, Zwart, & Meirink, 2012). As a consequence, these programs often do not match teachers' specific concerns when it comes to their own professional learning (Czerniawski, 2013; Opfer & Pedder, 2011). Subsequently, teachers often experience professional development initiatives as misaligned with their particular professional learning goals and irrelevant to their classroom practice (Little, 2012; Webster-Wright, 2009). However, there have been relatively few empirical studies aimed at understanding teachers' professional learning goals.

At the same time, a common problem with programs for teacher professional development is that they are designed in line with current school demands and trends, rather than based on a coherent and well-considered learning course for teachers for a longer period of time (Borko, Jacobs, & Koellner, 2010; Little, 2012; Van Veen et al., 2012). Neither are these programs geared to teachers' years of teaching experience, and they are not designed to build on teachers' previous experiences (Fessler & Rice, 2010). All teachers are treated more or less as if they are on the same level and have similar learning goals. Due to different knowledge levels and professional preferences, teachers can be expected to have different learning goals at different moments in their career. Teacher professional development could benefit from a learner-centered approach building on teachers' learning goals, problems in practice, and the teaching experience already acquired.

Recently, studies have pointed to the importance of addressing teachers as active agents in educational change efforts (Czerniawski, 2013; Hoban, 2002) and as directing their own professional development (Lohman & Woolf, 2001). A necessary condition for teachers to be self-directed learners is that they diagnose and become aware of their learning goals first (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012). For a better insight in how teachers diagnose what they want to learn it is of interest to study what teachers formulate as their professional learning goals and how this relates to teaching experience. This consideration has resulted in the following research question: *What is the relationship between teachers' professional learning goals and their years of teaching experience?*

2.2 CONCEPTUAL FRAMEWORK
2.2.1 TEACHERS' PROFESSIONAL LEARNING GOALS
In many studies on teacher learning the learning outcomes or learning activities within a specific educational reform or professional development context are examined (Bakkenes, Vermunt & Wubbels, 2010). However, teachers also learn when they engage in and learn from everyday classroom practice (continuous experiential learning) (cf. Czerniawski, 2013; Meirink, Meijer, Verloop, & Bergen, 2009), when they collaborate with colleagues

(Kennedy, 2011; Little, 2012) and from being part of a school system and its change processes (Hoban, 2002; Tynjälä, 2008). To understand *teachers' professional learning goals* as they emerge from their daily professional life and within their workplace setting, a situated inquiry is needed (Borko et al., 2010; Webster-Wright, 2009). Given this setting, we asked teachers about their experiences of professional learning and their current learning goals, which we will here refer to as teachers' professional learning goals (sometimes abbreviated to 'learning goals') (Opfer & Pedder, 2011; Webster-Wright, 2009). A learning goal is defined as a teacher's desired change in behavior or cognition (Bakkenes et al., 2010; Fenstermacher, 1994; Putnam & Borko, 2000).

Despite the fact that most teacher learning is typically reactive and unplanned (Vermunt & Endedijk, 2011), we focused in our study on teachers' intentional learning by asking teachers about their goals for professional learning. Intentional learning is easier to make explicit than implicit learning processes (Eraut, 2000). Also, because teachers can be considered active agents directing their own development as part of their professional life (Czerniawski, 2013), it was a logical step to focus on teachers' intentional learning. It is the only type of learning that can be taken into account in professional development planning (Janssen et al., 2012). Nonetheless, teachers might have difficulties defining concrete learning goals for themselves (Van Eekelen, Vermunt, & Boshuizen, 2006), which could result in methodological challenges when we try to get teachers to formulate learning goals.

2.2.2 TEACHER LEARNING RELATED TO TEACHING EXPERIENCE

Findings from previous studies seem to indicate that as experiential knowledge and skills increase, participation in professional learning or the motivation for learning decrease as teachers become more experienced (Day et al., 2007; Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011). Seen from a cognitive perspective, the expertise literature positions teachers as developing from novice, via advanced beginner and intermediate, towards expert teacher. For every stage different knowledge structures are distinguished, going from rule-driven, disorganized, and exemplary knowledge (novice) to an integrated, holistic, intuitive and situated knowledge base (expert) (Berliner, 2001). As a consequence, novice and expert teachers can be expected to differ in what they want to learn, why, and how.

Day et al. (2007) and Fessler and Rice (2010) have criticized earlier models of teacher development (e.g., Fuller, 1969) describing teachers' careers in fixed and linear stages, emphasizing pre-service, induction, and maturity phases. As an alternative, they suggest professional life phases which represent '[…] sequential stages that mirrored the timeline of teachers' experiences' (Fessler & Rice, 2010, p. 582) and can be distinguished by years of teaching experience (see Table 1.1 in Chapter 1). Most recently, Day et al. (2007) have shown that every phase can be characterized by different themes that are relevant to most teachers in the same phases of their careers. For example, Day's et al. (2007) first two phases (0 – 7 years of experience) include themes labeled Commitment [1] and Identity and Efficacy [2]; the third phase (8 – 15 years of experience) is called Managing changes in role and identity [3]; and the later phases (> 16 years of experience) are all related to Challenges to motivation and commitment [4, 5, 6]. The frameworks of professional life phases can provide insight into the variations in learning goals teachers formulate for

themselves. In this study we combined different models of professional life phases (Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993) and used these in interpreting our results.

2.2.3 WHAT DO TEACHERS LEARN IN THEIR CAREER?

Teachers differ in what they learn throughout their career. Feiman-Nemser (2001) introduced a teacher learning continuum in which early-career teachers' learning tasks are mainly related to content knowledge, students' characteristics, classroom management, and their own professional identity as a teacher (Feiman-Nemser, 2001). Later in their careers teachers focus more on extending subject matter knowledge, refining their repertoire, strengthening skills to improve teaching, and expanding responsibilities in the school (Feiman-Nemser, 2001). Although Feiman-Nemser based her continuum on the literature and her experiences as teacher educator, she did not explore what teachers themselves indicate to be central learning tasks related to their specific career phase.

In short, research (e.g., Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993) shows that there could be a meaningful relation between teachers' professional learning and teaching experience, but this has not been studied extensively, and a focus on teachers' own professional learning goals is lacking.

2.3 METHOD

2.3.1 RESEARCH APPROACH AND SAMPLE

To study teachers' learning goals as they emerge from classroom practice, a research design close to the context of teacher learning is needed (Putnam & Borko, 2000; Webster-Wright, 2009). We therefore opted for an in-depth, small-scale interview study in one secondary school.

Sixteen teachers from School 1 were interviewed. This particular secondary school offers education for five or six years, preparing students for vocational and university education, respectively. Recently, a workshop had been held on using technological innovations in the classroom to get students more involved. Moreover, the school was also investing in an induction program for beginning teachers, and ten experienced teachers had started a coaching course.

Prior to the interviews, a four-month period of acclimatization and socialization took place to learn about contextual factors that could influence teacher learning (see Appendix A). This period consisted of 60 classroom visits involving 30 teachers, and informal conversations with staff. From the teachers observed, 16 were selected for interviews, a selection first of all based on variation in years of teaching experience, and secondly variation in subject and gender (see Table 2.1).

2.3.2 INSTRUMENTS

Teachers do not regularly talk to others about their learning process, let alone their goals in furthering this process (Janssen et al., 2012). To study teachers' learning goals, we designed interview questions from various perspectives intended to support teachers in talking about their own learning (see Appendix B for interview questions). The combination of questions stimulated teachers to discuss such things as their concerns, recent learning

experiences and learning activities, feelings of mastery, and their aims and long-term plans (Janssen et al., 2012; Lohman & Woolf, 2001). From the various perspectives and the follow up-questions we were able to distil these teachers' professional learning goals.

Table 2.1 *Characteristics of teacher sample*

Characteristics	n
Men	8
Women	8
Years of experience[a]	
0 – 7	5
8 – 19	5
20 – 35	6
Subject domain	
Language	5
Science	5
Social studies	5
Other	1
Second career teachers	5
Teaching certification	
University degree	11
Non-university degree	4
No teaching certificate (yet)	1

[a]*This experience range was the result from combining the professional life phases of Day et al. (2007), Fessler and Christensen (1992), and Huberman*

2.3.3 PROCEDURE

All selected teachers were invited personally and agreed to participate. The interviews were semi-structured. After the interviews (approximately 75 minutes) had been conducted and transcribed verbatim, the teachers received the transcript of their interview to check whether they agreed with the text. In response to this member check, only two of the teachers suggested minor changes to the transcript.

2.3.4 ANALYSES

In order to develop a coding instrument to distinguish themes relating to teachers' learning goals, we created a list of domains derived from both open coding the interview transcripts (Miles &Huberman, 1994) and existing frameworks on teachers' knowledge structures (Magnusson, Krajcik, & Borko, 1999; Shulman, 1986; Van Driel & Berry, 2010) (see Table 2.2).

In this study, we defined learning goals as *desired change in behavior or cognition*. Sometimes teachers' learning goals were not specifically articulated as a goal but as an experienced deficit needing attention, as a concern in current practice, and as expected learning concerning a new task in the school. What these examples all have in common is that teachers explicate a wish to change something in their behavior or cognition, and that is why they were addressed as learning goals.

To analyze teachers' learning goals a data reduction of the interview transcripts was necessary; to this end, first a summary of each interview was made. Secondly, two researchers extracted key sentences from the summaries that represented teachers' learning goals according to the definition of a learning goal. Subsequently, they coded these key sentences independently from each other, which resulted in learning goals receiving a code from Table 2.2. Next, selected key sentences and codes were compared, disagreements were discussed, and adaptations made. As a final step in the analyses of teachers' learning related to teaching experience, a cross-case analysis was performed (Miles & Huberman, 1994). Therefore, we divided teaching experience into three broad categories, namely early career (0 – 6 years), mid career (7 – 18 years) and late career (19+ years). With the cross-case analysis we aimed to examine whether there were similarities and differences in learning goals across early-, mid-, and late-career teachers.

Table 2.2 *Codes and definitions for domains of teachers' professional learning goals*

Code	Domain of Learning Goal	Definition
1	Communication and classroom organization	Goals that deal with classroom rules, structure during the lessons, and classroom management; creating a safe learning environment; creating good teacher-student relationships. (cf. Shulman 1986)
2	Instruction and curriculum	Goals related to improving subject-related teaching strategies with regard to knowledge of a) instruction, b) students' learning, c) curriculum, d) assessment, e) subject content (cf. Magnusson, Krajcik, and Borko 1999; Shulman 1986)
3	Socialization	Goals related to how teachers (intend to) socialize themselves within their school environment and with regard to their colleagues/management.
4	Technological innovation	Goals triggered by working with (technological) innovations inside or outside the classroom which challenge the teacher and are often described as 'something new'.
5	Extracurricular tasks	Goals related to a particular non-teaching task of the teacher, or a specific position teachers fulfill in the school.
6	Teacher as professional	Goals related to problems teachers encounter while executing their job, and which affect their 'professional behavior'.

2.4 RESULTS

An overview of the different domains of professional learning goals relating to varying levels of teaching experience is presented in Table 2.3. The average number of learning goals per experience range was highest for early-career teachers, and lower for mid- and late-career teachers. It was only early-career teachers who formulated learning goals in terms of communication and classroom organization, whereas learning goals pertaining to curriculum and instruction were formulated by all teachers across the sample, although mostly by early-career teachers. Learning about technological innovations in the classroom and learning related to extracurricular tasks were typical of mid- and late-career teachers. Learning about yourself as a professional was mentioned only by early- and mid-career teachers.

Table 2.3 *Frequencies and means of teachers' learning goals related to teaching experience*

	Years of Experience						Total	
	Early 0 – 6 (n = 5)		Mid 7 – 18 (n = 5)		Late[a] 19+ (n = 4)		(n = 14)	
Domains of learning goals	f	m	f	m	f	m	f	m
1. Communication and classroom organization	6	1.20	0	0.00	0	0.00	6	0.37
2. Curriculum and instruction	11	2.20	7	1.40	1	0.25	19	1.19
3. Socialization	1	0.20	0	0.00	0	0.00	1	0.06
4. Technological innovation	0	0.00	1	0.20	3	0.75	4	0.25
5. Extracurricular tasks	0	0.00	4	0.80	1	0.25	5	0.31
6. Teacher as professional	3	0.60	4	0.80	0	0.00	7	0.44
Total goals	21	4.20	16	3.20	5	1.25	42	2.62

[a] Two teachers did not formulate explicit learning goals and were therefore left out

In the following we will discuss each learning domain in depth and in relation to individual teachers, taking their years of teaching experience into account (see Table 2.4 for an overview of each teacher's learning goals).

2.4.1 NO EXPLICIT LEARNING GOALS

Two teachers were not explicit about their learning goals: Paul [20][6] and Bernard [34] did not intend to learn new things and as a consequence could not indicate specific learning goals. For Bernard, for example, it was clear that there were no learning goals for him any longer because his students were satisfied and their exam results good:

> If students think that all goes well, then I don't have the idea that I necessarily have to change anything. (Bernard, [34])

[6] Number between brackets are teachers' years of experience

2.4.2 COMMUNICATION AND ORGANIZATION

Goals related to communication and organization, such as lesson structure, interacting with students, showing authority, and classroom management in general, were formulated by four early-career teachers and one mid-career teacher. Barbara [2] and Ryan [2] talked about lesson structure. For them it was important to learn about structuring the lessons so that classroom time is spent efficiently.

> Well I'm still working on effective and efficient. You know, I could be far more efficient with the time I have if I was far more structured, and I gave homework every day and I checked the homework and I had that kind of stuff you know. (Barbara [2])

Sara [4] and Duncan [<1] were concerned with classroom management. For them it was important to be perceived as an authority by their students.

> Or at least that [the students] have the impression 'oh, he is somebody, and he wants me to keep my mouth shut and pay attention, or else…', whatever that 'else' might be, but at least that they have the idea that they have to pay attention. And that is something that can definitely be improved, yeah. (Duncan [< 1])

2.4.3 INSTRUCTION AND CURRICULUM

Goals related to instruction and curriculum were formulated primarily by early- and mid-career teachers. With the early-career teachers, the goals were formulated as mastering skills for good instruction. With teachers with more than eight years' experience, the goals were more often formulated in terms of their day-to-day learning, for example slightly adapting instructions as a consequence of anticipating student mistakes made the previous day. We categorized this day-to-day learning only as a learning goal if it was the teacher's intention to change behavior. To understand this frequently mentioned learning domain better, we made subcategories based on a framework of Pedagogical Content Knowledge (PCK) (Magnusson et al., 1999). In the following, each subcategory will be discussed separately.

Instructional strategies

For nine teachers it appeared important to adapt their teaching to students' needs and to vary their instructional strategies. For Ryan [2] it was important to broaden his repertoire of instructional strategies, because he felt that he did not master enough ways of explaining scientific concepts to his students:

> Bending down to the student, that is really difficult for me in case of my 15-year-old students, but I hardly have lesson materials, I have been given hardly any tools to explain at that level. Sometimes my language is too difficult [for them], sometimes my language is too abstract, whereas they just want really concrete explanations. (Ryan [2])

For late-career teacher Patricia it was something she learns about on a daily basis, because she adapts her lessons instantly if she experiences problems with instruction.

> I have parallel classes and even after 27 years, you sometimes make wrong estimations, because I think, this is really easy and then it turns out not to be and then I can adapt it in the next class. (Patricia, [27])

Two early-career teachers (Sara [4] and Barbara [4]) mentioned activating students during instruction as an important way to get students more involved in their lessons and to let them produce spoken or written language and generate questions about the content of their subject.

> During the teacher education program I've created my own rule of thumb which is 'let them do the work' and that's something that I'm still working on, that I want to use more activating instructional strategies in my classes, because I think that students learn most in this way; you learn a language by using it. (Sara, [4])

Students' learning process
Two early-career teachers (Duncan [<1] and Barbara [2]) wanted to know more about how their students are learning their subjects and how as a teacher you can tap into that learning process.

> Because I know how I see it, but I see it as, you know, as a financial economist that has been years and years in the field, so, but also as a mother and a citizen and you know. But they are not mothers and citizens yet and they're not financial economists yet. So, they experience it in a really different way. And so I'm building on getting in touch with how they experience economics. (Barbara [2])

Curriculum development
Four early- and mid-career teachers (Sara [4], Susan [4], Richard [18] and Courtney [10]) wanted to learn how to design curricula for all the year level of their subjects.

> I've been appointed to adapt that curriculum to the new standards issued by the ministry, and I can see growth in that and that also connects directly with the content of the lessons (Richard [18])

Designing assessments
Two early-career teachers (Susan [4] and Sara [4]) were concerned with how to properly design assessments to assess particular skills their students need to master.

> but fluency, for example, that is really the biggest challenge of all language skills, certainly in such a big class. I can't let them all present, because I then lose 15 lessons, you see, that kind of problem (Susan [4])

Content knowledge
Two teachers indicated they wanted to learn about the content of their subject. Either because they felt insecure teaching content in which they have less expertise (Sara, [4]), or because they thought it is necessary to dive deeper into the content to enliven their lessons (Richard, [18]).

Table 2.4 *Professional learning goals per teacher related to teaching experience*

Career stage			
EARLY CAREER 0–6 YEARS	**DUNCAN (0.5)a** 1* Classroom management 2 Differentiate between students 2 Varying instruction 3 Being aware of school rules **SUSAN (4)** 2 Adapt teaching to student level 2 Developing curriculum and assessing skills	**RYAN (2)** 6 Saving energy 1 Structure during the lesson (transitions) 2 Increase variety of instructional strategies **SARA (4)** 1 Classroom management 2 Instructional strategies to activate students 6 Deal with lack of time 2 Assessment of students' skills 2 Curriculum development 6 Be a professional 2 Content knowledge	**BARBARA (2)** 1 Structure lesson efficiently 2 How students experience my subject (Economy) 2 Activating students (applying knowledge) 1 Flexible in handling own classroom rules
MID CAREER 7–18 YEARS	**COURTNEY (10)** 2 Curriculum development and assignments 4 Use ICT applications 5 Coaching novice teachers 6 Be a professional 2 Innovation in instruction **RONDA (12)** 2 Continue adapting instruction (improvise) 1 Improve interaction with students 5 Coaching novice teachers	**GERARD (10)** 6 Organize my work better 2 Varying teaching methods 5 Becoming a manager **RICHARD (18)** 5 Coaching novice teachers 2 Deepening content knowledge 2 Curriculum development	**ANNA (12)** 2 Continuously adapting instructional strategies 6 Asking for help when problems occur
LATE CAREER 19+ YEARS	**PAUL (20)** 0 No explicit learning goals **PHILIP (29)** 5 Developing as coach for novice teachers	**HENRY (20)** 4 Activate students by using ICT in the classroom **VICKY (30)** 4 Use ICT (social media/games)	**PATRICIA (27)** 4 Use more ICT in the classroom 2 Continuous adaptation of instruction **BERNARD (34)** 0 No explicit learning goals

Note. Under each name the core learning goals of this particular teacher are summarized. a Names are pseudonyms, numbers are years of experience *The numbers indicates the domain to which this goal belongs. 1 = Communication and classroom organization, 2 = Curriculum and Instruction, 3 = Socialization, 4 = Technological innovation, 5 = Extracurricular tasks, 6 = Teacher as professional

2.4.4 SOCIALIZATION

Goals concerning socialization as a teacher in the school context were only mentioned by one teacher, namely Duncan [<1] who had been working at this school for less than a year. For him it was important to learn the often implicit school rules.

> Those are things like how it goes in schools, maybe a little bit more about rules in school. Rules that I'm not aware of but the students are (Duncan [<1]).

2.4.5 TECHNOLOGICAL INNOVATION

Goals relating to innovation were all related to the technological applications that were a topic of discussion in the school at the time of interviewing. The innovation goals were mentioned by mid- and late-career teachers. Three late-career teachers (Henry [20], Patricia [27], and Vicky [30]) were hesitant to try out new ways of teaching via technological innovations, and some mentioned they did not feel comfortable using the digital blackboard in their classroom (Patricia [27]). The goals were formulated in terms of 'learning how it works' for late-career teachers and 'learn more about it' for mid-career teachers. Early-career teachers did not mention this as a learning goal.

2.4.6 EXTRACURRICULAR TASKS

These kind of goals were mentioned predominantly by mid-career teachers, and had to do with skills they needed for specific extracurricular tasks they were doing or planning to do.

An extracurricular task frequently mentioned was learning about coaching beginning teachers (Courtney [10], Ronda [12], Richard [18], and Philip [29]). Two teachers (Philip, Ronda) were experienced coaches and stated they were still learning a lot while coaching novice teachers (e.g., about their own teaching), while two mid-career teachers (Courtney, Richard) were in the middle of a coaching course and wanted to develop their coaching skills further by improving their conversation techniques and learn how to adapt their coaching to the learning needs of beginning teachers.

One mid-career teacher (Gerard [10]) expressed a wish to become a manager in the school. He wanted to climb the career ladder for several reasons: salary increase, more influence in school processes, and more variety in his work. To become a manager he has asked for feedback from one of the school leaders, and has requested permission to do a course on school management next year.

2.4.7 TEACHER AS PROFESSIONAL

These particular learning goals have to do with organizing your work better and act more professionally inside and outside the classroom, and were addressed by five early- and mid-career teachers. One early-career teacher, Ryan [2], wanted to learn how to save energy while teaching, because he feels really tired after a day full of lessons.

> I notice that teaching still takes a lot out of me, I spill a lot of energy. And I say spill because I think that I can achieve the same learning effect with less energy, the same student outcome. (Ryan [2])

Another example is mid-career teacher Gerard [10], who finds he is a bit chaotic in his work and sometimes does half work, so he wants to organize his work better. Anna [12]

said she needs to learn to address problems in her work (e.g., heavy workload) in time, by asking colleagues or managers for help. Both Gerard and Anna are aware of their role as professionals in terms of organizing their work more effectively.

2.5 CONCLUSION

Regarding the kinds of professional learning goals distinguished by teachers, our results have shown that a distinction can be made between learning connected with teaching practice, and learning connected with the school as a workplace. Teachers' learning goals were not aimed solely at improving their own teaching practice, but also at development as a professional (e.g., organizing their work load), their additional role within the school (e.g., coaching beginning teachers), and at issues currently encountered at the school (e.g., the use of technological innovations).

When relating this to teachers' years of experience, we found that after approximately 7 years of teaching learning goals were also aimed at broader themes outside the classroom, and at new challenges besides the goals related to their teaching practice. For example, mid-career teachers started courses to become licensed coaches for beginning teachers, or they became responsible for curriculum innovation in their school. This is in line with the study by Feiman-Nemser (2001), who found that after sufficient experience with instructional methods, teachers can focus on their active role in the broader school community and look beyond the classroom for new roles and responsibilities (Feiman-Nemser, 2001). Adding variation in job tasks is also thought to relate to teachers trying to remain challenged and motivated in their job (Day et al., 2007).

Another result relating to teaching experience was our finding that communication and classroom organization was a topic mentioned only by novice teachers. The early-career teachers in our sample formulated learning goals aimed at classroom instruction and curriculum, classroom organization and communication, and being a professional teacher. This result is connected with Fuller's (1969) stages of novice teachers' concerns; first teachers focus on themselves, next, they are concerned with their instruction, and even later on, they are concerned with the impact of their teaching on their students. Nonetheless, it appears that the early-career teachers in our sample were concerned with all these three topics simultaneously, in a pattern resembling Feiman-Nemser's (2001) central tasks of induction. Thus, novice teachers do not only want to focus on mastering communication with their students, keeping order and managing their classroom, as is frequently suggested in studies on teacher induction, but also on improved curriculum and instruction and growing as professional.

All early- and mid-career teachers we interviewed wanted to learn about curriculum and instruction in relation to the subjects they teach. With regard to literature on teacher expertise development, expert teachers are thought to have a more routinized teaching repertoire and a more distinctive domain-specific knowledge base than novice teachers (Berliner, 2001). In our study, we did not focus on distinguishing experts from experienced teachers, but in our teacher sample most learning goals that remained important for experienced mid-career teachers were related to learning about curriculum and instruction, and more specifically in the subdomain 'varying instruction to meet students' needs'. It

seems that from the teachers' perspective it is this type of knowledge (PCK) aimed at increasing student subject understanding which is considered an important learning goal for continuous professional learning (Magnusson et al., 1999; Van Driel & Berry, 2010). Other teacher knowledge domains, such as 'communication with students' and 'organizing classrooms' might become routinized more easily as teachers' experience increases.

Learning about curriculum and instruction was not a learning goal for the late-career teachers in our sample. Apparently, they do not see a need to formulate learning goals regarding students' subject understanding and other classroom-related knowledge as these have become automated in their teaching repertoire. At least, it does not require their attention or awareness to learn about this. Rather than learning about classroom practice, they were more interested in learning about technological innovations and extracurricular tasks, since these were demanding issues within their professional lives at the time of interviewing.

In terms of professional life phases as described by Day et al. (2007), Fessler and Christensen (1992), and Huberman (1993) our early-career teachers seem to go through a phase of forming their own *identity and efficacy* as a teacher (Day et al., 2007) (cf. Fessler and Christensens's *competency building* phase), because they were concerned with how to effectively structure lessons and increase their repertoire of instruction methods. In addition, some of our early- and mid-career teachers experienced a phase of *change in role and identity* (Day et al., 2007) because they were searching for new ways to increase the impact on their students, and growing into new roles and responsibilities in the school. For two of our late-career teachers the later phase of Day et al. (2007) relating *challenges to motivation and commitment* was applicable, because they did not want to invest in their professional development anymore.

2.5.1 LIMITATIONS

A potential limitation of our study was that we, as researchers, stimulated teachers to talk about their learning goals and thereby interfered in their regular classroom routines. This might have made teachers not fully self-directive in their statements. Teacher learning is a topic which is not often talked about in schools. Without our interference, these teachers might have not thought of these goals for themselves. This lack of dialogue and shared language about learning would make it difficult for teachers to self-direct their on-going learning (Janssen et al., 2012). Our multi-perspective methodology used in the interview questions appeared to be really useful in getting teachers to talk about their own learning goals. Having somebody else close to their current teaching context (e.g., colleague or teacher leader) ask various questions about their learning experiences may help teachers to become more aware of their own learning experiences and could therefore function as a good starting point for teachers to formulate their learning goals.

Teachers' learning goals suggest a certain goal-directedness in teachers' preferred learning. For some teachers these goals are not explicit, but this does not mean they do not learn. Their learning is fed more by day-to-day improvements, comparable to Eraut's (2000) distinction between reactive and implicit learning. Taking deliberate learning (in this study: learning goals) as a central measure of teacher learning will create the impression that these teachers are not learning and could therefore have limited our

results. Therefore, it is advisable not to take learning goals as the only measure of teachers' commitment to learning.

2.5.2 IMPLICATIONS

If we want to organize teachers' continuous professional learning in such a way that teachers' experience is taken into account, it seems that for early-career teachers learning opportunities are required relating to the problems they experience in practice. Mid-career teachers could be supported by providing opportunities for growth in curriculum and instruction (especially instructional strategies and curriculum development) and broader responsibilities in their job. Late-career teachers can best be supported by offering learning opportunities about new developments such as technological innovations. These learning opportunities, adjusted to teachers' experience, could be facilitated by the school, for example by regularly inquiring after individual teacher's professional learning goals and taking a long-term view on teachers' learning (Van Veen et al., 2012). For teacher leaders an overview of the learning goals of the teachers within their team can indicate what learning opportunities they should give priority when facilitating or organizing teacher learning in their schools.

UNDERSTANDING TEACHERS' PROFESSIONAL LEARNING GOALS FROM THEIR CURRENT PROFESSIONAL CONCERNS

3

UNDERSTANDING TEACHERS' PROFESSIONAL LEARNING GOALS FROM THEIR CURRENT PROFESSIONAL CONCERNS [7]

ABSTRACT

In the day-to-day workplace teachers direct their own learning, but little is known about what drives their decisions about what they would like to learn. These decisions are assumed to be influenced by teachers' current professional concerns. Also, teachers in different professional life phases have different reasons for engaging in professional learning. In this study we explored the professional concerns underlying teachers' learning goals in order to understand variation in professional learning over a teacher's career.

In this qualitative study we administered a semi-structured interview and a card sorting task to 15 teachers (ranging from 1 to 34 years of teaching experience) to elicit teachers' learning goals and current professional concerns. By conceptually combining learning goals with professional concerns, we distinguished three different types of concern-goal pairs: continuous, growth and improvement, and work-management pairs.

The results showed that early-career teachers have mainly growth and improvement concerns (personal ambition and socialization in the job) whereas mid- and late-career teachers have both continuous and growth and improvement concerns. Work-management concerns differ for early- and late-career teachers: the former are still trying to manage the job, whereas the latter try to avoid having a burnout. Results are further discussed in terms of professional life phase models and teachers' developmental tasks throughout their career.

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[7] This chapter has been submitted in adapted form as:

Louws, M.L., Meirink, J.A., Van Veen, K. & Van Driel, J.H. *Understanding teachers' professional learning goals from their current professional concerns*

3.1 INTRODUCTION

Most teacher learning occurs during teaching and does not necessarily depend on centrally organised learning activities (Kwakman, 2003). For this learning in the workplace, teachers are generally held responsible for choosing what and how to learn. This is especially true in the Dutch context where teachers are asked to use ten percent of their time for professional learning activities. However, there is hardly any research on how teachers direct their learning in these day-to-day settings (cf. Hoekstra, Beijaard, Brekelmans, & Korthagen, 2007). Previous research portrayed teachers as not willing to learn or unable to direct their own learning (cf. Van Eekelen, Vermunt, & Boshuizen, 2006), but this seems to contradict with the idea of teachers having a say in their own professional development. Moreover, only rarely do studies address what teachers *themselves* would like to learn (i.e., what are their professional learning goals) (Janssen et al., 2012). With this study we tried to better understand teachers' reasons for formulating professional learning goals (Day, Stobart, Sammons, Kington, et al., 2006).

To better understand the processes of teachers' ongoing and continuous professional learning in school contexts we adopted the research tradition of describing and understanding teachers' professional lives and careers (Day, Sammons, Stobart, Kington, & Gu, 2007; Rinke, 2008; Tang & Choi, 2009). Within this tradition, Day et al. (2007) state that teachers' professional learning is driven not only by teachers' sense of efficacy, but also by personal and professional lives and the school context. From their VITAE studies these authors conclude that professional learning over time plays an important role in teachers remaining committed and effective, because professional learning is described as an 'important professional life investment', 'recharging batteries', or 'renewal/refreshment' (Day et al., 2007, p. 148), or so-called 'personal drivers' of teachers' professional learning (Grundy & Robison, 2004). We aim to further examine the relationships between professional lives and teacher learning in this study and assumed professional lives to influence teachers' decision-making when self-directing their learning. Knowing what reasons underlie teachers' learning in their workplace and throughout their career can inform theories on what a professional continuum of teacher learning might look like (Beck & Kosnik, 2014; Feiman-Nemser, 2001; McMahon, Forde, & Dickson, 2015).

Furthermore, teachers in different phases of their career vary in their approach to choosing their learning goals, because '[…] the reasons that teachers undertake [C]PD may change over time – focusing on different "developmental tasks"' (Day, Stobart, Sammons, Kington, et al., 2006, p. 141). These developmental tasks have been well-researched for teachers in the induction phase (first years of teaching), but have received less attention for teachers post-induction (Feiman-Nemser, 2001). To understand the variation in teachers' learning goals for teachers with different years of experience we used models of professional life phases (cf. Fessler & Rice, 2010).

3.1.1 RESEARCH AIM

In our study, we assumed that teachers' current professional concerns, originating in professional life phases, provide insights into how teachers are directing their professional learning. As formulated in our research questions:

1. How can teachers' learning goals be understood from their current professional concerns?

2. How do teachers' learning goals and their current professional concerns relate to their teaching experience?

3.2 CONCEPTUAL FRAMEWORK

3.2.1 TEACHERS' PROFESSIONAL LEARNING AND LEARNING GOALS

Our study focuses on teachers' professional *learning* (Hoban, 2002; Nilsson, 2012). In studies on professional learning, teachers are addressed as active agents in educational change (Hoban, 2002) and as self-initiating professional learning activities (Lohman & Woolf, 2001). Teachers are viewed as active agents directing their own professional learning as part of their professional life (Czerniawski, 2013; Gravani, 2007). We specify teachers' professional learning as learning goals which can be considered the initial step towards planning their own learning (Janssen et al., 2012). We define learning goals as teachers' *desired change(s) in behaviour or cognition* (Bakkenes, Vermunt & Wubbels, 2010; Fenstermacher, 1994; Putnam & Borko, 2000), with cognition regarded as 'the integrated whole of theoretical and practical insights, beliefs, and orientations on the part of the individual' (Zwart, Wubbels, Bolhuis, & Bergen, 2008, p. 983).

3.2.2 PROFESSIONAL LIFE PHASES AND PROFESSIONAL CONCERNS

In this study we used three professional life phase models, in which phases in teachers' professional lives are distinguished on the basis of different professional concerns in each phase (Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993) (see Table 1.1 in Chapter 1 for an overview). The induction phase is characterized by becoming socialized in the profession and developing basic teaching skills, and is referred to as easy or painful beginnings Huberman (1993). After induction comes a phase in which teachers try to become stabilized in their profession, characterized as pedagogical mastery (Huberman, 1993), committing to the teacher profession (Huberman, 1993), and increasing perceived effectiveness (Day et al., 2007). Also, at this stage a period of enthusiasm and growth can be experienced, due to increased opportunities for continued (curricular) development and further career opportunities (Fessler & Christensen, 1992), also referred to as diversification and change (Huberman, 1993). After this phase a career crisis may occur (e.g., career frustration by Fessler and Christensen (1992) or reassessment by Huberman (1993)), as a result of disillusionment with the teaching profession or because ideals cannot be transformed into practice. Another cause for career crisis can be negative experiences in work and lives (e.g., work load, family tensions), as mentioned in the 'managing tensions' phase of Day et al. (2007). The final phases of the teaching career are characterized by teachers' confidence in their teaching abilities on the one hand, and gradual withdrawal from the profession with either positive memories or bitterness on the other. Huberman (1989) also asserts that each phase is part of individual trajectories, and although he tries to find similarities across these trajectories he finds just as many differences, due to the

idiosyncratic nature of teachers' lives. Hence, the mix of components that reflects a distinct phase can always be different for each individual.

The focus on concerns as influencing teacher learning started in 1969 with the seminal work of Frances Fuller. She claimed that in order to understand beginning teachers' learning to teach, it is necessary first to understand their concerns (Fuller, 1969). Beginning teachers' concerns develop from concerns of the self (self-concerns), via concerns with respect to pedagogy and curriculum (task-concerns) to concerns with respect to students' learning (impact-concerns). Later, scholars used Fuller's model of concerns in adapted forms, but the operationalization of concerns as teachers' worries, fears or problems remained (Kagan, 1992; Shoffner, 2011).

Rather than focusing exclusively on *problems* teachers may experience, we focus on professional concerns reflecting themes that matter most to teachers in their daily professional lives. We used the models of professional life phases to define themes teachers might be occupied with in light of their professional learning (see Method section).

3.3 METHOD
3.3.1 PARTICIPANTS AND CONTEXT
We approached 15 teachers from School 2 to participate in a study on teacher learning. The school had good exam scores and student numbers increased due to its good reputation. At the time, school management was investing in introducing laptops in the lower grades.

I spent four months in this particular school to become acquainted with the school context and teachers' day-to-day working lives (see Appendix A). For the interview study we selected 15 teachers who had been observed in the classroom, aiming for a representative sample in terms of teaching experience, gender and subject taught (see Table 3.1). Teachers were approached verbally and agreed to participate for two meetings of approximately one hour each: one a semi-structured interview about their learning goals, the other a card-sorting task. They were informed about the procedure (e.g., the possibility to opt out throughout the data collection phase) and the confidential treatment of the generated data. Time between interviews was one to three weeks, which ensured that teachers were 'fresh' when they started the complex card-sorting task but had already reflected on their current learning goals during the first interview. Afterwards, teachers received a copy of the interview summary for a member check. Nine teachers suggested small changes, such as leaving out risky remarks, clarifying acronyms or adding a sentence to nuance a statement made.

To compare the professional concerns of 15 teachers who were in different phases of their career, we distinguished three broad subcategories of teaching experience (early-, mid-, and late-career, see Table 3.1). This was done to generate hypotheses on how teachers' underlying concerns and their choices of learning goals are related to their current professional life phase.

Table 3.1 *Background characteristics of selected teachers*

Teacher pseudonym (male/female)	Years of teaching experience	Subject domain	
Alex (m)	1	Modern languages	
Hanna (f)	1	Modern languages	
Alissa (f)	3	Dutch language	EARLY-CAREER
Johan (m)	4	Biology	
Erik (m)	4	Philosophy	
Helen (f)	7	Biology	
Nicole (f)	10	Modern languages	
Vera (f)	12	Dutch language	MID-CAREER
Ferdinand (m)	13	Chemistry	
Bart (m)	15	Philosophy & English	
Rick (m)	19	Physics	
Hester (f)	25	Economics	
Lois (f)	28	Modern languages	LATE-CAREER
Caspar (m)	30	Mathematics	
Karel (m)	34	Geography	

3.3.2 INTERVIEWS

Learning goals interview

The focus of this interview was on eliciting teachers' learning goals (similar approach as in Chapter 2). Because teachers do not regularly talk about their learning, nor do they formulate concrete learning goals for themselves (Janssen, 2013), we used many perspectives to elicit these goals (see Appendix B). Sample questions are *'what have you learned in the past year(s)?'* and *'How do you see yourself and your teaching in five years from now?'*. We made summaries of the teachers' answers to the different questions and derived key sentences that reflected teachers' core learning goals (see Data analysis, phase 2).

Professional concerns

To determine the teachers' professional concerns that were specific to a professional life phase, we designed an instrument that could address this. Following Huberman's (1993) assertion that phases reflect a mix of components which can be different for each individual, we chose to present the participants with the separate themes that are important for teachers' professional lives. On the basis of three professional life phase models with different aims and backgrounds (Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993), the phases of concerns (Fuller, 1969) and a model of teacher expertise (Berliner, 2001), we elicited 33 themes, which were printed on cards to be used in a card-sorting task (see Appendix C). These themes were selected on the basis of our expectation that teachers would react differently to them in different phases of their professional lives. For example, *contact between teacher and student* is something beginning teachers might struggle with in terms of how to form good relationships with students, whereas very experienced

teachers might be more concerned with how to connect to young students' worlds.

For the instruction on the task we combined methodologies from the Q-sort task (Van Exel & de Graaf, 2005) and card-sorting tasks (Friedrichsen & Dana, 2003). Typically, the Q-sort methodology presents people with a sample of statements about some topic, and respondents are asked to rank these statements according to their preference, judgement or feeling about them. Also, sorting cards proved to be a useful tool for eliciting teachers' underlying orientations in the method used by Friedrichsen and Dana (2003). The authors found that 'it was not how the teacher sorted particular cards, but what the teacher said during the sorting that offered most insight' (p. 295).

The instruction for card sorting was 1) to go through the cards quickly and distinguish them according to whether the theme on the card was *relevant or important* for the teacher's work situation *right now* (+), or whether the theme on the card was absolutely *not relevant or important* for the work situation *right now* (-). Cards for which they could not really make a clear judgment could be placed in the middle (?), 2) to make a top-five selection of the cards on the + pile and a top-five selection of the cards on the – pile, and 3) to elaborate on how the top-five cards from the + pile influenced their daily work and learning. The responses were audiotaped and videotaped in order to see how the card-sorting task was handled. In the analysis, we were interested predominantly in the teachers' considerations in response to the cards, not the selected cards themselves.

3.3.3 DATA ANALYSIS

Both the first and the second interviews were transcribed verbatim. Our analyses of the data consisted of multiple phases:

Phase 1: Constructing teacher profiles: creating a description of each teacher's background in teaching and their current tasks and responsibilities in the school.

Phase 2 : Summaries of the transcripts of the first interview were written. For each summary, two researchers extracted core learning goals independently from each other and described these in key sentences. Next, selected key sentences were compared, disagreements were discussed, and adaptations to the key sentences were made. Sometimes teachers' learning goals were not specifically articulated as a goal but as an experienced deficit needing attention, a problem of practice, or expected learning concerning a new task in the school. If teachers expressed a desire to change something in their behaviour or cognition, this wish was addressed as learning goal. Each learning goal was coded as mostly a characteristic of classroom-context learning (code 1), school-context learning (code 2), or teacher as a professional (code 3). Next, teachers' learning goals (i.e., the key sentences with a code) were described in the teacher profiles.

Phase 3: a summary was made of teachers' responses to the top-five selected themes that were relevant or important for teachers' current professional lives and their answers to the question how these themes were influencing their work and learning. The summaries were also described in the teacher profiles and were characterized as teachers' current professional concerns.

Phase 4: Connecting the teachers' learning goals to teachers' professional concerns, we followed the following steps in the within-case comparison:

Step 1. For each learning goal we checked whether concerns could be paired on the basis of content (starting point = trying to explain the learning goal from the concerns). For example, one of Helen's learning goals focused on her communication with students, and her professional concern (in reply to the card 'contact between student and teacher') was that communication is the most important skill for teachers if they are to motivate students and has her continuous attention. The concerns partly overlap the teacher's learning goal and partly provide an extra explanation why this goal is pivotal to Helen's current work experience. The concern-goal pairs were listed in a conceptually clustered data matrix (Miles & Huberman, 1994) (see Table 3.2 for two sample pairs). Learning goals and professional concerns that could not be paired on the basis of content overlap were not included; thus, a total of 19 concerns and 7 learning goals are not displayed in the data matrix and were not considered for further analyses.

Step 2. To provide insight into the way the concern-goal pairs were matched, we described the coherence between the two in our matrix. In the rightmost column we described this coherence by explaining in what way the professional concerns were linked to learning goals with arrows from professional concerns to the learning goals. We arrived at this elaboration by rereading the teacher profiles and summaries and describing links based on content while trying to stay close to the phrasing teachers used in both interviews. These arrows should not be seen as causal relations, but as linked variables.

The pairing of concerns and goals was first done for one early-, one mid- and one late-career teacher and we discussed thoroughly whether the right concerns were matched with the right goals on the basis of content; counter-examples of pairs were explored. After agreement had been reached on how the pairing should be done content-wise, I constructed all the remaining pairs.

Table 3.2 *Two sample concern-goal pairs from the conceptually clustered data matrix*

Vera	Learning goals[a]	Professional concerns (card themes)	Coherence between professional concerns and leaning goals
Pair 1	1 Continuous development on content knowledge and students' learning	• Contact between teacher and student • Focus on good teaching • Focus on students' learning process	I'm **continuously** developing on students' learning process and having an eye for individuals → Plus it feels **rewarding** to develop good lessons → these are your **main tasks** as a teacher
Pair 2	2 Coaching beginning teachers 2 Guiding special needs students	• Search for new challenges	I'm in search of **new** challenges to **prevent** working on routine (plus I want to stay motivated until I'm 66) → You can of course deepen or broaden the things you already do, but you can also **start something new** → that's how I'm **now** learning about coaching beginning students and guiding special needs students

[a] *Number codes indicate the content of the learning goal (1 = classroom-context, 2 = school-context, 3 = the teacher as professional)*

Phase 5: Cross-case comparison: To search for patterns in the 33 different pairs of professional concerns and learning goals, we looked for similarities in the language teachers used to talk about their learning in combination with their professional concerns. To this end we selected key words that showed how teachers had arrived at the learning goals related to that particular topic. Key words were derived from studies in which indicators of change in teacher learning were used (Clarke & Hollingsworth, 2002; Zwart, Wubbels, Bergen, & Bolhuis, 2007). We found that teachers' learning goals could be shaped by professional concerns in three different ways:

a) through learning something that is <u>always</u> important to the teacher and closely related to their deep intrinsic <u>values</u> (keywords: 'continuous', 'always', 'ongoing', 'main task', 'good teacher', 'never finish learning', 'daily', 'satisfaction', 'highly value', 'commitment', 'important')

b) through learning for personal <u>growth</u> and <u>improvement</u> of current (teaching) skills (keywords: 'grow', 'update', 'learn more', 'become better', 'new', 'new task', 'experiment', 'explore', 'learn about', 'learn how', 'expect change', 'change', 'more often')

c) through managing <u>work</u> practices (keywords: 'prevent', 'manage', 'worrying', 'control', 'main concern', 'ask myself', 'becoming aware', 'pay attention', 'condition', 'only focus on')

In the sample concern-goal pairs in Table 3.2 the keywords are given in bold. Vera's first concern-goal pair is characterized by learning something that is always important (a) and her second concern-goal pair is characterized by a new task she wants to develop herself in, and thus is driven by her current tasks and responsibilities (b). From categorizing the pairs of professional concerns and learning goals we could deduct how teachers' own learning goals can be understood from their professional concerns and how teaching experience played a role (see Table 3.3 in the Results section).

3.4 RESULTS
3.4.1 TEACHERS' PROFESSIONAL LEARNING GOALS
The learning goals formulated by the teachers could be categorized in three categories: 1) classroom context, 2) school context and 3) the teacher as professional. Learning goals in the classroom context were mentioned by all teachers. These goals are all related to instructional strategies and/or communication with students. For example, they are aimed at activating students in class (Johan), bringing variation in instruction (Rick), and the more general goals of continuously deepening content and pedagogical knowledge (Bart). Learning goals of the second category were mentioned by six teachers (two early-, three mid-, and one late-career). Examples are learning about being a mentor (Hanna), teaching with innovative digital devices (Lois), and learning how to coach beginning teachers (Vera). The last category, learning goals aimed at teachers as professionals, was mentioned by eight teachers (three early-, three mid- and two late-career), and for six of them this had to do with managing work load and/or saying 'no' to new tasks. The other two teachers formulated goals about their professional identity (Bart) and managing their emotions (Ferdinand).

3.4.2 TEACHERS' PROFESSIONAL CONCERNS

The cards teachers selected in their top-five during the card sorting task reflect their current professional concerns. The cards selected most were 'Contact between teacher and student' (12 teachers), 'Focus on good teaching' (10 teachers), 'Managing work load' (7 teachers), 'Indicating my own boundaries' (6 teachers), and 'Focus on students' learning process' (5 teachers). Exploring the cards most frequently selected, we found that teachers differed in their interpretations of the theme. For example, among the twelve teachers that selected 'contact between teacher and student', interpretations differed as to how this theme influenced their current work and learning. For six teachers, contact between teacher and student was an important *prerequisite* for being a good teacher and motivating students (one early-career, one mid-career, three late-career). Five teachers addressed the importance of *mastering* how to form good relationships with students, saying this needed permanent development (one early-career and four mid-career). And five teachers explained that they highly *valued* the contact they have with students (two mid-career and three late-career). Lois for example explained that:

> .. this is always important, even more important than being able to explain your subject. If this no longer works for you, you will need to find something else to do than teaching

3.4.3 COHERENCE BETWEEN TEACHERS' PROFESSIONAL CONCERNS AND LEARNING GOALS

As explained in the Method section, teachers' learning goals can be understood from professional concerns through three different ways: a) learning something that is <u>always</u> important to teachers and closely related to their deep intrinsic <u>values</u>, b) learning for personal <u>growth</u> and <u>improvement</u> of current (teaching) skills, and c) managing <u>work</u> practices. We labelled these continuous, growth and improvement, and work-management pairs, respectively (see Table 3.3).

The continuous concern-goal pairs were characterized by teachers referring to goals that are always important to them or to what they consider a continuous process of learning. Teachers also mentioned what they think characterizes a good teacher and why this requires continuous attention. Some concern-goal pairs also reflect teachers' deep intrinsic values because these topics are at the core of teachers' jobs and can create rewarding or satisfactory feelings. Helen, for example, considers learning about communication with students something that is never finished (see Phase 4, step 1 in Data analysis).

The growth and improvement concern-goal pairs were characterized by the teachers referring to something they wanted to develop in their current practice. If this was related to their teaching practice, they talked about refining, expanding and improving their repertoire, mostly related to specific teaching skills they wanted to improve. Lois, for example, started an experiment in the classroom and expected this to expand her repertoire of assessing language skills. Sometimes these concern-goal pairs were characterized by expected learning because of starting a new task, changed responsibilities, and/or changes in student population. Vera, for example, mentioned she was looking for various challenges in her job to keep herself motivated, challenges related to her learning

goals about coaching novice teachers and guiding special needs students.

The work-management concern-goal pairs were characterized by teachers managing their work practices, which sometimes included the wish to avoid falling into old routines. The content of these concern-goal pairs was mainly about how to organise your work. Hanna, for example, explained how the combination of teaching and the moral obligations to be involved in school activities influenced her development in a negative way. Therefore, one of her goals was to pay better attention to managing her work-life balance:

> what is difficult is the work-life balance; when do you stop, when can I really say it is enough? Also difficult are the moral obligations; there are so many activities that are not compulsory, but they do expect you to be there, and this is what takes a lot of time. […] I'm very willing to attend these activities, that is not what it is all about, but I do want to have my life besides teaching. I need to learn to settle for what is possible, I'm a perfectionist, but it all needs to fit within the time I have, so to say.

3.4.4 RELATING CONCERN-GOAL PAIRS TO PROFESSIONAL LIFE PHASES

In the preceding we have tried to differentiate between teachers' learning goals by exploring the different concern-goal pairs. Next, we want to relate the concern-goal pairs from Table 3.3 of our early-, mid-, and late-career teachers to the professional life phase models.

The continuous concern-goal pairs are mainly found for mid- and late-career teachers. An exception is early-career teacher Johan, who also sees evolution of his teaching skills as a continuous process in his job. Of those mid- and late-career teachers, three of them have goals related to teacher-student relationships. These teachers see this as central to their task as a teacher, considering building strong relationships a prerequisite to motivating students to learn.

We found some particularities across the growth and improvement pairs that are specific to the teachers' professional life phase. Hanna (early-career) wants to become socialized in the school context and acquire a more stable position. Alex, Alissa and Erik (early-career) talk about their personal ambitions in their job. Vera and Bart (mid-career) explain their learning goal as focusing on something new (coaching/special needs for Vera, curriculum development for Bart). Lois and Caspar's (late-career) goals are triggered by school's introduction of laptops for students in the lower grades. Taken together, beginning teachers' learning goals seem to be driven by their aim for socialization in the profession and personal ambitions, whereas mid- and late-career teachers seem more occupied with remaining challenged and motivated in their job and/or adapting their teaching to current school innovations. Less evidently related to professional life phases are the growth and improvement concern-goal pairs about student behaviour (both early-career Hanna and mid-career Ferdinand) and student learning (early-career Hanna as well as late-career Rick, Lois and Karel).

The work-management concern-goal pairs are about managing work load and indicating boundaries (e.g., saying 'no' to new tasks). For early-career teachers this is because they are interested in learning how to organise their work (Hanna & Alissa) or in managing work load as a necessary condition for being able to learn in their day-to-day professional life (Erik). Mid- and late-career teachers, on the other hand, are more concerned about falling victim to a burn-out, and their learning is therefore aimed at

Table 3.3 *Overview of concern-goal pairs for early-, mid- and late-career teachers*

	Continuous concern-goal pairs: Learning which requires continuous development	Growth and improvement concern-goal pairs: Learning for personal growth and improvement of (teaching) skills	Work-management concern-goal pairs: Learning to manage work practices
	*Teacher	Short description*	*Teacher	Short description*	*Teacher	Short description*
EARLY CAREER	**JOHAN**	Continuous evolution of teaching skills > updating complex instruction & activating students (1) **ERIK**	Feel strongly committed to school which is crucial to work here > need to be aware that school also manages without me (3)	**HANNA**	Focus on students' needs > learn about differentiation and anticipating students' answers (1) **HANNA**	Restoring disturbed relationships with students (1)	**HANNA**	High work load in combination with moral obligations > organise school work and pay attention to work-life balance (3) **ALISSA**	Tough combination of studying and work > manage work load and ask for compensation (3)
MID CAREER	**HELEN**	Never finish learning about communication with students (1) **HELEN**	Students' learning process is your main task as a teacher (1) **VERA**	Continuous learning & main task as teacher (1) **BART**	Always adapting instruction and learning about subject (1)	**HANNA**	Stable position in school organisation > curriculum development and mentoring (1 & 2) **ALEX**	Ambition: become excellent teacher > optimize differentiation & handling student misconduct (1) **ALEX**	Challenging myself in designing language skills assignments (1) **ALISSA**	Ambition: Teach upper grades (pedagogies & content knowledge) (1) **ERIK**	To become a good teacher > activating instruction, differentiation, subject content (1) **VERA**	Start something new > coaching beginning teachers & guiding special needs students (2) **FERDINAND**	Incident with student & changing schools > control emotions & better assess student behaviour (1 & 3) **BART**	Invest in curriculum development > organisational skills & instruction (2)	**ERIK**	Guarding boundaries is necessary to be able to develop into a good teacher (1) **NICOLE**	Burn-out 3.5 years ago > indicate boundaries and worry less about interpersonal situations (3) **BART**	Professional identity and contact with students > professional ethics in online communication (3) **BART**	Professional identity and reassessing myself as teacher > 'where am I in teaching?' (3)
LATE CAREER	**HESTER**	Daily learning about subject through lesson preparation and reflection on the lessons (1) **CASPAR**	To be a good teacher > always maintain good contact with students and stay connected with their world (1)	**RICK**	Focus on coaching and contact with students > monitoring students' progress (1) **RICK**	Focus on students' learning and instruction > varying instruction (1) **LOIS**	Laptops in classroom > exploring digital content to motivate students (1) **LOIS**	Experiment with instruction > assessment of language skills (1) **CASPAR**	Laptops in classroom > different classroom management (1) **KAREL**	Conscious of my role in enhancing students' learning > motivate students for my subject and integrate content and the 'real world' (1) **KAREL**	Conscious of my role in enhancing students' learning > how students learn to learn (1)	**RICK**	In recovery after burn out > focus on planning and work-life-study balance (3) **HESTER**	Task description is full > Learn to say 'no' to tasks that are outside teaching (3)

Note. *Number codes in the short description refer to the content of teachers' learning goals;*
(1 = classroom-context, 2 = school-context, 3 = teacher as professional)

managing their planning (Rick) or better indicating their boundaries (Nicole). Late-career teacher Hester's task description includes some extra-curricular tasks (e.g., participating in a committee) and she blames herself because she says 'yes' too often to requests to participate in these tasks. An exception is Bart who seems to be more in a reassessment phase (cf. Huberman, 1993) asking himself 'who am I as a teacher?'.

3.5 CONCLUSION AND DISCUSSION

In this study we aimed to acquire a more detailed understanding of what reasons underlie teachers' professional learning. Regarding our first research question, *'How can teachers' learning goals be understood from their current professional concerns?'*, we found that teachers' learning goals can be characterized by continuous, growth and improvement, and work-management concern-goal pairs. These different concerns underlie teachers' decision-making about what they want to learn.

The continuous pairs can explain teachers' continuous development in teaching. This relates to what scholars have addressed as the 'complexity of teaching' (Labaree, 2000); teaching, because of its strongly contextual and situational character (Doyle, 2006) is so complex that it will always need attention, and thus requires continuous adaptation (Clarke & Hollingsworth, 2002). The content of this continuous learning is either about developing good teacher-student relationships or about investment in instruction and subject pedagogy skills. Those two goals are considered central developmental tasks for teachers (Beck & Kosnik, 2014; Feiman-Nemser, 2001). Being aware of these central tasks for continuous development is a necessary skill for becoming an *adaptive expert* (Darling-Hammond & Bransford, 2005). In this process, teachers become increasingly aware of the complexities of teaching and learn how to systematically assess their own performances.

The growth and improvement pairs show how teachers' learning could be shaped by their goal to become better teachers and/or to learn in a new task or responsibility. The outcomes in terms of learning goals might differ, but what the pairs have in common is that teachers' learning goals are driven by professional growth. Instead of a focus on what a teacher cannot do or what he/she is lacking (deficit approach, which applies to two teachers in our study), the majority of teachers in our sample stated that they wanted to learn for improvement and growth (growth approach) (cf. Clarke & Hollingsworth, 2002). Another characteristic of these pairs is how specific changes in the context (e.g., students, tasks, curriculum or school) can result in teachers setting learning goals for themselves.

The work-management pairs show how teachers focus their learning not only on their classroom and their teaching, but also on learning how to manage their work. Some teachers indicated that this is an important prerequisite for learning about classroom teaching. This finding underlines the importance of understanding teachers' social and emotional well-being and their abilities to manage tensions in their work and lives before we ask about their professional learning (Day et al., 2007).

For our second research question we compared concern-goal pairs for early-, mid, and late-career teachers, and looked for differences as a result of teaching experience. First, we found that learning goals of early-career teachers are not solely focused on classroom management and disruptive student behaviour, as suggested in various

professional life phase models (Fuller, 1969; Kagan, 1992; Rolls & Plauborg, 2009); rather, their learning goals are also characterized by refining teaching practice and striving for mastery. Their developmental 'tasks' are broader and relate to deepening their subject matter pedagogies, extending their repertoire regarding curriculum and instruction, and increasing responsibilities (cf. PD tasks as decribed by Feiman-Nemser, 2001). Also, unlike their mid- and late-career teachers, early-career teachers talked more explicitly about specific skills they like to learn to become good teachers. This relates to early-career teachers' interest in increasing their effectiveness in teaching, with a focus on instruction and subject-related expertise (cf. Day et al., 2007; Rolls & Plauborg, 2009). According to Huberman (1989, p. 351): 'the consolidation of an instructional repertoire leads naturally to attempts to increase one's effectiveness within the classroom'. Second, when looking into how teachers articulated their growth and improvement concerns we note that early-career teachers' learning goals seem to be affected by their aim for socialization in the profession and personal ambitions, whereas mid-career teachers seem more occupied with remaining challenged and motivated in their job (cf. resiliency and commitment, Day et al., 2007). Or, as Huberman explains for the diversification and change phase 'having worked with 6 – 7 yearly cohorts of pupils […] one begins to repeat the yearly cycle and to find that it lacks variation' (1989, pp. 351-352). Teachers can then use changing routines and learning new tasks to increase the variation in their job and to experience themselves as novices in these new tasks (Fessler & Christensen, 1992). Third, the continuous pairs are found mainly among mid- and late-career teachers, and seem to be the drivers of their permanent investment in improving their teaching. It seems that these teachers' core professional values have been formed, and they know what continuously drives their learning. Lastly, work-management goals of early-career teachers were closely related to their desire to manage their day-to-day work load; for late-career teachers, these goals were more about balancing their work with extra-curricular tasks and preventing themselves from having a burn-out. Work management is often not considered part of a teacher's professional learning, but being able to manage tensions and becoming resilient to aversive work and life events is essential for remaining motivated and committed to the teaching job (Day et al., 2007).

3.6 IMPLICATIONS

The qualitative methodology used in this study proved useful for eliciting teachers' underlying concerns, and provided a better understanding of teachers' learning goals. Asking teachers to construct their own professional concerns and reflect on what mattered most at the time was an important asset for this study, not only for generating insights into teachers' professional lives in relation to their learning goals, but it also served as a useful reflection tool by forcing teachers to prioritize their current concerns and explaining this to an outsider (Postholm, 2008). The advantage of the card-sorting task is that it lets teachers construct their own combination of components most relevant to their professional life (Huberman, 1989).

A possible drawback of the methodological approach was that the coupling of learning goals with concerns was done by researchers rather than teachers themselves. This can

be improved through member checking the generated concern-goal pairs together with the participating teachers shortly after the interviews. Another drawback is that due to our small sample, hypotheses were generated on the fairly general early-, mid-, and late-career level, and relations of teachers' goals with particular professional life phases were not possible. Despite the general distinctions made, we were still able to demonstrate – on the basis of the teachers' selection of their top-five concerns – variation in their underlying reasons for setting learning goals which we could link to differences in teachers' experience levels. From this, we hope to have shown how teachers' professional learning should be seen as driven by their current professional concerns about commitment to teaching, personal ambitions, feelings of mastering the job, work load and work-life balance, and their relationship with students.

EXPLORING THE RELATION BETWEEN TEACHERS' PERCEPTIONS OF WORKPLACE CONDITIONS AND THEIR PROFESSIONAL LEARNING GOALS

EXPLORING THE RELATION BETWEEN TEACHERS' PERCEPTIONS OF WORKPLACE CONDITIONS AND THEIR PROFESSIONAL LEARNING GOALS [8]

ABSTRACT

Schools' structural workplace conditions (e.g., learning resources and professional development policies), and cultural workplace conditions (e.g., school leadership, teachers' collaborative culture) have been found to affect the way teachers learn. It is not so much the objective conditions that support or impede professional learning but the way teachers perceive those workplace conditions that influences teachers' learning. Not much is known, however, about how teachers' perceptions relate to the way they direct their own learning. Using a sensemaking approach, we explored how four teachers' perceptions of cultural and structural workplace conditions were related with how they direct their own learning. The four cases were selected from a sample of 31 teachers from two secondary schools, and differed in the extent to which the teachers perceived their workplace as enabling or constraining their learning. We found that the content of teachers' learning goals is related to their perception of shared vision and professional dialogue in their schools, and driven by individual classroom-based concerns. Furthermore, we found that teachers' perceptions of cultural workplace conditions and supportive leadership practices seem to be more important influences for teachers' self-directed learning than their perception of structural conditions.

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[8] This chapter has been submitted in adapted form as:

4.1 INTRODUCTION

Teachers' learning is assumed to be influenced by the school in which they work. School factors such as teacher collaboration, resources for learning, policies for professional development and school climate, are understood as affecting how teachers learn (Day, Sammons, Stobart, Kington, & Gu, 2007; Imants & Van Veen, 2010; Smylie, 1995). Literature reviews indicate that the effectiveness of teachers' professional development is highly dependent upon the context in which the teacher is operating (Borko, Jacobs, & Koellner, 2010). A teacher's workplace is an important environment as it could provide learning opportunities in daily teaching practice (Borko et al., 2010; Horn & Little, 2010), opportunities to learn together with colleagues (Little, 2012), and opportunities to apply new knowledge and skills that are learned outside the school context. According to Little (2012, p. 25):

> … [s]chools that support teacher learning and foster a culture of collegiality and continuous improvement are better able to support and retain new teachers, pursue innovation, respond effectively to external changes and secure teacher commitment

Scholars in the field of teacher learning build on insights from workplace learning to further analyze these contextual influences (Fox, Wilson, & Deaney, 2010; Hodkinson & Hodkinson, 2005; Hoekstra, Korthagen, Brekelmans, Beijaard, & Imants, 2009; Imants, Wubbels, & Vermunt, 2013). Workplace learning studies aim to determine what workplace conditions enable or constrain professional learning (Ellström, 2001; Hoekstra, Korthagen, et al., 2009; Smylie, 1995). Furthermore, in recent studies it is argued that it is not so much the objective conditions which support or impede employees' professional development, but the way they interpret those organizational conditions in relation to their work and learning (Hoekstra, Korthagen, et al., 2009; Imants et al., 2013; Nishii & Wright, 2007; Tynjälä, 2012). Previously, a few studies have demonstrated how mediating psychological factors on part of the individual might impact the relation between structural and cultural dimensions of the school organization and teachers' professional learning (Geijsel, Sleegers, Stoel, & Krüger, 2009; Kwakman, 2003; Thoonen, Sleegers, Oort, Peetsma, & Geijsel, 2011). Thus, it is of interest how teachers' perceptions of the workplace environment can be understood as affecting professional learning. We regard these perceptions of the workplace a consequence of sensemaking processes in which the teacher interprets messages from the institutional environment and integrate these messages in their existing framework (Coburn, 2001).

Furthermore, recent workplace studies relied on participatory approaches and socio-cultural theories (Tynjälä, 2012) to emphasize how employees are participating in communities of practice or participating in professional learning activities. However, within those approaches, the teacher as an individual making deliberate choices in the workplace environment is overlooked (Hodkinson & Hodkinson, 2005). The individual and the environment should be seen as mutually influencing each other through the interaction of workplace affordances and individual's agency (Billett, 2004; Imants et al., 2013). In this study, we focused particularly on teachers' actions as individuals making sense of

and consequently responding to conditions for learning in the workplace (Hodkinson & Hodkinson, 2005; Hoekstra, Korthagen, et al., 2009; Imants et al., 2013; Poell & Van der Krogt, 2013; Weick, Sutcliffe, & Obstfeld, 2005). Moreover, the participatory approach on the processes of learning shifts the emphasis away from *what* is to be learnt, thus creating the risk that workplace learning is treated as 'an abstract idea or learning for learning's sake' (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015, p. 13). Our focus on teachers' self-articulated professional learning goals can accommodate the perspective of teachers acting upon their environment because these goals are elected by the teachers themselves.

This study aimed to explore the relationship between teachers' perceptions of their workplace environment and their learning and was guided by the following research question: *how do teachers' perceptions of workplace conditions relate to their professional learning goals?*

4.2 CONCEPTUAL FRAMEWORK
4.2.1 TEACHERS' PROFESSIONAL LEARNING GOALS
In our study we view teachers as active agents that develop themselves professionally, not as passive recipients of professional development. On the basis of studies highlighting the importance of addressing teachers as active agents in educational change efforts (Hoban, 2002) and studies on employees' agency (Billett, 2004, 2011), teachers can be viewed as agents that self-direct their learning process (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012; Lohman & Woolf, 2001). Self-directed learning as concept is derived from adult learning theories that positions the learner to have a sense of personal autonomy in their learning. This personal autonomy can be seen as learners taking control of the goals and purposes of learning and to assume ownership of learning (Garrison, 1997; Knowles, Holton, & Swanson, 2015; Merriam, Caffarella, & Baumgartner, 2007). In addition, studies on self-directed learning claim that in day-to-day learning employees 'are responsible for most of the detailed decision-making about learning, including choices what to learn, how to learn, and at what pace the learning will occur' (Confessore & Kops, 1998, pp. 367-368). The concept of self-directed learning is especially relevant in the Netherlands, as Dutch teachers are generally held responsible for their own professional learning and keeping teaching quality high. In this study we focus on *teachers' professional learning goals* as the initial phase of teachers' self-directed learning (Tough, 1979) and define a learning goal as *desired change in behavior or cognition* (Bakkenes et al., 2010; Fenstermacher, 1994; Putnam & Borko, 2000). We understand teachers' learning goals as influenced by both self-perceptions (e.g., self-efficacy, career aspirations), tasks characteristics and responsibilities, and teachers' perceptions of the context (e.g., as situated in practice with current classroom or school-wide issues) (Borko et al., 2010; Eraut, 1995; Horn & Little, 2010; Imants & Van Veen, 2010; Tynjälä, 2008).

4.2.2 WORKPLACE CONDITIONS OF SCHOOLS
There is a range of studies on relevant workplace conditions for teachers to work and learn (Ellström, 2001; Eraut, 1995; Imants & Van Veen, 2010; Rosenholtz, Bassler, & Hoover-Dempsey, 1986; Sleegers & Leithwood, 2010; Smith & Gillespie, 2007; Smylie,

1995) which share similar findings on what constitutes important workplace conditions in terms of teacher learning. Some examples of essential school conditions are that a) teachers share their work, jointly prepare lessons, or collaborate in a learning community (Little, 2012; Smylie, 1995), b) teachers are participating in school-wide decision-making on school improvement (Rosenholtz et al., 1986; Smylie, 1995), and c) teachers are supported in their learning by resources such as time, materials, colleagues, and feedback mechanisms (Ellström, 2001; Smith & Gillespie, 2007). This diverse set of essential conditions for teachers to learn during their work can best be understood if we consider them part of structural and cultural organizational conditions and features of school leadership that could stimulate or hinder teachers' work and learning (Imants & Van Veen, 2010).

Structural conditions refer to the way schools, teachers' work, and teachers' learning are organized structurally in terms of time, space, resources, work load, task variation, evaluation and feedback, organizational goals, and professional development policies. According to Ellström (2001), employees need to have access to adequate learning resources, which includes objective factors such as time for learning and reflection, and subjective factors such as knowledge of the task and work processes. As regards time, there needs to be a subtle balance between time for teaching and time for learning and reflection, both collaboratively and individually (Ellström, 2001).

The term 'cultural conditions' in the literature refers to building a shared school culture, aiming for a shared school vision, a culture of collaboration, a professional learning climate, and collective decision-making (cf. Jurasaite-Harbison & Rex, 2010; Little, 2012). It is especially the culture of collaboration among teachers and a shared understanding of the school's organizational goals that work to improve teachers' on-site learning, in which continuous learning becomes a school-wide norm embedded in the professional community (Little, 2012).

Leadership, which can be viewed as a cultural condition, is assumed to be relevant for teachers' professional learning through the way school leaders influence structural and other cultural conditions (Sleegers & Leithwood, 2010). Supportive school leadership can be considered 'transformational' (Leithwood & Jantzi, 1990) if it is characterized by the following three dimensions impacting teachers' work and learning, 1) vision (i.e., inspiring teachers to be engaged in their work by developing, identifying, and articulating a particular vision), 2) individual consideration (i.e., concern and respect for the personal feelings and needs of teachers), and 3) intellectual stimulation (i.e., challenging teachers to professionalize in such a way that the organization as a whole is learning).

4.2.3 TEACHERS' PERCEPTIONS OF WORKPLACE CONDITIONS

Studies on school-organizational conditions have already shown that psychological factors mediate the impact of these conditions on teachers' engagement in professional learning, for example through teachers' commitment and self-efficacy (Geijsel et al., 2009; Kwakman, 2003; Thoonen et al., 2011). Similarly, the objective workplace conditions alone do not influence teachers' learning, it is how teachers make sense of their workplace as a learning environment, and as a consequence use the learning opportunities afforded by this environment (Coburn, 2001; Hoekstra, Korthagen, et al., 2009; Imants et al., 2013; Tynjälä, 2012). In this sensemaking approach teachers are seen as individuals who compare

school-organizational messages with their preexisting framework and decide whether to act upon school policy or not (Coburn, 2001; Weick et al., 2005). This process is dynamic, because both organizational conditions and work and learning processes change continuously (Bryk, Sebring, Allensworth, Easton, & Luppescu, 2010). In a similar vein, Billett (2004) introduced the concept of co-participation at work, referring to the process of learning 'shaped by interactions between what is afforded by the workplace and how individuals elect to engage with what is afforded' (p. 316). Merely taking into account situational factors to see workplaces as learning environments is not enough. Thus, it is at the intersection of what an organization affords an individual, and consequently the individual perceiving this learning environment, that we can understand how and what individuals are able to learn through work.

In line with Imants et al. (2013), we understand sensemaking in this study as the perceptions teachers have of their workplace as enabling or restrictive to their own learning, and consequently, in what way they use their perceived learning environment for how they self-direct their learning (operationalized as teachers' professional learning goals). An example of this sensemaking process is how teachers integrate organizational goals within their own goals and how their perception of their workplace influences this decision-making.

4.3 METHOD
4.3.1 RESEARCH DESIGN
We explored the relationship between individual teachers' learning goals and their perceptions of their workplace environment in a small-scale interview study. From a sample of interviews with 31 teachers from two Dutch schools for secondary education (School 1 and 2) we selected a subsample of four cases (two teachers from each school) to explore this relationship more in-depth. Because of our specific focus on how teachers perceive their workplace as a learning environment, we needed a research design which was sensitive to particularities in different school contexts. Therefore, we first summarized how teachers within the two different school contexts perceived the schools' workplace conditions. On the basis of this descriptive analysis we were able to make a selection of four teachers and explain context-specific particularities within and across the four cases.

4.3.2 PARTICIPANTS
The study took place in two secondary schools (School 1 as described in Chapter 2, School 2 as described in Chapter 3). Prior to the interviews, a school visit of four months took place to learn about contextual factors that could influence teacher learning. Each four-month period was used for 60 classroom visits, and informal conversations with staff (see also Appendix A). After this socialization period, 16 and 15 teachers from School 1 and School 2, respectively, with varying levels of experience and teaching backgrounds were selected for interviews. In all, 31 teachers were interviewed on their perceptions of their school's workplace conditions and their learning goals.

The emphases on teacher professional learning differed per school. In School 1, the topics of interest were learning about ICT technologies in the classroom and coaching beginning teachers. Recently, ten teachers were invited to participate in a course on

coaching beginning teachers and obtain a coaching certificate. In School 2, school leaders recently held performance interviews and was conducting a short survey among teachers about the causes and consequences of their experienced workload. For the past three years, the plenary study days were focused on ICT (especially laptops) in the classroom.

4.3.3 INSTRUMENT

Interviews were held on the basis of a semi-structured questionnaire and lasted approximately 75 minutes. At the start of each interview it was emphasized that teachers should feel free to articulate their own learning goals, without taking into account what others would like them to be learning. Because teachers may experience difficulty with articulating concrete learning goals for themselves (Janssen et al., 2012; Van Eekelen, Vermunt, & Boshuizen, 2006), we designed interview questions from various perspectives intended to support teachers to talk about their own learning (similar approach as Chapter 2 and 3, see Appendix B for questions). From these various perspectives and the follow up-questions we aimed to deduce teachers' professional learning goals (see data analysis).

To study teachers' perceptions of workplace conditions, questions were designed to stimulate teachers to talk about the learning resources available in the school, learning culture, and the way their school management stimulates teacher learning. A sample question was: 'What do you see as concrete learning opportunities in this school, and what learning resources are available for teacher learning (e.g., books, instructional methods, websites, courses, professional learning communities)?'

4.3.4 DATA ANALYSIS

All interviews were transcribed verbatim. We first compared 31 teachers' perceptions of their workplace to arrive at a selection of cases. These cases were used to explore the relation between teachers' perceptions and their learning goals more in-depth.

Selection of cases based on teachers' perceptions of workplace conditions
First, summaries were made of each teacher's responses regarding the questions on workplace conditions in their school. Next, all remarks on workplace conditions were listed in key sentences per teacher. A coding scheme was designed based on sensitizing concepts from workplace conditions literature (e.g., Ellström, 2001; Sleegers & Leithwood, 2010; Smylie, 1995). Sample sensitizing concepts were 'Learning resources' (structural conditions), 'Professional learning climate' (cultural conditions) and 'Stimulating initiatives' (leadership). Every key sentence received at least one code from the coding scheme. The code could be either *Constraining*, if that matching sensitizing concept was experienced as constraining teachers' learning (example statements: 'little teacher influence in …', 'too little time for …', 'too much emphasis on …'), or *Enabling*, if that sensitizing concept was experienced as enabling teachers' learning (example statements: '… stimulates my learning', '… is made available', or 'there is a culture/norm of …'). On the basis of frequency counts we created a summary per school of teachers' perceptions of workplace conditions (see Table 4.1).

Table 4.1 *Number of key sentences coded as constraining or enabling workplace conditions per teacher.*

	Structural		Cultural		Leadership	
	Constraining	Enabling	Constraining	Enabling	Constraining	Enabling
School 1						
Duncan	3	1	0	1	0	1
Ryan	*3*[a]	4	2	4	1	1
Barbara	1	4	1	3	2	3
Susan	2	5	4	2	*3*	*3*
Sarah	2	6	1	2	*3*	*3*
Courtney	1	3	2	2	0	1
Gerard	4	2	5	2	6	*1*
Anna	1	4	3	0	0	2
Ronda	2	0	1	1	5	1
Richard	2	1	1	0	0	1
Paul	1	5	1	1	0	2
Henry	0	4	0	1	0	4
Patricia	0	4	0	2	1	1
Philip	0	5	0	1	*1*	2
Vicky	4	4	3	1	2	3
Bernard	4	1	1	0	2	1
School 1 totals						
Sum	30	53	25	23	26	30
Mean[b]	1.84	3.28	1.53	1.41	1.47	1.72

	Structural		Cultural		Leadership	
	Constraining	Enabling	Constraining	Enabling	Constraining	Enabling
School 2						
Hanna	1	7	2	1	1	2
Alex	*5*	6	1	0	1	0
Alissa	0	6	0	1	0	2
Johan	0	4	0	2	0	1
Erik	1	6	1	3	1	2
Helen	0	8	0	3	2	4
Nicole	*5*	6	1	2	3	2
Vera	3	7	2	3	4	7
Ferdinand	2	7	3	1	1	1
Bart	2	4	3	0	3	1
Rick	2	6	0	4	2	3
Hester	3	3	0	2	1	1
Lois	4	7	3	5	*4*	2
Caspar	*6*	3	2	2	4	0
Karel	*5*	3	6	*1*	6	0
School 2 totals						
Sum	39	83	24	30	33	28
Mean[b]	2.43	5.37	1.57	1.97	2.17	1.83

Note. All names are pseudonyms. Names in bold are selected cases for further analyses.
[a] Italic number-pairs indicate that at least one of the key sentences of this teacher (in this category) was coded as enabling *and* constraining.
[b] Mean key sentences were corrected for the double-coded key sentences, i.e., if one key sentence was coded as both enabling and constraining.

Based on the coding of teachers' perceptions of workplace conditions, we distinguished similarities and differences both within and across schools. The numbers from Table 4.1 show that schools differed mainly in their mean average key sentences about structural conditions (i.e., higher mean score of enabling structural conditions in School 2 compared to School 1). The numbers for each teacher show great variation within each school. For example, in School 2 the teachers differed in their perceptions about the structural conditions: Nicole sees them as both constraining (5) and enabling (6), Helen perceives them as clearly enabling (8), and Caspar perceives these conditions as mainly constraining (6). In addition, these numbers show that some teachers explained extensively how the school was supportive (or not) to their professional learning (for example Gerard in School 1), whereas others did not make a lot of remarks (Richard in School 1).

Differences between schools also became clear from the content of the remarks teachers made. In School 1, teachers mentioned a lack of opportunities to learn from each other and opportunities for feedback and evaluation. For example, four teachers were negative about the absence of performance interviews in the school (structural). Negative perceptions about collegial collaboration were mainly articulated with respect to some subject departments that were not perceived as supportive to their work and where opportunities to exchange ideas for lessons were missed (cultural). Teachers from School 1 acknowledged that the school leader is accessible and supportive of their initiatives (leadership). Simultaneously, nine teachers were negative about top-down leadership and a lack of shared decision-making in the school (culture and leadership). For example, one teacher explained:

> We are not being heard. School management decides top-down, and that goes like 'this is how you are going to do it', which results in resistance from teachers.

In School 2, teachers' initiatives are stimulated and rewarded, and at the same time eight teachers mentioned to experience a heavy workload (structural). This workload seems related to the high number of innovations (ICT) and school activities the school has been introducing over the past couple of years. Eight teachers feel that the school is focused too narrowly on ICT, and too much time is spent on learning about ICT (structural and cultural). The school leader is perceived as being accessible and having good relationships with the teachers, although seven teachers experienced the school leadership as directive, since they do not have a say in what they want to focus on themselves (leadership). For example, one teacher said:

> Within the themes which the school deems important, everything is possible. There is much pressure to learn about ICT and to implement school policies.

Teachers from both schools perceived the following structural and cultural workplace conditions and leadership practices as enabling their learning: learning opportunities provided (i.e., time, facilities, resources), collaboration among colleagues, support from management and autonomy for teachers to decide what they want to learn individually (i.e., initiatives are rewarded and requests to do a workshop or follow a course are usually

approved). What was perceived as constraining was a lack of teacher participation in decision-making (top-down) and a lack of a clear vision in the school and the accompanying policies and procedures.

In addition to these differences between schools, Table 4.1 also shows that school's workplace conditions could be perceived as enabling *and* constraining by teachers from the same school. An example of this within-school variation can be found in teachers' perceptions of school leadership. In both schools teachers perceive their school leadership as accessible and as stimulating initiatives for professional learning, however, there were nine teachers from School 1 and seven teachers from School 2 that experienced a directive school leadership. To explore such within-school variation more in-depth and how different perceptions of the workplace conditions relates to teachers' self-directed learning, we selected two cases from each school.

For the selection we used a purposive sampling technique, to arrive at maximum variation between cases (Creswell, 2007); we wanted to select four teachers, two teachers from each school, with one teacher from each pair perceiving the workplace as clearly enabling learning and one teacher perceiving it as clearly constraining learning. We selected four teachers from our sample of 31, namely Patricia and Bernard from School 1 and Erik and Vera from School 2. The selected cases also differed in the way their perception of the workplace related to their learning goals, so we were able to show the variation that exists in these relationships. For example the case of Vera does not show a clearly enabling or clearly constraining perception about her school's workplace conditions from Table 4.1, but from her 'constraining' remarks an interesting relationship with her learning goals could be demonstrated. That is why we included her. These four teachers, two men and two women, also differed regarding years of experience and the subject they taught.

Exploring the relation between perceptions of workplace conditions and learning goals
To be able to relate the four teachers' perceptions of workplace conditions to their learning goals, we first had to deduce their learning goals from their answers to the questions on teacher learning. In this study, we defined professional learning goals as *desired change(s) in behavior or cognition*. A learning goal could start from a task that had been imposed on the teacher or in response to school-wide issues, but it only counts as a goal if the teachers *themselves* approach it as something to learn about (according to our perspective of teachers as self-directed learners). Teachers could formulate learning goals related to their classroom context and learning goals that were related to their broader school context (see also Chapter 2 and 3 for a description of analyzing learning goals).

To explore the relationship between teachers' perceptions of the workplace and their learning goals, a profile of each teacher was created in which the teacher's learning goals and workplace perceptions were summarized. First, we explored within each case how teachers' perceptions of the workplace as enabling or constraining their learning were related to their learning goals and looked for examples that would demonstrate this sensemaking process. Finally, we compared cases in order to distinguish thematic similarities across cases that could answer our research question (Miles & Huberman, 1994).

4.4 RESULTS
4.4.1 TWO CASES: PERCEPTIONS OF WORKPLACE CONDITIONS AS ENABLING

Patricia (27 years of experience, school 1). Patricia is a Music teacher that started working at this school 15 years ago as part-time teacher. She now works full-time, with half of her time teaching (15 lessons per week), and half of her time filled with extra-curricular responsibilities, such as coordinator of the school's international program, coaching beginning teachers, mentor of two classes, and coordinator of a compulsory in-school PD course. One of her learning goals focuses on implementing more ICT technology in her classroom, because at the moment she does not feel comfortable using new digital technologies and software programs in her class. She just returned from a week-long masterclass on international education in Lapland and got inspired to use the digital technology that was presented there. She has a strong preference for learning by doing (e.g., hands-on), in courses, through interaction with (international) subject colleagues, and by reflecting on her teaching with and without others. According to Patricia her school offers both compulsory learning opportunities and opportunities upon your own request. For example, her masterclass was facilitated by the school leader in terms of scheduling her for a week off and stimulating her to go. Patricia arranged a European grant for herself to be able to attend this international masterclass.

Also, Patricia experiences a clear school vision on active student learning which matches her own ideas of effective teaching.

> You see, in this school active student learning was emphasized in the school's vision. They really want teachers to use teaching methods that foster active student learning in class. As a teacher working in a school where there is no such vision, you might find yourself alone in learning about this topic and then it gets really hard.

She is coordinator of the compulsory in-school PD course for second-year teachers. The focus in this course is on how to use activating teaching strategies in class. In this course a small group of teachers come together regularly and share their experiences and give advice on implementing new activating teaching methods in their classrooms. Patricia explains that she also learns from these suggestions for her own teaching practice. She aims for a continuous adaptation of instruction to match students' learning processes and students' worlds.

The case of Patricia shows how her perception of the school as offering learning opportunities upon teacher requests in combination with the school's vision that fits her ideas of good instruction, makes her positive about the learning opportunities in this school. She acts upon these school conditions by organizing an international grant and masterclass for herself that provide her with hands-on experiences to feel comfortable in learning about digital technologies in the classroom. Her learning goals seem to result from creating her own learning opportunities by going abroad and her involvement as coordinator of the in-school PD course. In terms of sensemaking, we found that Patricia's positive experiences with structural and cultural conditions in her school strongly relates with her ambition to continuously develop herself as a teacher.

Erik (4 years of experience, school 2). Erik has taught Religious Studies at this school for four years, and this year started a university program to become a licensed teacher. When he talks about his workplace environment he states that this is a great if not the best school for teacher professional learning, because there are so many learning opportunities, opportunities for task differentiation, a strong learning culture, and an accessible school leader. He compliments the school leaders for having an eye for individual teachers and their professional learning.

Regarding his learning goals he is determined to grow professionally but feels obstructed by his current work load. This year he experiences an increased work load due to task differentiation (e.g., coordinating school activities, teaching a new subject). He now needs to set his boundaries and learn to say 'no' to any more differentiation.

> I want to deliver quality in my lessons (now it's more about quantity), so I want to acquire more content knowledge, which I can do by spending more time preparing classes, but I do not have time for that.

An important detail is that he does not blame the school for this high work load, but accepts that the work load is part of a teacher's job. Although he is really positive about the school as a learning environment, he cannot seize the opportunities offered because he feels he lacks time to develop himself professionally. Therefore his learning goals are related to reducing this work load and his school duties, in order for him to make room for deepening his content knowledge and subject-specific pedagogies.

Erik's case shows us how a teacher's agency is played out in a high-work load environment, because he tries to change the tide by focusing his learning goals on managing his work load before moving on to what he actually wants to learn. In terms of sensemaking, we found Erik's perception of the work environment as supportive (although restricting his learning opportunities because of the high work load), combined with his personal ambitions to deliver quality in his lessons, to be key for him to take responsibility and try to self-direct his learning.

4.4.2 TWO CASES: PERCEPTIONS OF WORKPLACE CONDITIONS AS CONSTRAINING

Bernard (34 years of experience, school 1). Bernard has 34 years of teaching experience and will soon retire as a teacher. He predicts he will leave this school with a feeling of bitterness because he does not receive any appreciation and recognition for his work. In all those years he has worked hard and conscientiously to prepare his math lessons and tests, and has 'delivered' students with good exam grades. He feels that he is not rewarded for these efforts. Instead, he feels that appreciation goes to teachers that organize extra-curricular activities.

> In this school there is a lot of appreciation for everything, they think it's amazing if you organize a school trip to Burundi, but if I'm at home designing a school exam, that takes me longer. Then they act as if every teacher in this school performs equally well when it comes to teaching, but that is not true. […] And I'm part of an organization in which I feel I have less and less to say, whilst I'm still good at my job, I think that's weird.

He gives an example of how he became disenchanted with the school organization; an occasion when things were decided without input from the teachers. He explains that he used to be very involved in school and organized a Project Week for students for more than 15 years in a row, but during one management meeting it was decided that from then on there was no longer going to be a Project Week.

Concerning his learning goal, he feels that there is no reason to change his teaching because his students' performance on the exams is above average. If he feels he needs to learn anything, he does not need any support or training to do so. Whenever there were curriculum changes in the past, he taught himself the new material because he knew his students would also have to learn it themselves. Although he does not articulate explicit learning goals he keeps investing in drawing up good examples and assignments for his students to practice with, because he does get appreciation from his students, and simply because he gets paid to make his students do well in their exams.

To sum up, he experiences the school as a constraining workplace due to a lack of recognition for his work, and its top-down leadership and decision-making; neither does he see an urgent need to change his teaching practices. The case of Bernard shows us that teachers that experience their workplace as constraining their work and learning might focus their learning on assisting student learning (classroom context goals), and turn away from issues in the broader school context (school context goals). In terms of sensemaking, Bernard's case provides a good example of how a teacher's personal history (cf. ontogeny Billett, 2011) serves as a filter for how he perceives his current workplace environment. This, together with Bernard approaching retirement and lowered investment, may have resulted in a teacher that does not see a need to change (Beynon, 1985).

Vera (12 years of experience, school 2). Vera works as a Dutch language teacher at this school and, in general, values the opportunities for learning in terms of time, facilities and differentiation in tasks. She is eager to take up new challenges within and outside the school in order to keep herself motivated as a teacher. Nonetheless, she does not feel the urge to go along with the current emphasis on digital learning (ICT) in her school. Her learning goals are aimed at developing her content knowledge, guiding special needs students, and coaching beginning teachers. She does not feel comfortable with the direction in which the school is heading, i.e., towards more use of digital devices and – to prepare for that – spending many plenary team sessions on improving teachers' digital competences and software use. Therefore, she experiences the school's ICT learning environment negatively because there does not appear to be sufficient time for developing digital content, and for discussing the vision behind the use of ICT in the school and the way teachers can use it effectively.

> I'm frustrated during the ICT team sessions. We're going really fast in the domain of ICT, but they do not consider the negative sides of it, that is what we as school need to think about, what do we want to achieve by using ICT in our school.

Instead of moving along with current innovations in her school (i.e. ICT) and without experiencing enough challenges in teaching itself, she now focuses on out-of-school learning

activities such as developing a literature course for retirees which is subject related but not school related, and challenges her to develop interesting subject materials.

To sum up, she perceives the current ICT trend in school negatively, which sometimes frustrates her, but she still likes to learn a lot and wants to experience challenges in her work. The case of Vera shows how schools might offer many learning opportunities in terms of team sessions and facilities on a certain topic, but if teachers experience no shared vision or space for exploring the possibilities, they may focus their learning on other topics of interest. In terms of sensemaking, Vera finds it difficult to integrate the implementation of the innovation with her own beliefs what good education constitutes. As a result, she creates new (out-of-school) learning opportunities for herself.

4.4.3 COMBINING RESULTS

The structural conditions that were mentioned in these four cases concerned resources (in terms of permission for cancelled classes) for Patricia, enough time for Erik, and learning opportunities and task differentiation for Vera. The cultural conditions and leadership characteristics that mattered for teachers' self-directed learning were a clear school vision for Patricia, opening the school dialogue about work load for Erik, not being recognized and top-down leadership for Bernard, and lacking school dialogue on the underlying arguments for the innovation at Vera's school. Both Patricia and Bernard (School 1) and Erik and Vera (School 2) work in the same school environment but perceive it quite differently, but also the two 'enabling' cases and the 'constraining' cases differed in the way they made sense of the workplace conditions.

In general, we saw that Patricia and Erik, who experienced their workplace as enabling learning, differed in the way they articulated their learning goals. They were similar in that they both showed a high level of agency by either organizing their own learning opportunity abroad (Patricia) or by taking responsibility for their own work load (Erik), but different in what they would like to learn, depending on their interests, levels of experience and school-based learning opportunities. The learning goals formulated by Bernard and Vera, who perceived some characteristics of their workplace as constraining teacher learning, had in common that they focused on other goals than the school management envisioned for their organization. Bernard focused solely on his classroom context and his students' learning. The content of Vera's learning goals related to other school responsibilities (coaching colleagues, coaching students) and learning goals outside the school context (organizing a literature course for adults).

4.5 CONCLUSION AND IMPLICATIONS
4.5.1 CONCLUSIONS

From the 31 interviews about teachers' perceptions of the workplace conditions, we can conclude that learning opportunities, collaboration among colleagues, support from management, and autonomy to decide what to learn were regarded as enabling teacher learning. Teacher participation in decision-making (top-down), a lack of clear vision and accompanying policies and procedures were perceived as constraining teacher learning. By exploring four teachers' cases more in-depth, we tried to gain further insight into how

these perceptions about the workplace as enabling or constraining relate to teachers' self-directed learning. We addressed the research question: *how do teachers' perceptions of workplace conditions relate to their professional learning goals?*

Based on four different cases, we found that structural conditions played a minor role in how teachers perceived their workplace as learning environment compared to the cultural conditions and characteristics of leadership. Teachers' perceptions of the cultural conditions and leadership characteristics seemed more important when teachers formulate learning goals for themselves. This finding relates to earlier studies on the importance of a shared understanding of school goals, professional learning climate and transformational leadership practices for teacher learning (Jurasaite-Harbison & Rex, 2010; Leithwood & Jantzi, 1990; Little, 2012). The cultural conditions and leadership characteristics in this study concerned a clear school vision (Patricia), having a schoolwide dialogue on issues that matter most (Erik & Vera), and being heard, feedback and recognition (Bernard).

The case of Bernard emphasizes the importance of individual support, recognition of performance and school management's involvement in teachers' teaching. Not feeling recognized in your work narrows teachers' focus down to doing only what teachers are paid to do, namely to teach. An important implication of this case might be that being recognized as a professional or feeling heard, can have a positive effect on teachers' self-directed learning. On the other hand, we do not know whether Bernard would formulate more learning goals if his perception of the school as learning environment was more enabling. The career phase before leaving teaching is characterized either with confidently looking back on their career and gradual withdrawal from the profession or with dissatisfaction and increasing disillusionment due to tensions in the workplace (Beynon, 1985; Day et al., 2007). It seems that Bernard falls in the latter category and his (lack of explicit) learning goals are maybe more a result of an interaction of his perception of the current workplace environment, his personal history with this environment, and his current career phase. Late-career teacher Patricia does not seem to fall in either of these end-of-career categories. In contrast, her perception of the same school as Bernard's is one that clearly enables teachers learning by offering plenty learning opportunities and communicating a clear vision on good education. Interestingly, both Patricia and Bernard perceive the same school environment quite differently. This also seems to relate to what both teachers need from their environment for their specific learning goals; Patricia likes to learn in courses and through interaction with (subject) colleagues which she can easily organize for herself in this context and within her responsibility as coordinator of an in-school PD course. Bernard would probably benefit from more recognition of his teaching. Apparently, the same environment can be perceived differently as a result of different concerns and learning goals of teachers (cf. Hoekstra, Korthagen, et al., 2009).

Second, the cases of Erik and Vera show how a professional dialogue in school can influence the direction of teachers' learning. Erik's school leaders try to understand the causes and consequences of teachers' work load experiences, and at the same time Erik perceives it as his responsibility as a teaching professional to be able to manage work load. The management's being understanding and having teachers discover the causes of their own work load might have made teachers more aware of their own responsibility in managing the work load. In contrast, the case of Vera shows how a lack of dialogue in the

school or of school leaders' vision on (ICT) innovations can influence the way teachers make sense of the innovation ('why are we doing this in the first place?') and shifts their focus away from it. Vera decides to move away from the current innovation and search for other topics that interest her. Both Erik and Vera work in the same school environment but perceive it quite differently. As a consequence of this sensemaking process, their enactment of their school environment differs in relation to their classroom concerns and learning goals. From these cases we conclude that besides their perceptions of their workplace environment, teachers' learning goals are a result of an interaction between their own concerns of the classroom, and the context of the school.

4.5.2 IMPLICATIONS

Our findings demonstrate teachers to differ greatly in how they perceived the same work environment and what consequences this has for how they direct their own learning. Future studies on workplace conditions for teachers' learning should take this sensemaking process into account when drawing inferences about how the school as learning environment can support teacher learning. If we are to organize professional schools for teachers to learn, school-organizational workplace conditions are still granted a central role (Smylie, 1995; Van Veen, Zwart, & Meirink, 2012). For school leaders it can be very complex to steer teachers' learning in a particular direction or to experience any direct influence at all on teachers' learning pathways (Leithwood & Jantzi, 1990; Poell & Van der Krogt, 2013). Nevertheless, it remains important for school leaders to show interest in teachers' individual learning pathways and recognize their current performances, and to stimulate a shared vision while maintaining a professional learning climate (Hoekstra, Korthagen, et al., 2009; Janssen et al., 2012; Little, 2012; Tynjälä, 2012). Because of teachers making sense of what their school environment affords and actively directing their learning (Billett, 2004; Bryk et al., 2010), we should not expect school leaders to have a one-way influence on what teachers learn. It is at the intersection of what a school affords and the sensemaking processes of teachers that professional teacher learning emerges. The task and challenge for school leaders is to create such workplace 'norms' that teachers feel it is their own responsibility to continue learning, but at the same time keeping the school's collective goals in mind (Little, 2012). Furthermore, school leaders should be aware of the dynamic character of teacher learning at the workplace, which implies that the ways teachers perceive their workplace environment and the ways this influences their learning can differ within and across teachers and from time to time (Bryk et al., 2010). Our study showed that keeping this balance between individual and collective goals and creating an environment for teacher learning is a complex endeavor.

TEACHERS' SELF-DIRECTED LEARNING AND TEACHING EXPERIENCE: WHAT, HOW, AND WHY TEACHERS WANT TO LEARN?

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TEACHERS' SELF-DIRECTED LEARNING AND TEACHING EXPERIENCE: WHAT, HOW, AND WHY TEACHERS WANT TO LEARN?[9]

ABSTRACT

What teachers want to learn is often not taken into account when professional development (PD) initiatives are designed, nor are teachers portrayed as being able to direct their own learning. Another concern for PD design is that teachers' professional learning differs according to their level of experience. In this study, we took together the questions of what, how, and why teachers want to learn in the concept of teachers' *self-directed learning*; a concept derived from adult learning theories that accommodates for the idea that teachers are able to formulate their own learning needs and consequently direct their learning. A total of 309 teachers filled out a questionnaire on their preferences for learning domains ('what'), their preference for learning activities ('how'), and their reasons to learn about a selection of learning domains ('why'). In regression analyses we tested for linear and non-linear relationships between teachers' years of teaching experience with self-directed learning (what, how and why). The results showed three significant relationships. Teachers' learning about classroom management (what) showed a non-linear relationship with years of experience; early- and late-career teachers showed higher preferences compared to mid-career teachers to learn about classroom management domains. Furthermore, years of experience had a negative relationship with learning through experimenting in the classroom (how) and identified reasons for learning (why). As teachers are more experienced, they are less likely to have preferences for learning through experimenting, or learning because of the reason that a learning domain is personally important to them. Results are discussed through a comparison with studies on teacher effectiveness, teachers' PD, and reasons to learn.

5.1 INTRODUCTION

In-service teacher learning is often referred to as (continuous) *professional development* (PD) and is considered a crucial factor for increasing teacher quality, and improving schools and student learning (Day, Sammons, Stobart, Kington, & Gu, 2007; Opfer & Pedder, 2011). Programs for teacher professional development have been criticized for not involving teachers in the choice of the content of these programs (Van Veen, Zwart, & Meirink, 2012), or not taking teachers' needs into account in PD design (Gravani, 2007). Several scholars suggested that adapting professional development programs towards teachers' learning needs could increase the programs' effectiveness (Gravani, 2007; Shriki & Lavy, 2012; Van Veen et al., 2012), especially if PD is understood as situated in the school context (Wilson & Berne, 1999). A problem in the mismatch experienced in PD is that teachers are often regarded as recipients of PD rather than active participants that are able to explicate their learning goals and have a say in their own learning (Ball & Cohen, 1999; Van Veen et al., 2012).

Another concern is that in the design of PD activities teachers' experience is hardly taken into account. Teachers at the beginning of their career have different aims for learning than mid- and late-career teachers, due to differences in expertise and professional life phases (Anderson & Olsen, 2006; Berliner, 2004; Day et al., 2007). It has been suggested that in order to design a curriculum for PD further research is needed on differences in teacher learning across a career (Van Veen & Kooy, 2012). However, empirical evidence on which to base such a differentiated curriculum is still lacking. When teacher learning research does take teaching experience into account this is mostly in settings for formal learning (e.g., participation in university courses), whereas in-service teacher learning has been found to occur in both formal and informal settings, both outside the school and in the workplace (Kwakman, 2003; Kyndt, Gijbels, Grosemans, & Donche, 2016).

Teachers show a high level of ownership over their own learning: they themselves decide what they learn from the learning opportunities the workplace offers them (Admiraal et al., 2015). This level of ownership can be seen as teachers' self-initiated or self-directed learning (Lohman & Woolf, 2001). Because teachers show great ownership when directing their own learning in the workplace, it is of interest to explore what teachers themselves choose as their learning goals, what kind of learning activities they choose to engage in, and what reasons teachers have for professional learning (Kyndt et al., 2016; Lohman & Woolf, 2001; Mansfield & Beltman, 2014; Thomson & Turner, 2013).

In this study, we combined the questions of what, how, and why teachers want to learn in the concept of teachers' *self-directed learning*, a concept derived from adult learning theories based on the view that teachers are able to formulate their own learning needs and consequently direct their learning. We explored teachers' self-directed learning by focusing on a) teachers' own learning goals, how they want to learn, and the reasons they have for why they want to learn, and b) differences in teachers' years of experience. The research question is: *To what extent does teachers' self-directed learning (what, how and why teachers want to learn) relate to their years of teaching experience?*

5.2 CONCEPTUAL FRAMEWORK
5.2.1 PD AND TEACHERS' SELF-DIRECTED LEARNING

Following Wermke (2011, p. 668), continuous professional development

> includes not only in-service education and training in the form of organised programmes but also every self-determined and systematic development such as the independent reading of books and journals, attending university courses, programmes and conferences, as well as interaction with colleagues and principals.

Moreover, studies point to the importance of regarding teachers as active agents in educational change efforts (Hoban, 2002) and teachers as undertaking self-initiated professional learning activities (Kwakman, 2003; Lohman & Woolf, 2001; Mushayikwa & Lubben, 2009). Therefore, we treated teachers as active agents in their own development who self-direct their learning. The research tradition on self-directed learning has been derived from theories on adult learning emphasizing adults' sense of personal autonomy in their learning. This means that learners take control of the goals and purposes of learning and assume ownership of learning (Garrison, 1997; Knowles, Holton & Swanson, 2015; Merriam, Caffarella, & Baumgartner, 2007). It also means that adults would like to be seen and treated by others as being capable of self-direction (Knowles, Holton & Swanson, 2015, p. 44). We assume that if teachers are treated as responsible individuals in control of their own learning they are more likely to be engaged in learning (cf. Ellinger, 2004). Also, viewing teachers as capable of self-direction means that teachers are treated as professionals, which would solve the central mismatch experienced in PD if a program neglects teachers as active participants in designing their own professional learning (Van Veen et al., 2012).

In self-directed learning processes different phases can be distinguished (Knowles et al., 2015; Tough, 1979). These phases generally include a needs assessment, planning, engaging in learning, and evaluation. A learning need can be explained as a discrepancy or gap between the desired competencies and the learners' current level of ability (Knowles et al., 2015). Comparing desired with current competencies suggests a deficiency perspective on learning by focusing on skills or knowledge a learner has not mastered yet. We assume that learning needs not only relate to feelings of competence (i.e., sense of self-efficacy) but could also derive from professional growth, which means 'an inevitable and continuous process of learning' (Clarke & Hollingsworth, 2002, p. 947).

In both perspectives the needs assessment phase is important for determining learning goals and hence the direction of what is to be learnt. What learning domains teachers choose in this phase can vary. Following Shulman (1986) conceptual framework of teachers' knowledge, different domains can be distinguished, for example knowledge of subject content, classroom management, curriculum, and students' learning processes. We also distinguished less classroom-related domains of learning, such as learning about school organizations, about themselves as professionals, and how to act as mentor for novice colleagues (Mushayikwa & Lubben, 2009; Van Eekelen, Vermunt, & Boshuizen, 2006).

In the planning phase, learners choose the specific learning activities they would like to engage in and decide how to evaluate their learning. We assumed that teachers choose

those learning activities they have a strong preference for. In research on teachers' learning activities different categorizations are adopted, depending on the theoretical framework used (Evers, 2012; Hoekstra, Brekelmans, Beijaard, & Korthagen, 2009; Kwakman, 2003; Meirink, Meijer, & Verloop, 2007; Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011). For this study we followed the categorization by Meirink et al. (2007), in which four types of learning activities are distinguished: 1) learning by experimenting, 2) learning by reflecting on own teaching practice, 3) learning from others (with/without interaction), and 4) learning by doing. We expected that the last category, 'learning by doing', is such an ongoing part of teachers' practice, that it is less likely to be part of the 'planning learning activities' phase (Webster-Wright, 2009). Therefore, this category was not included in the study. In addition to these three categories, we distinguished a category 'keeping yourself up-to-date' (e.g., reading professional literature, follow training on your subject) (Kwakman, 2003).

Teachers' self-directed learning should not be understood as a solely individual activity, but is considered to be informed by the problems teachers experience in practice, school climate, recent learning experiences, tasks and responsibilities, and national and school policies (Kwakman, 2003; Mushayikwa & Lubben, 2009; Wilson & Berne, 1999). When teachers assess their learning needs their decision-making can be seen as influenced by a combination of these different internal and external factors (Merriam et al., 2007). It is likely that adult learners will consider something a learning need and consequently self-direct their learning if they hold the positive expectation that the object of learning will be valuable to their work situation, if they experience control over the learning, and if they think that the investment will actually lead to the goal (Deci & Ryan, 2000; Garrison, 1997; Knowles et al., 2015; Thomson & Turner, 2013). The 'most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, and the like)' (Knowles et al., 2015, p. 45).

To study why teachers want to learn the theory of self-determination (SDT) can be used, which has as its central assumption that all individuals have an inner tendency to strive for growth, integration, and well-being (Deci & Ryan, 2000). Deci and Ryan's SDT (2000) determines different types of motivation on a continuum from 'none' to completely 'self-determined behavior'. This continuum goes from external, to introjected, identified, and intrinsic regulated behavior (Gagne & Deci, 2005; Van den Broeck, Vansteenkiste, & De Witte, 2008; Vansteenkiste, Lens, & Deci, 2006). A general distinction is made between controlled motivation (i.e., external and introjected reasons for learning) and autonomous motivation (i.e., identified and intrinsic reasons for learning) (Van den Broeck et al., 2008). 'Controlled motivation' is learning that is externally controlled and induced by others, whereas 'autonomous motivation' is characterized by the individual's values and interest in the activity, i.e., more self-determined behavior. Another underlying assumption in SDT is that if professionals' learning activities are more self-determined, the quality of their learning increases. Positive outcomes of autonomous motivation are higher goal commitment and a longer engagement in learning (Deci & Ryan, 2000). According to SDT, motivation is never fully regulated through one type of motivation but can be a combination of different regulations, which reflects how professionals engage in learning in organizations (Jansen in de Wal, den Brok, Hooijer, Martens, & Van den Beemt, 2014; Vansteenkiste,

Sierens, Soenens, Luyckx, & Lens, 2009). Furthermore, previous research has shown that motivation to learn can be different for different (academic) subjects and different goals: the content does matter (Vansteenkiste et al., 2009). Therefore, we assumed that teachers can have different reasons to learn about different domains.

Teachers' motivations for PD have generally been found on altruistic (e.g., to help students) and intrinsic (e.g., because they enjoy it) reasons, although external motivators (e.g., administrative support, qualification) can be influential as well (Thomson & Turner, 2013). There are various studies on teachers' motivations for their careers (Hildebrandt & Eom, 2011; Mansfield & Beltman, 2014; Watt, Richardson, & Wilkins, 2013), on whether teachers are willing to learn in a context of educational innovation (Abrami, Poulsen, & Chambers, 2004; Van Eekelen et al., 2006), and on different levels of engagement in organized professional development activities (Gorozidis & Papaioannou, 2014; Thomson & Turner, 2013). However, these studies rarely address teachers' motivations for learning in their everyday work environment (cf. Kyndt et al., 2016; Thoonen, Sleegers, Oort, Peetsma, & Geijsel, 2011). In a recent study on teachers' motivations for engaging in learning activities it was found that teachers with an extremely autonomous motivation profile engaged more often in professional learning activities than teachers with externally regulated motivation profiles (Jansen in de Wal et al., 2014). This confirms the basic SDT assumption that stronger experiences of autonomous motivation will lead to more engagement in learning. In our study, we tested different motivations (i.e., reasons to learn) teachers can have to learn about particular learning domains.

For a comprehensive understanding of teachers' self-directed learning we examined what, how, and why teachers would want to learn in relation to teaching experience.

5.2.2 PD AND TEACHING EXPERIENCE

A recent review by Kyndt et al. (2016) showed that research on teachers' everyday learning in relation to teaching experience is scarce; from the 74 studies reviewed there were only 10 in which beginning teachers were compared with more experienced teachers. In the next sections we summarize findings from research on teachers' participation in learning activities and on teacher effectiveness, to provide a general (but not exhaustive) overview of empirical work on differences between teachers' learning for different experience ranges. A distinction is made between early- and late-career teachers. Mid-career teachers are often not studied as a separate group.

5.2.2.1 What? Learning domain and teaching experience

Teaching is inherently complex due to many classroom aspects involved that needs to be monitored simultaneously (e.g., organization and structure, instruction, within-classroom differentiation, dealing with student misconduct) (Doyle, 2006). Studies on teacher quality bring forward that this complexity of teaching suggests a particular order in which teaching skills are mastered (Berliner, 2004; Kyriakides, Creemers, & Antoniou, 2009; Maulana, Helms-Lorenz, & Van de Grift, 2015; Seidel & Shavelson, 2007). For example, an increase in impact on students' learning for teachers in their first teaching years was found, and a general stabilization of teaching skills was found after approximately seven years of teaching (Berliner, 2004). Recently, a large-scale observation study found that

after 20 years of experience reach a plateau and even show a gradual decline in their pedagogical teaching skills (Van de Grift, Van der Wal, & Torenbeek, 2011). In line with this finding, self-report data show that teachers' participation in professional learning activities gradually decreases as they become more experienced (Richter et al., 2011). Teachers' interest in the learning domains of subject content, pedagogies & psychology, and subject-specific pedagogies shows an increase towards mid-career and a decrease after that point which can be expressed as curvilinear relations between teacher learning and experience (Richter et al., 2011). For the domains school organization, coaching, and professional well-being no effect with experience was found, probably because these are not chosen very often (Richter et al., 2011). However, in another study experienced teachers (more than eight years of teaching) were found to have an increased interest in learning about role effectiveness, possibly due to taking up different roles in the school (Day et al., 2007). A large-scale study by Day et al. (2007) found (disruptive) pupil behavior to be a consistent concern for a substantial proportion of teachers in all experience groups, but particularly for early- and late-career teachers.

In teacher education research beginning teachers' learning is characterized by classroom management, developing teacher-student relationships, instructional and pedagogical mastery, and being accepted in the school context and learning about school politics (Brekelmans et al., 2005; Feiman-Nemser, 2001; McCormack, Gore, & Thomas, 2006; Veenman, 1984). An increased interest in administration tasks and a wish to increase impact is also specific to early-career teachers (Anderson & Olsen, 2006). More experienced teachers' interests are associated with experimenting with new teaching methods, further developing instructional repertoire, and combining management and teaching (Kyndt et al., 2016; Richter et al., 2011; Shriki & Lavy, 2012). Late-career teachers are often characterized as confident in their teaching abilities and having high job satisfaction due to their teacher-student relationships and high student achievements (Day et al., 2007; Kyndt et al., 2016). Another group of late-career teachers have been found to become more distant from students due to the increasing age difference (Brekelmans et al., 2005), and as a result a wish to learn about interacting with students (Kington, Reed, & Sammons, 2014; Shriki & Lavy, 2012).

5.2.2.2 How? Learning activities and teaching experience

In recent studies, experienced teachers have been found to undertake as many learning activities as beginning teachers but to prefer different activities (Grosemans, Boon, Verclairen, Dochy, & Kyndt, 2015; Richter et al., 2011). These studies suggest that beginning teachers are more in favor of observing colleagues, interaction with experienced colleagues (i.e., a mentor), and university courses on their subject domain. However, experienced teachers are more in favor of sharing and collaborative initiatives, experimenting, and reading professional literature. Richter et al. (2011) found a negative curvilinear relationship between age and in-service training (i.e., seminars, conferences, and school-specific professional development), which means low levels of a teacher participation at the start of a teacher's career, a peak in mid-career, and lower levels again at the end of the career. In addition, there are contradictory findings regarding the relationship between teaching experience and learning in interaction and learning from experimenting

(Flores, 2005; Krečič & Grmek, 2008; Richter et al., 2011). For example, Richter et al. (2011) found a negative relationship between age and teachers' learning in interaction (i.e., cooperation with colleagues), which would indicate that experienced teachers cooperate less often. Krečič and Grmek (2008), on the other hand, found that teachers' perceptions of the importance of cooperative learning did not differ with teachers' varying levels of experience.

5.2.2.3 Why? Reasons for learning and teaching experience

In general, studies have shown early- and mid-career teachers to be more 'eager' for PD (Flores, 2005; Kyndt et al., 2016; Richter et al., 2011). Studies on differences in goal setting and reasons for learning in early- mid-, and late-career teachers seem to indicate that teachers' motivation to learn varies with teaching experience. For example, early-career teachers have been found to be mostly mastery-oriented and intrinsically motivated for instructional, personal, and career goals (Mansfield & Beltman, 2014). Mid-career teachers are motivated for learning to increase their impact on students' learning (Shriki & Lavy, 2012), or for career promotion and external incentives (Hildebrandt & Eom, 2011). Late-career teachers seem predominantly motivated because of their own interest in their subject (Shriki & Lavy, 2012).

5.3 METHOD

5.3.1 SAMPLE AND PROCEDURE

We studied teachers' self-directed learning, conceptualized as what, how and why teachers want to learn, by means of a questionnaire administered in 11 Dutch secondary schools in the spring of 2015. Schools were recruited through convenience sampling, i.e., most participating schools were partners of the teacher education institute where the researchers work and located in the same region. Ten schools were located in urban and suburban areas in the western part of the Netherlands, and one school in the southern part. The levels of schooling offered at these schools varied from pre-vocational to pre-university secondary education, or a combination of different levels. The questionnaire was web-based and administered through an e-mail link. We sent the link directly to teachers in three schools; in the other eight schools, the link was sent to the teachers by the school management. As a consequence of school management being in charge of forwarding the link to their teaching staff, we only have a rough estimate of the number of teachers from these schools. The link was sent to approximately 920 teachers. A total of 309 teachers (55.2 % female) finished the questionnaire, which implies a response rate of 34 %. The sample characteristics are shown in Table 5.1. The average number of years of experience was 14.23 years (SD = 11.30) and 122 teachers were second-career teachers (i.e., they had a previous career before entering the teaching profession). Because the number of years of experience is an important variable in this study, we used the categories from the professional life phase model of Day et al. (2007), in which teachers' effectiveness and motivation for work and learning were found to differ for these specific groups. [10]

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[10] Because there are no estimates available of the distribution of years of experience in the Dutch teacher workforce, we compared our sample characteristics with the distribution of teachers' ages. In a 2013 estimate of the secondary school teacher workforce there are two peaks in the distribution: teachers between 25 and 35 years of age, and teachers between 55 and 65 years of age, with the latter group taking up one-third of the total workforce (Lubberman, Van Kessel, Wester, & Mommers, 2013). In our sample teachers from the latter category seem to be underrepresented, which means that we have to be careful when making inferences about the very experienced teachers.

Table 5.1 *Sample characteristics.*

	Number of teachers	**Percentage**
Years of teaching experience[a] **(n = 302)**		
0 – 3	43	14.24
4 – 7	57	18.87
8 – 15	102	33.77
16 – 23	45	14.90
24 – 30	23	7.62
31+	32	10.60
Subject domain[b]		
Mathematics	35	11.74
Science	60	20.13
Social sciences	53	17.79
Language: Mother tongue	39	13.09
Language: Modern foreign	63	21.14
Language: Latin/Greek	13	4.36
Art & creative subjects	31	10.40
Physical education	18	6.04
Philosophy and religious studies	11	3.69
Otherwise	26	8.72

[a] *Categories are from Day et al. (2007)* [b] *No exclusive categories: a sound number of respondents taught in more than one subject domain*

5.3.2 INSTRUMENT

5.3.2.1 Development of the questionnaire

Teachers' self-directed learning was measured for three areas. First, we assumed that teachers would vary regarding the domains they want to learn about ('what?'); second, teachers can vary regarding the learning activities they want to engage in ('how?'); and third, we assumed that teachers can vary regarding their reasons for why they want to learn ('why?'). For our instrument, we first explored existing questionnaires measuring related constructs (e.g., learning activities, preferences, motivation, values, teacher competence). If there were no existing questionnaires that related to our aims we designed our own questions on the basis of a previous interview study on teachers' learning goals (see Chapter 2). In this earlier study we conducted semi-structured interviews with 31 secondary-school teachers about the type of learning activities they wanted to engage in and what they wanted to learn. As response category we chose degree of preference on a five-point scale, because it accommodates the idea of teachers' volition in describing what and how they want to learn. Also, this scale offered a continuum of response options (i.e., not preferred, slightly preferred, somewhat preferred, moderately preferred, strongly preferred) which are easier to answer than dichotomous response options (e.g., I do not want to learn about … vs. I want to learn about …) (Krosnick & Presser, 2010).

Next, we assessed the phrasing of the items by asking two expert teachers to think aloud when answering the questions. Whenever items were not clear or could be interpreted in more than one way, we adapted the items. Third, we conducted a pilot study in which 55 teachers from two schools who did not participate in the study filled out the questionnaire. The pilot results were used to gain feedback on the length and complexity of the questionnaire. We also conducted tests for collinearity and reliability of the items to reduce the number of questions. Lastly, we used the pilot results to make adaptations to the different scales, in order to reduce the item load of the questionnaire (from 135 items to 67 items) and keeping reliability of the different scales to at least .60.

5.3.2.2 Variables in questionnaire
5.3.2.2.1 Learning domains

An existing questionnaire that fit our aims was not available. Therefore, we based our questions on our earlier interview study in which we interviewed 31 teachers on their professional learning goals. In the analyses of these interviews we used Shulman's knowledge domains (1987) to code teachers' learning goals. We now used these knowledge domains to design items for learning domains. As a result, teachers were asked to rate their preference for a particular learning domain (18 items in total) on a five-point rating scale (*1= not preferred, 5 = strongly preferred*). To find latent dimension scores for further analyses we conducted an exploratory factor analysis. Four items were excluded from this analysis because they did not belong to any of Shulman's knowledge domains, and nor did they form a separate dimension because of their distinctive content. These items were: personal effectiveness, other tasks in the school (e.g., coordinator, manager), ICT technologies, and supporting new and beginning colleagues. In our analyses we treated these four separate items as one-item dimension scores.

For the exploratory factor analysis we preferred oblique rotation over varimax rotation because factors are generally assumed to be correlated, and in fact had inter-item correlations above .32 (Brown, 2009). After exploratory factor analysis with oblique rotation, three components were distinguished on the basis of the Eigenvalue-greater-than-1.0-rule (Kaiser, 1960), namely a) Classroom management and organization domains (3 items), b) Subject matter-specific domains (6 items), and c) Individual student care domains (3 items) (see Table 5.2). Cronbach's alphas were satisfactory and the division into three components reflected Shulman's domains of pedagogical knowledge (classroom management and organization), subject matter knowledge, pedagogical content knowledge, and curricular knowledge (taken together in the dimension 'subject matter-specific'), and knowledge of learners and their characteristics (individual student care). The three components explained 65 percent of the total variance.

5.3.2.2.2 Learning activities

These questions were partly derived from Ever's TPD@Work scale (2012), intended to measure teacher participation in professional learning activities, and partly inspired by Dutch studies on teachers' learning activities during a nationwide reform (Bakkenes, Vermunt & Wubbels, 2010; Hoekstra, Brekelmans, et al., 2009; Kwakman, 2003; Meirink et al., 2007). We started with the 21 TPD@Work items, adapted the response scale to

Table 5.2 *Factor loadings of exploratory factor analysis with oblique rotation for learning domains*

Learning domain items	Classroom management and organization	Subject matter-specific	Individual student care	h^2
Creating a safe learning climate in the classroom	.948			.903
Organizing structure and discipline in the classroom	.844			.707
Good relationship with students in the classroom	.798			.719
Testing and assessment		.783		.577
School curriculum		.657		.518
Developing lesson materials		.640		.370
Instructional pedagogies specific to my subject		.608		.371
Subject content		.594		.408
Students' learning process		.575		.412
Students with behavioral- and learning problems			.872	.694
Cultural differences between students			.645	.487
Guiding individual students (e.g., mentoring, coaching)			.516	.438
Cronbach's alpha	.914	.828	.756	

Note. Direct oblimin rotation, delta = 0. Factor loadings below |.300| were suppressed.

match the questions on learning domain (instead of a four-point scale for frequency, we used a five-point Likert scale for preference), and deleted items with a specific content focus. Six items derived from our own interview studies were included, so that we ended up with 17 items measuring four dimensions of preferred learning activities: learning from interaction, reflection, experimenting, and learning from keeping up-to-date. The initial exploratory factor analysis with oblique rotation revealed five components based on the Eigenvalue-greater-than-1.0 rule (Kaiser, 1960); however, there was one item (i.e., 'trying out new teaching methods in my lessons') with a factor loading above 1. probably due to its high degree of multicollinearity with the other items (Jöreskog, 1999). The item could not be removed because the category 'experimentation' consisted of only two items in the first place. After trying out multiple solutions, we found that the six items derived from our interview study loaded on multiple dimensions or had low initial communalities. After we deleted these six items we found a three-factor solution whose components were easy to interpret (see Table 5.3). The different components were labeled a) Reflection on practice & collaboration (5 items), b) Training and keeping up-to-date (4 items), and c) Experimenting (2 items). In this solution we found the items for 'reflection on practice' and 'collaboration' were combined in one component, which makes sense because reflection often occurs in interaction with others (Meirink et al., 2007). The three-factor solution explained 52 % of the total variance; Cronbach's alphas for each component were satisfactory.

5.3.2.2.3 Reasons for learning

To understand teachers' reasons to learn about the different learning domains, we used instruments based on the self-determination theory (Deci & Ryan, 2000). Deci and Ryan (2000) distinguish different motivations to learn on a continuum from controlled to

Table 5.3 *Factor loadings for exploratory factor analyses with oblique rotation of learning activities.*

Learning activity items	Reflection on practice & collaboration	Training & keeping up-to-date	Experimenting	h^2
Critical reflection on teacher's experiences	.593			.404
Asking students for feedback in the lessons	.571			.372
Reciprocal classroom visits with colleagues	.538			.250
Preparing lessons with colleagues	.496			.419
Assembling a school working group or committee with colleagues	.349			.250
Participating in (subject-specific) conference		.667		.419
Consulting books, subject-specific journals etc.		.629		.447
Participating in a training course		.555		.347
Visiting educational sites on Internet		.517		.368
Trying out new teaching methods in my lesson			-.745	.607
Testing alternative teaching materials in class			-.636	.499
Cronbach's alpha	.695	.692	.685	

Note. Direct oblimin rotation, delta = 0. Factor loadings below |.300| were suppressed.

autonomous motivation (external, introjected, identified, intrinsic). We adapted items from the Academic Self-regulation Questionnaire (Vansteenkiste et al., 2009), which reflects the idea that motivation is dependent on the topic of learning. To prevent item overload, we designed one item per reason (cf. Koestner, Lekes, Powers, & Chicoine, 2002).

In the questionnaire teachers were first asked to select a maximum of five domains (minimum of one) they wanted to learn about. Then, they were asked to state for each of these why they wanted to learn about this particular topic. The response options were 'because somebody else (e.g., management, colleagues, pupils) expects me to' (external), 'because I would feel a bad teacher if I did not learn about this topic' (introjected), 'because I personally think it is important to learn about this' (identified), and 'because I experience it as interesting and fun to learn about this' (intrinsic). For each reason, they were asked to indicate on a five-point scale to what extent this reason was applicable to this particular learning domain. In this way we could assess which reasons prevail for different learning domains. Of the 309 teachers, 255 teachers filled out these questions completely.

5.3.3 DATA ANALYSIS
To answer the research question on how self-directed learning can be described, we inspected the descriptive statistics of the different learning domains ('what'), learning activities ('how'), and the reasons for learning ('why') to see which domains, activities, and motivations had high or low scores. We used paired-samples t tests to compare the high and low scores with each other. To answer the research question about how teaching experience related to what, how, and why teachers want to learn, we used linear regression analysis. After inspection of the scatterplots and the Curvefit command (SPSS Statistics 23), we decided whether to test for linear or for non-linear relationships. For assumed non-linear relationships we used polynomial regression analysis with teaching experience as predictor (Kutner, Nachtsheim, & Neter, 2004; Richter et al., 2011). In these

analyses we first introduced the linear term (x) for teaching experience in Model 1, and then a quadratic term (x^2) of teaching experience in Model 2. We used the difference in F values and R^2 were used to compare models to see whether the linear or the polynomial predictor fitted the data best.

The level of significance was set at $p < .05$ for the paired-samples t tests and we corrected for multiple significance testing with the Holm Bonferroni adjustment for the regression tests (Ludbrook, 1998). We used unstandardized regression coefficients (b) to interpret linear relationships and standardized regression coefficients ($\beta_{experience}$, $\beta_{experience}^2$) to interpret non-linear relationships. We used Pearson's correlation coefficient to indicate the size of the effect (Field, 2009). Effect size was interpreted according to Cohen's (1988) criteria: .1 = small effect, .3 = medium effect, .5 = large effect for r and .01, .09, .25 for R^2 (for the model comparison).

5.4 RESULTS
5.4.1 DESCRIPTIVE RESULTS

Table 5.4 provides the descriptive statistics for teachers' preferences for learning domains and learning activities. Regarding the learning domains, we found teachers' preferences to be higher for the *subject matter-specific domains* and *ICT* than for the other domains (all paired-samples t tests were significant, $df = 303$, $p < .001$). Regarding the learning activities, teachers' preferences for *experimenting* (M = 3.54, SD = .82) were significantly higher than for *training and keeping up-to-date* (M=3.23, SD = .81, $t = -4.954$, $df = 303$, $p < .001$). Teachers' preferences for learning from *reflection on practice & collaboration* (M = 3.45, SD = .72) were higher than for *training & keeping up-to-date* (M = 3.23, SD = .81, $t = 4.304$, $df = 303$, $p < .001$).

Table 5.4 *Descriptive statistics for teachers' preferences for learning domains and learning activities.*

|	Mean	SD
Learning domains		
Classroom management and organization	2.86	1.29
Subject matter-specific	3.44	.79
Individual student care	2.76	.97
ICT	3.27	1.21
Mentoring novice colleagues	2.80	1.27
Personal effectiveness	2.79	1.29
Management tasks	2.56	1.37
Learning activities		
Reflection on practice & collaboration	3.45	.72
Training & keeping up-to-date	3.23	.81
Experimenting	3.54	.82

In Table 5.5 the descriptive statistics for the motivation scores across all learning domains (i.e., mean scores of each reason to learn over the selected one to five learning domains). The mean scores show that teachers' motivation for learning about a self-selected learning domain was stronger for the identified and intrinsic reasons than for the external and introjected reasons (all paired-samples t test were significant, $df = 248$, $p < .001$). The correlations between different reasons showed that the two autonomous (i.e., external and introjected) and the two controlled (i.e., identified and intrinsic) motivation types are positively correlated with each other. An exploration of the variation in reasons specific to each learning domain did not uncover any patterns; each learning domain showed low mean scores for external and introjected reasons, and high mean scores for identified and intrinsic reasons. On the basis of this first inspection we did not analyze any further our assumption that teachers' reasons to learn was domain specific.

Table 5.5 *Descriptive statistics and inter-item correlations for teachers' reasons to learn (n = 255)*

Reasons to learn	Key word in item	Descriptives		Inter-item correlations		
		Mean	*SD*	*External*	*Introjected*	*Identified*
External	*Others*	2.22	1.19	-		
Introjected	*Bad teacher*	2.70	1.28	.345**	-	
Identified	*Important*	4.32	0.67	-.062	.058	-
Intrinsic	*Interest*	4.27	0.74	-.060	.031	.266**

5.4.2 RELATING WHAT, HOW AND WHY TEACHERS WANT TO LEARN TO TEACHING EXPERIENCE

To explore the direction of the relationships between teachers' self-directed learning and teaching experience, we first inspected graphical representations of these relationships with scatterplots in which lines had been fitted with the SPSS CURVEFIT command (see Figures 5.1, 5.2 and 5.3). These lines provided an opportunity to inspect the linear and non-linear relationships between our independent and dependent variables. The graphs seem to indicate that some of the learning domains follow non-linear trends (e.g., classroom management and individual student support). We tested for both linear and non-linear trends for the learning domains, and expected linear trends for learning activities and reasons for learning.
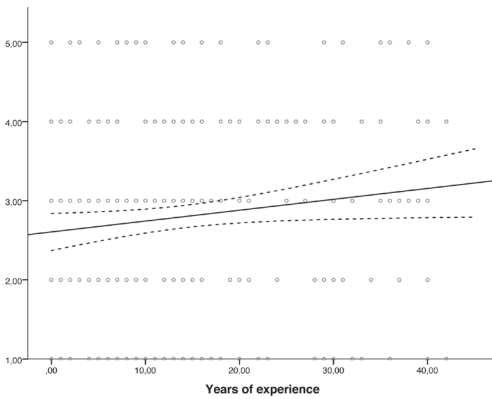

A. Classroom management

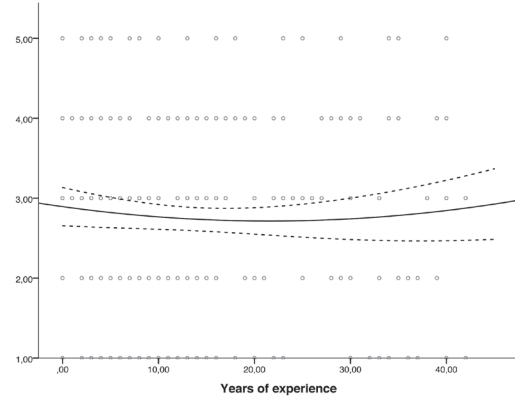*B. Subject matter-specific*
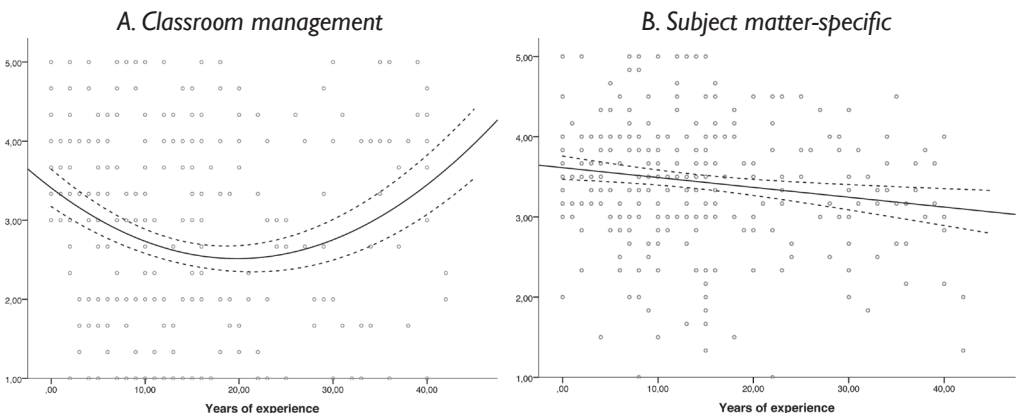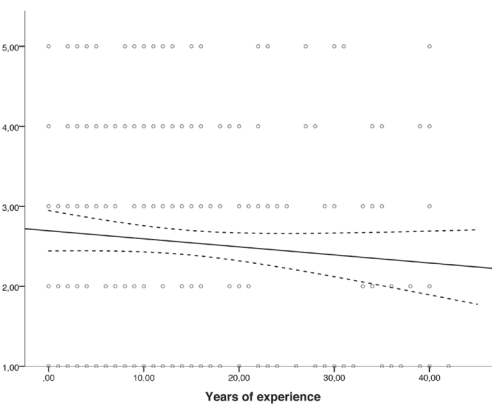
C. Individual student support
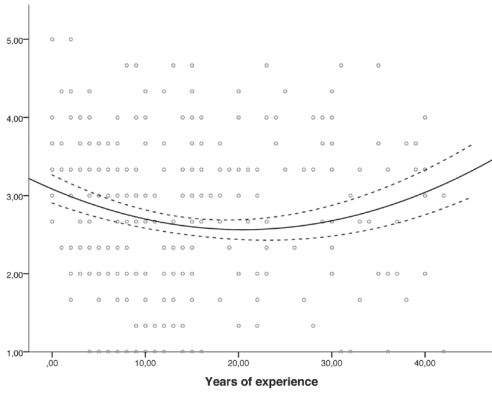
D. ICT
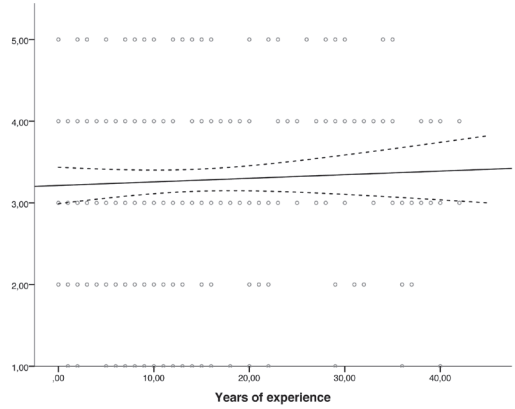
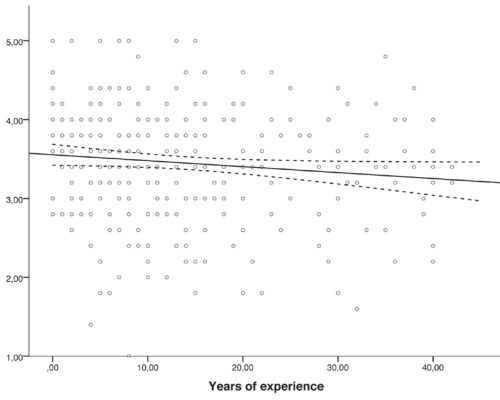*E. Mentoring novice teachers*

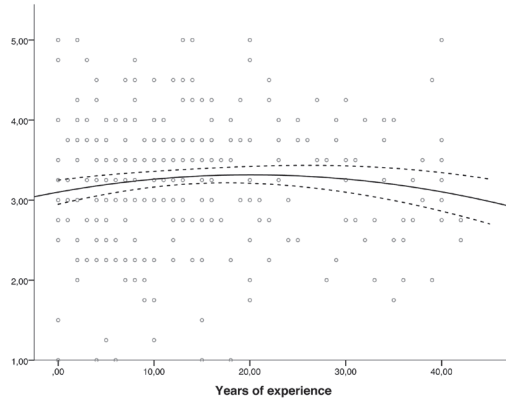*F. Personal effectiveness*

G. Management tasks

Note. Dotted lines indicate 95% confidence interval.

Figure 5.1 *Scatterplots and fitted lines for teachers' preferred learning domains*
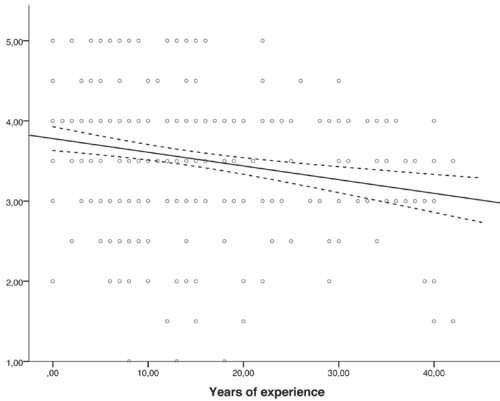
A. Reflection on practice & collaboration

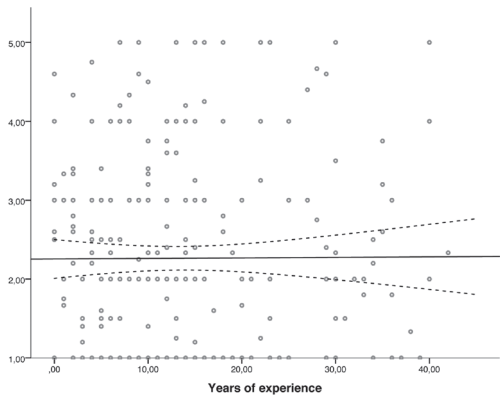## B. Training & keeping up-to-date

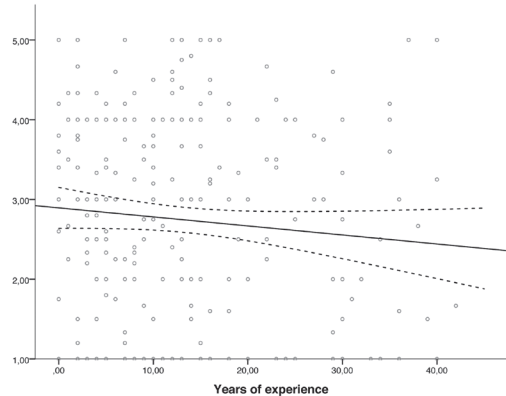## C. Experimenting

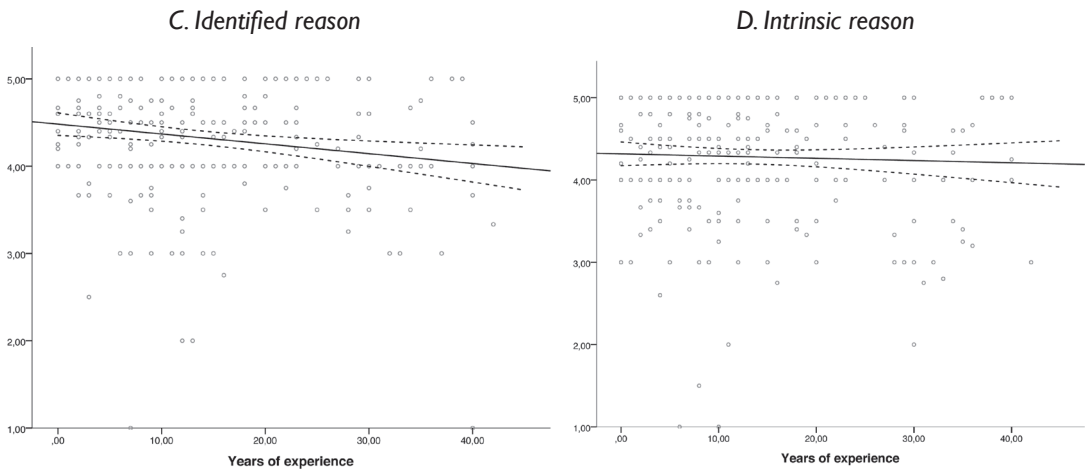*Note.* Dotted lines indicate 95% confidence interval

Figure 5.2 *Scatterplots and fitted lines for teachers' preferred learning activities*

A. External reason

B. Introjected reason

C. Identified reason   D. Intrinsic reason

Note. Dotted lines indicate 95% confidence interval

Figure 5.3 *Scatterplots and fitted lines for teachers' reasons for learning*

To see which linear or curvilinear trends were visible for teaching experience related to teachers' preferences for learning domains, we carried out a multiple regression analysis in which we entered Experience as predictor in the first model and the polynomial function of Experience in the second model (cf. Richter et al., 2011). For the learning domains only one curvilinear relationship was found. Teachers' preferences for learning about classroom management follow a positive curvilinear trend, $\beta_{experience}$ = -.751, p = .003, $\beta_{experience}^2$ = .746, p = .003, based on a significant *F* value change between models 1 and 2, ΔF = 14.861, p = .003, R^2 =.049. A positive curvilinear trend means that both less experienced and very experienced teachers have high scores on their preferences for learning about classroom management and organization, whereas teachers with approximately 7 to 15 years of experience have lower scores. The size of the positive curvilinear effect was small according to Cohen's (1988) indicators. For the other learning domains we did not find significant linear or curvilinear relationships with years of experience.

For the learning activities one linear relationship was found. Teachers' preferences for learning through experimenting relates negatively with years of experience, b = -.017, p < .001, r = -.224. The other learning activities showed no relationship with experience. For the different reasons for learning, we found that the identified reason had a negative relationship with years of experience, b = -.014, p = .005, r = -.209. The other reasons showed no relationship. The effect sizes (*r*) were small according to Cohen's (1988) rule of thumb.

5.5 CONCLUSIONS

This study started from the assumption that teachers' different learning needs stem from differences in teaching experience, which has consequences for how teachers self-direct their learning in the workplace. To examine these presumed differences we measured what, how, and why teachers want to learn, and related these differences to their years of experience.

From the descriptive analyses, we found that teachers varied in what, how and why they want to learn. For example, considering learning domains we found that teachers strongly preferred subject matter-specific domains and ICT. The finding that teachers want to learn about ICT might be explained from the current emphasis on learning through digital devices and multimedia which is relevant to all teachers (cf. the OECD Teaching and Learning International Survey [TALIS] report 2013, where ICT skills integration was top ranked in teachers' professional learning goals) (Van Braak, Tondeur, & Valcke, 2004). All teachers strongly preferred learning about subject matter-specific domains. This can be explained by the nature of teaching: being an expert at explaining your subject and adapting your instruction accordingly to different student levels is at the core of a teacher's job (Shulman, 1986). Good and adaptive instruction is also considered the most complex skill involved in teaching and therefore requires continuous development (Van de Grift et al., 2011; Van Veen et al., 2012; Wilson & Berne, 1999). Another reason for learning about subject matter can be continuous curricular changes, resulting in a lifelong need to stay up-to-date in your subject domain.

To answer our research question, we found one learning domain, one learning activity, and one reason for learning to be significantly related with teaching experience. The learning domain of classroom management and organization follows a positive curvilinear trend in relation to years of experience. This means that early- and late-career teachers show a stronger preference for learning about this domain than mid-career teachers. Late-career teachers' learning about classroom management and organization can be explained by the results of Shriki and Lavy (2012), who found that late-career teachers want to adapt themselves to today's young generation in order to find mutual respect and have good relationships with students. Student perceptions of teachers' proximity in teacher-student relationships seem to confirm this concern; teachers with more than 25 years of experience show lower proximity scores than teachers with 0 to 10 years of experience (Brekelmans et al., 2005). Our finding that early-career teachers want to learn about classroom organization confirms previous findings. Also, early-career teachers are generally found to be concerned with mastering *all* aspects of classroom teaching, including organizing their classroom and developing subject pedagogies (Feiman-Nemser, 2001; McCormack et al., 2006; Veenman, 1984).

With respect to how teachers want to learn, the questionnaire findings show that with increasing experience teachers' learning preference for developing their teaching skills through experimenting decreases. Learning from training and keeping up-to-date, for example by consulting professional literature and participating in workshops, does not vary with years of teaching experience. This contradicts with the study by Richter et al. (2011), in which experienced teachers were found to spend more time on reading professional literature but participate less in in-service training than their inexperienced colleagues. Apparently, staying informed and up-to-date is relevant to all teachers regardless their years of experience, and this can be done by attending workshops or reading professional literature. However, we did not distinguish between those two forms of professional learning activities.

Finally, teachers want to learn about a self-selected learning domain because they experience it as interesting (intrinsic reason) and/or because they feel it is important to

learn about (identified reason). This shows that teachers' reasons to learn about self-selected learning domains is highly autonomous. Although the effect was small, the 'identified reason' (i.e., whether the topic is important to learn about) was negatively related to years of teaching experience. A possible explanation can be found in a study on teachers' professional lives in which late-career teachers were found to have more emotional distance to their work (Day et al., 2007) and maybe also to their learning, which would mean they see it as less important.

5.6 DISCUSSION & IMPLICATIONS

The trends in what teachers want to learn as found in this study resemble findings from large observation studies on teacher skills and research on teachers' effectiveness (Day et al., 2007; Kyriakides et al., 2009; Van de Grift et al., 2011). These studies suggest a sharp increase in pedagogical and instructional teaching skills and impact in the first years of teaching peaking at mid-career. After mid-career, teachers' skills level off, stabilize, or even gradually decline (Van de Grift et al., 2011). In our study, mid-career teachers formulated less preference to learn about classroom management and organization than early-career teachers, probably because of their high competence levels in managing classrooms. The similarities of our study with these large-scale studies on the development of teaching skills show that teachers' self-directed learning follows a similar course.

Our findings on the learning domain 'classroom management and organization' follow a positive curvilinear relationship with 'years of experience', which contradicts the findings by Richter et al. (2011). They found a negative curvilinear trend, which implies that mid-career teachers are more interested in learning about classroom management than early- and late-career teachers. An explanation can be found in a different measurement in the study of Richter et al.: they studied the content of teachers' *formal* learning activities over the past five years, whereas in our study, we emphasized the use of *all* kinds of learning activities involved in learning about these domains. Richter's results are dependent on the number of formal learning activities teachers have participated in, and hence these content-related results reflect mid-career teachers' participation in formally organized learning activities. The fact that our findings differ from Richter's is caused by different approaches to discussing teachers' PD in relation to teaching experience[11] . If only organized and formal learning activities are taken into account for teachers' PD, this means that not the full range of teachers' self-directing their learning in the workplace is addressed. We argue that PD can consist of multiple learning activities and should be addressed as part of everyday school life, because teacher learning does not necessarily happen in organized PD settings alone (Little, 2012; Wilson & Berne, 1999).

For many of the learning domains we did not find any significant relationships with years of experience. This may be due to the large variation in the data. Teachers' self-directed learning is influenced not only by their experience in teaching, but also by current national policies and societal discussions in education (e.g., which explains teachers' strong preference for learning about ICT), by school context, and by individual factors related to teachers' professional and personal lives (cf. Day et al., 2007). Future research could address these antecedents of teachers' self-directed learning and find connections between

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[11] *In the study by Richter et al (2011) teacher age was used as predictor, but the researchers found a .90 correlation between age and experience, which makes the results comparable to the findings we report here if experience had been used. However, in line with Kington et al. (2014), we argue that teachers' age is not a valid indicator of teachers' current learning needs in relation to the teaching job, also because of the increasing influx of second-career teachers in the profession. For example, one third of our sample consisted of teachers that had had other careers before teaching.*

these different factors (cf. Kyndt et al., 2016).

There are several limitations that could have influenced our results. For example, our sample was relatively small due to teachers' signing up voluntarily. Furthermore, the very experienced group was underrepresented in our sample, which implies that our findings about this group should be interpreted with caution. Another limitation might be that we used cross-sectional data to make inferences about teachers' career development, so that we cannot make inferences about what teachers' developmental pathways might look like. A final limitation of our study is that we studied teachers' self-directed learning through presenting a list of possible learning domains and activities which might not represent the self-determined nature of teacher learning in the workplace. Nonetheless, we did find small effects on experience-related aspects of self-directed learning, which we corrected for multiple significance testing.

Our study presents an example what the perspective of self-directed learning in relation to teaching experience might look like: teachers seem to differ in what, how, and why they want to learn. Therefore, our findings can inform PD because differential motivations and different preferences were taken into account. Such a differentiated approach can enhance the effectiveness of PD, and ultimately result in a career-long PD curriculum based on differential teachers' learning preferences (Gravani, 2007; McMahon, Forde, & Dickson, 2015; Van Veen & Kooy, 2012). Such a curriculum could focus on, for example, late-career teachers' learning about managing classrooms and coping with (disruptive) student behavior (cf. Day et al., 2007). Future studies could address the question how subject matter-specific domains might be different for teachers with varying experience levels, taking into account the different levels of teaching complexity and domain-specificity in teaching (Seidel & Shavelson, 2007; Van de Grift et al., 2011).

We further argue that self-directed learning provides a relevant contribution to the current debate on teachers' PD. Previous studies have already shown that teachers do set their own learning goals and direct their own learning, although they might need some assistance in this process of reflection and enactment (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012; Mushayikwa & Lubben, 2009; Shriki & Lavy, 2012)(cf. Chapter 2 and 3). In addition, our study indicates that teachers have autonomous reasons to learn about self-selected learning domains, which sets the expectation that teachers will be very determined to learn about these learning domains (Jansen in de Wal et al., 2014; Van den Broeck et al., 2008). In practice, teachers' learning goals should be taken into account whenever constructing individual professional development plans, or PD facilitators try to address individual teachers' learning preferences in their program design. For this to happen, we suggest that future studies address the question of how teachers' articulated goals result in concrete action plans on the part of the teachers themselves (i.e., the next phases of self-directed learning) and how best to provide support to teachers setting their own learning plans (Janssen et al., 2012; Shriki & Lavy, 2012).

GENERAL CONCLUSIONS AND DISCUSSION

6

GENERAL CONCLUSIONS AND DISCUSSION

6.1 INTRODUCTION

In light of the argument that many teacher professional development (PD) initiatives are not adapted to meet what teachers say they want to learn, we were interested to learn about teachers' self-directed learning. The studies in this thesis therefore aimed to address what, how and why teachers want to learn and how this relates to their years of teaching experience and their workplace context. For this purpose 31 teachers from two secondary schools were interviewed and a large-scale questionnaire study with 309 teachers was conducted. From the interview studies we could deduct teachers' professional learning goals, their professional concerns, the relation between them, and teachers' perceptions of their workplace as a learning environment. The questionnaire study produced data on teachers' preferences for learning domains and learning activities and their reasons to learn.

The next sections below first provide an overview of the findings of each chapter. Second, overall conclusions that transcend the individual chapters are presented. Then, the research findings are discussed in light of the literature on teacher professional learning. The final sections address the limitations, make suggestions for further research and discuss practical implications.

6.2 CONCLUSION PER CHAPTER
CHAPTER 2

The focus of this chapter was on how the content of teachers' self-directed learning, operationalized in their learning goals, was related to their years of experience. This study was guided by the following research question: *What is the relationship between teachers' professional learning goals and their teaching experience?* To answer this question, 16 teachers from one secondary school (School 1) were interviewed about their learning goals. Shulman's (1986) knowledge domains were used to categorize the variation in learning goals emerging from the interview data. To understand the frequently mentioned learning domain *Curriculum and Instruction* better, subcategories were created based on a framework of Pedagogical Content Knowledge (Magnusson et al., 1999): instructional strategies, students' learning process, curriculum development, designing assessment, and content knowledge.

The results showed that teachers' learning goals were not solely aimed at improving their teaching practice, but also at professional learning in a broader sense (such as managing their work load, their additional role within the school e.g., coaching beginning teachers), and at issues currently encountered at the school (e.g., the use of educational technology). To compare the professional learning goals of teachers that were in different phases of their career, three broad subcategories of teaching experience (early-, mid-, and late-career) were distinguished. Learning about communication and classroom organization

was a topic mentioned only by early-career teachers. Mid-career teachers had learning goals aimed at broader themes outside the classroom, and at new challenges besides the goals related to their teaching practice. All early- and mid-career teachers interviewed wanted to learn about curriculum and instruction in relation to the subjects they taught. Late-career teachers were more interested in learning about technological innovations and extracurricular tasks rather than learning about classroom practice, since these were demanding issues within their professional lives at the time of interviewing.

Chapter 3 discussed underlying reasons for teachers' learning goals using the perspective of teachers' current professional concerns.

CHAPTER 3

This chapter focused on what underlies teachers' formulating learning goals for themselves, and how this varies for teachers with different amounts of teaching experience. We tried to find an answer to what underlies teachers' learning by studying teachers' experiences of their current professional concerns. The following research questions were designed:

1. *How can teachers' learning goals be understood from their current professional concerns?*
2. *How do teachers' learning goals and their current professional concerns relate to teaching experience?*

For this purpose, 15 teachers from one secondary school (School 2) were interviewed twice: in the first interview the teachers were asked about their learning goals; in the second interview the teachers did a card-sorting task designed to elicit their current professional concerns (i.e., themes that were relevant or important for teachers' current professional lives such as their teaching competences, work-life balance, professional identity). Conceptually clustering teachers' professional concerns with learning goals enabled us to understand how these concerns were shaping teachers' learning goals. The concern-goal pairs were categorized as 'continuous', 'growth and improvement', and 'work-management' pairs. These were the different concerns underlying teachers' decision-making in what they wanted to learn.

Continuous concern-goal pairs were characterized by themes that were 'always' important in teachers' professional lives. The content of the continuous concern-goal pairs was either about developing good teacher-student relationships or about ongoing investment in instruction. Growth and improvement concern-goal pairs showed how teachers' learning could be shaped by their learning to become better in particular teaching skills and/or learning for a new task or responsibility. Work-management concern-goal pairs showed how teachers not only focused their learning on their classroom and their teaching, but also on learning how to manage their work.

To compare the professional concerns of 15 teachers who were in different phases of their career, three broad subcategories of teaching experience were distinguished: early-, mid-, and late-career (as in Chapter 2). From the growth and improvement pairs mentioned by early-career teachers, it appears that their learning goals were characterized by refining their teaching practice and striving for mastery and perfection. Their developmental 'tasks' were broad and related to deepening their subject matter pedagogies, extending their repertoire in curriculum and instruction, and taking on more responsibilities. Early-career teachers' learning goals seemed to be affected by their aim for socialization in the

profession and personal ambitions, whereas mid-career teachers seemed more focused on staying challenged and motivated in their job. The 'continuous' pairs were mainly found among mid- and late-career teachers, which seemed to drive their permanent investment in improving their teaching. Work-management goals of early-career teachers came from a wish to be able to manage their day-to-day work load and for late-career teachers, these goals were more about balancing their work with extra-curricular tasks and, for some, avoiding burn-out.

CHAPTER 4

In addition to individual teachers' learning goals discussed in chapter 2 and 3, this study focused on broader contextual influences on teachers formulating learning goals for themselves. Teachers' workplaces are assumed to differ in the extent to which they offer learning opportunities for teachers. This study aimed to explore the relation between teachers' perception of their workplace as a learning environment and their self-directed learning. This was based on the central premise that it is not objective workplace conditions that support or impede teachers' professional learning but the way teachers make sense of their workplace and consequently act on that. The central research question was: *How do teachers' perceptions of workplace conditions relate to their professional learning goals?* To answer this research question, 31 teachers from two schools (School 1 and 2) were interviewed about their learning goals and perceptions of their workplace as a learning environment. From these 31 teachers four teachers were selected who perceived their workplace as either enabling or constraining their learning. Structural and cultural workplace conditions and school leadership were distinguished as factors that may influence teachers' perceptions of their workplace. The selected four teachers varied in the extent to which their perception of the workplace as enabling or constraining their learning related to the kind of learning goals they formulated for themselves.

Based on these four cases, teachers' perceptions of the cultural conditions and characteristics of leadership were found to be most important for their self-directed learning (i.e., formulating learning goals). For example, these four teachers mentioned a shared vision in school, opening up the school dialogue on school-wide issues, and being recognized as teaching professionals as important conditions for their own learning. These results reflect earlier studies on the importance of a shared understanding of school goals, professional learning climate and transformational leadership practices for teacher learning (Jurasaite-Harbison & Rex, 2010; Leithwood & Jantzi, 1990; Little, 2012).

These four cases show that a lack of shared vision in a school may shift teachers' focus away from the school organizational goals. In addition, feeling heard and recognized is an important workplace condition for teachers' self-directed learning. The task for school leaders is to create such workplace norms that teachers feel it is their own responsibility to continue learning, but at the same time keeping the school's collective goals in mind (Little, 2012). From the case studies we concluded that teachers' learning goals result from an interaction of their own concerns at the classroom level, and their perceptions of the whole school context.

In addition to the small-scale qualitative research design reported on in chapters 2 to 4, we studied teachers' self-directed learning on a larger scale. This questionnaire study was guided by the following research question:

To what extent does teachers' self-directed learning (what, how and why teachers want to learn) relate to their years of teaching experience?

A total of 309 teachers filled out a questionnaire with questions about what learning domains they wanted to learn about ('what?'), what type of learning activities they wanted to engage in ('how?'), and what reasons motivated them to learn about particular learning domains ('why?'). Non-linear and linear regression analyses were used to test relationships between teachers' years of teaching experience and what, how, and why they wanted to learn. The findings show that the teachers' interest in learning about classroom management and organization had a non-linear relationship with years of teaching experience. More specifically, this means that early- and late-career teachers had higher mean scores for learning about this domain than mid-career teachers. Overall, teachers wanted to learn about subject matter-specific domains and about ICT in the classroom. With respect to how teachers want to learn, the findings show that the teachers' engagement in *experimenting* decreased gradually with years of experience. In terms of why teachers want to learn, the results indicate that the teachers wanted to learn about particular learning domains because it interested them or because they thought it was important to learn about this domain. These two reasons for learning about self-selected learning domains are described in self-determination theory as autonomous motivation (Deci & Ryan, 2000). Thus, the teachers' motivation to learn about self-selected learning domains was highly autonomous.

6.3 OVERVIEW OF GENERAL FINDINGS

In the following paragraphs, general findings that were addressed across two or more chapters are combined and further explained. The first general finding addresses the relationship between teachers' learning goals and teaching experience, and the second general finding addresses teachers' reasons and motivation for professional learning.

6.3.1 LEARNING GOALS VARY ACCORDING TO TEACHING EXPERIENCE

We were interested in how teaching experience relates to teachers' professional learning goals. Chapters 2, 3 and 5 report on the research into how teachers with different levels of teaching experience differed in the content of their learning, operationalized as learning goals (interview studies) or learning domains (questionnaire study). In this section these findings are combined and related to existing research.

Both interview studies found that *early-career teachers* were concerned with three central tasks of induction (Feiman-Nemser, 2001): a) communication with students and classroom management, b) improving curriculum and instruction, and c) growing as a professional and/or establishing themselves in the school. The literature on teacher induction focuses in particular on the challenges of classroom management. The conclusions from this research are that, in addition to classroom management, early-career teachers' aim to increase their effectiveness in teaching by striving for excellence in their lessons,

by looking for variation in instruction, and by learning about students' learning processes (cf. Fuller's 1969 impact concerns). They also want to broaden their responsibilities and become more established in the school, for example, by taking up mentor roles or organizing extracurricular activities for students (Anderson & Olsen, 2006). Lastly, they felt that their work load could hinder their effectiveness in teaching and therefore sought ways to handle this work load better.

Classroom management and relating to students were topics to learn about for early-career teachers ('growth and improvement concern') as revealed by the interview studies, whereas the questionnaire study showed that not only early-career, but also late-career teachers are interested in learning about classroom management and relating to students. From chapter 3 this interest can be explained from teachers' 'continuous concerns'. For example, two mid- and late-career teachers expressed the view that forming good relationships with students is an important prerequisite for motivating students in your class and is always important to invest in. Previous studies have explained late-career teachers' interest in learning about classroom management and relating to students in terms of these teachers wanting to accommodate themselves to today's young generation in order to find mutual respect and have good relationships with students (Brekelmans et al., 2005; Day, Sammons, Stobart, Kington, & Gu, 2007; Shriki & Lavy, 2012).

Eighteen out of twenty early- and mid-career teachers in the interview studies wanted to learn about aspects of *curriculum and instruction*. The questionnaire findings also showed subject matter specific-learning domains to be strongly prioritized by all teachers. An interest in subject matter domains can be ascribed to continuous changes in subject content and curricular changes which result in a lifelong need to stay up-to-date in one's subject domain. Furthermore, according to the interviewed teachers, being an expert at explaining subject matter and adapting instruction according to different students is at the core of their job as teacher (cf. Shulman, 1986). More specifically, the subdomain 'varying instruction to students' was mentioned frequently as an example in the interview studies. This seems to be a particular subdomain of curriculum and instruction that requires teachers' continuous professional learning (cf. teachers' pedagogical content knowledge, Shulman, 1986b). Differentiating instruction to students is also one of the most complex skills in teaching (Denessen & Douglas, 2015; Van de Grift, Van der Wal, & Torenbeek, 2011) and therefore requires continuous development. From these results we conclude that teachers' self-directed and continuous learning will always be closely related to curriculum, instruction and subject-related domains as it is closely connected to effective teaching (Van Veen, Zwart, & Meirink, 2012) and because these aspects are key in becoming an adaptive expert in teaching (Darling-Hammond & Bransford, 2005).

In contrast with early-career teachers, mid- and late-career teachers in both schools were often interested in learning about *educational technology* in the classroom. In the questionnaire study this learning goal appeared to be highly preferred by all teachers. The interest in learning about educational technology might be explained from the current emphasis on learning through digital devices and multimedia which is relevant to all teachers, with teachers with minimal computer experience feeling a strong need to learn about this (Van Braak, Tondeur, & Valcke, 2004).

6.3.2 TEACHERS' REASONS FOR LEARNING

Both chapter 3 and chapter 5 addressed the question of why teachers engage in self-directed learning ('why?'), but used a different approach. Chapter 3 focused exclusively on teachers' professional concerns as reasons for professional learning (Day et al., 2007). Chapter 5 examined teachers' autonomous and controlled motivation for professional learning; trying to grasp the full continuum of self-determination theory (Deci & Ryan, 2000). The general findings from Chapter 5 about the reasons for teachers' learning seem to suggest that teachers' intrinsic and identified reasons were more important for teacher learning than introjected and external reasons. These reasons were closely related to teachers' interest and beliefs about significance: reasons examined in more depth in Chapter 3. In this section, the findings on teachers' differential reasons for learning are explained using motivational theories and literature on teachers' professional lives.

The questionnaire study found that teachers' reasons to learn about self-selected subjects were more autonomous rather than controlled. This finding is in line with earlier studies that found learners' autonomous reasons for learning to be stronger predictors to engage in learning than controlled reasons (Knowles, 1970; Van den Broeck, Vansteenkiste, & De Witte, 2008; Vansteenkiste, Lens, & Deci, 2006). Our finding from the questionnaire study confirms our assumptions derived from self-directed learning and self-determination theory which states that if reasons are well integrated in the individual's self they are seen as more powerful reasons for individuals to engage in learning (Deci & Ryan, 2000). In other words, experiencing choice and personal autonomy over one's learning is closely related to autonomous reasons for learning.

Chapter 3 discussed insights gained from the research into what these more autonomous reasons for professional learning look like with an additional content focus (it leads to learning about 'what'?). The results from the card-sorting task lead to the conclusion that teachers' professional lives can exert a strong influence on teachers choosing learning goals for themselves. Their 'continuous', 'improvement and growth', and 'work-management' concerns resulted in a different set of learning goals. For continuous concerns, teachers want to learn because it considers something which is always important to them. Their core values have been formed and they know what aspects of their teaching deserve continuous attention. These continuous concerns seem closely related to teachers' values and beliefs about good teaching (Kelchtermans & Ballet, 2002; Tang & Choi, 2009) and maintaining good relationships with students (Brekelmans et al., 2005; Day & Gu, 2007; Veldman, Van Tartwijk, Brekelmans, & Wubbels, 2013). The improvement and growth concerns were driven by teachers' striving for mastery (early-career), interest or challenge (mid-career), or a specific responsibility or task (early-, mid-, and late-career). Work-management concerns stemmed from tensions involving the teacher as a professional working in a demanding organization and developing professionally (cf. Bakker & Demerouti, 2007). Thus, external factors (demanding organization, task characteristics) and internal factors (interest, values and beliefs) were both found to lead to the formulation of learning goals (cf. Merriam, Caffarella, & Baumgartner, 2007).

Taking these findings from Chapter 3 and 5 together, we concluded that the teachers were motivated and willing to learn for reasons that were more integrated into the 'self'. These findings seems to reinforce previous findings that reasons to learn can still come

from 'outside' of the teacher, but if they are more integrated into the teacher's self, they are much more likely to result in teachers' formulating intrinsic learning goals, such as learning for personal and professional growth (Gagne & Deci, 2005; Jansen in de Wal, den Brok, Hooijer, Martens, & Van den Beemt, 2014; Vansteenkiste, Lens, & Deci, 2006). Teachers' will to learn has previously been discussed in contexts of national reforms and teaching qualifications (cf. Eekelen, Boshuizen, & Vermunt, 2005), and consequently teachers' motivation for learning has been portrayed as lacking or problematic. However, our studies showed teachers to be willing and autonomously motivated to learn if they experience choice and autonomy over this learning. Therefore, the question should not be *whether* teachers are generally willing to learn, but *what, how,* and for *what reasons* teachers want to learn.

6.4 GENERAL DISCUSSION
6.4.1 TEACHERS' SELF-DIRECTED LEARNING AND PROFESSIONAL LEARNING GOALS

As stated in the introduction chapter, we perceived teachers as active learners and used the concept of self-directed learning to refer to this active process. Consequently, the research focused on teachers' professional learning goals as a characterization of the first phase in planning their self-directed learning. Rather than focusing on the *process* of teachers formulating learning goals for themselves, we were mainly interested in the end *product* of this learning process: the content of teachers' professional learning goals (see Chapter 6, 3. Overview of general findings for an overview of the different learning goals).

One could question the usefulness of discussing the content of learning goals when it is not clear how teachers managed to arrive at 'suitable' learning goals for their desired competence in comparison with their current ability levels. To discuss the value of teachers' self-articulated learning goals compared with their current ability level, the teachers' learning goals were compared with studies that focused on how teachers learn to become teachers (Anderson & Olsen, 2006; Feiman-Nemser, 2001; Fuller, 1969; McCormack, Gore, & Thomas, 2006), what teachers need to know and be able to do (Darling-Hammond & Bransford, 2005; Grossman, 1992; Shulman, 1986), and how effective teachers are in teaching over the course of their career (Berliner, 2001; Day et al., 2007; Kyriakides, Christoforou, & Charalambous, 2013; Van de Grift et al., 2011). The learn-to-teach studies found that beginning teachers focus on mastering *all* aspects of their teaching, including classroom management, relating to students, designing assignments and assessments, getting socialized in the school context and forming their teaching identity. The learning goals from the early-career teachers in our sample focused on exactly these aspects of teaching. The teaching expertise studies found that it takes approximately seven years to become an expert teacher; however, not all teachers become an expert. Expert teachers have more routine teaching behavior which allows for more conscious processing of complex information (Berliner, 2001). The learning goals from the mid-career teachers in our interview studies were less focused on mastering critical (or basic) aspects of teaching, but on further improving their instructional strategies, on specializing in particular tasks or responsibilities, or on becoming a subject specialist by focusing on curriculum design. These goals therefore reflect the stabilization phase in teaching in which

teachers have an interest in learning more complicated teaching skills or specializing in particular non-teaching domains, because they have already mastered the basics. Teaching skills become much more variable with regard to their effectiveness after 20 years of teaching experience (Day et al., 2007). The goals formulated by our late-career teachers are also more variable.

Although this study did not measure teachers' actual teaching performance nor their actual learning activities, it seems that the study teachers' learning goals did match large-scale study findings of teachers' teaching skills. We therefore conclude that teachers are very well able to indicate their own learning goals (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012; Mushayikwa & Lubben, 2009; Shriki & Lavy, 2012).

6.4.2 PERSPECTIVES ON TEACHERS' PROFESSIONAL DEVELOPMENT

Chapter 1 introduces the term professional *learning* to replace the term professional *development.* The word 'professional development' connotes PD that is *done to* teachers and has a rather instrumental function, whereas professional learning recognizes the ongoing nature of professional growth and perceives teachers as agents in this developmental process (Loughran, 2006; Nilsson, 2012; Timperley, Wilson, Barrar, & Fung, 2008; Webster-Wright, 2009). In contrast, research literature around PD frequently takes a deficiency perspective on teacher professional development, claiming that particular teaching competencies are to be implemented or enacted in teachers' classrooms (Lieberman & Mace, 2008; Timperley & Alton-Lee, 2008).

The related discussion seems to revolve around the question of *who* is in charge of professional development and who decides upon the agenda: teachers, schools or the national government? Our research aimed to show that teachers set learning goals for themselves from the perspective of self-directed teacher learning. Teachers' learning goals stemmed from their motivation for continuous professional learning in the complex job of teaching (e.g., related to their core teaching values), for growth and improvement (e.g., improving specific teaching skills, or to stay challenged and motivated for their job), and for managing their work (e.g., balancing work load). The results permit the conclusion that teachers are intrinsically motivated to develop continuously and thus that their self-directed learning deserves more appreciation in the debate about teachers' PD. Our results resonate with the work of scholars that take a growth approach to PD in which teachers are the main actors to bring about change in their practice (Ball & Cohen, 1999; Clarke & Hollingsworth, 2002; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Day et al., 2007; Hawley & Valli, 2000; Hoban, 2002; Timperley & Alton-Lee, 2008). The general discussion on PD could integrate these perspectives of teachers as owners of their own professional learning, perceiving teachers as partners in deciding on the PD agenda, not as recipients.

For any discussion about PD it is important to consider the national context in which it takes place. Most of the work of PD scholars is strongly contextualized in Anglo-Saxon countries, such as the United Kingdom, the United States and New Zealand, which seem to cope with stronger accountability pressures from the government (implemented top-down, to fix problems in education) compared to the system in the Dutch context. The studies of this thesis were conducted within the Dutch context where schools do

not experience a strong culture of performance evaluation of teachers, nor is there a mandatory national system of continuous evaluation or qualification (points) for teachers[12]. In contrast with other countries (e.g., Spain, UK, USA), Dutch teachers have professional autonomy to engage in professional development and participation in PD is voluntary without being linked to salary or career incentives. This is because Dutch teachers are asked to use their time for professional development (i.e., 10 percent of their time) wisely. Consequently, Dutch teachers have much say in directing their professional learning, but they use it in various ways (Diepstraten & Evers, 2012). The concept of professional learning, and taking responsibility for your own professional learning, matches the Dutch context quite well in theory.

6.4.3 MODELS ON PROFESSIONAL LIFE PHASES AND TEACHING EXPERIENCE

The research (chapters 2, 3 and 5) looked at the relationship between teachers' learning and their teaching experience. To interpret the findings, models on professional life phases were used. These phase-based models assume that teachers go through a sequence of phases which run parallel to their development over years of experience (Fessler & Rice, 2010). The themes described in the professional life phase models of Huberman (1993), Day et al. (2007), and Fessler and Christensen (1992) were useful for explaining variation between teachers in our interviews and questionnaire study.

The usefulness of stage or phase theories to describe general teacher development has been a subject for discussion (Dall'Alba & Sandberg, 2006; Grossman, 1992). Many stage theorists claim that the development of skills or knowledge follow a particular order and build up on each other, and/or that different experience levels can be distinguished that reflect a certain readiness to learn something (cf. Berliner, 2004; Fuller, 1969). This is a claim which is highly contested due to its assumption of a vast upright linear pathway which all professionals will follow in skill development without potential setbacks or non-linear pathways (Dall'Alba & Sandberg, 2006). The risk with stage models in general lies in treating them as fixed and deterministic. We contend, however, that the phases described in professional life models show particular themes that are relevant to many teachers at different stages of their professional life. This does not mean that they will experience *all* of these phases, nor in this particular order or at a particular pace. This concurs with Huberman's (1989) line of reasoning because he asserts that each phase is part of an individual's trajectory. In his research he tried to distinguish similarities across teachers' trajectories, but he concludes that there were just as many differences due to the idiosyncratic nature of teachers' lives. Hence, the mix of components that reflects a distinct phase can always be different for each individual. In this thesis we did not use the professional life phases to 'label' teachers according to their years of experiences, but carefully considered the differences that existed within and among teachers with varying levels of experience in their professional learning. Using themes from the professional life phases facilitated a better understanding of these differences.

The research approach adopted for this study was different from the research approach used in professional life phase studies. It was not so much interested in validating a similar model for the Dutch context, but used established models as a framework for interpreting the results. More specifically, we took the distinction in years of experience

from Day et al. (2007) to identify groups of teachers with different amounts of experience in their professional lives. In doing the complexities that exist within teachers' professional lives may have been undervalued (chapters 2 and 5). To compensate for this, in chapter 3, themes from the professional life phase models are used to better understand variation in teachers' learning, allowing for more complexity in the relation between teachers' experience and whatever professional life phase they might find themselves in. By using the themes from professional life phase models as indicative of teachers' goal setting for learning insight was obtained into how teachers' professional lives can impact their professional learning. For example, it was found that an experienced teacher recovering from burn-out will formulate different professional learning goals from an experienced teacher looking for variation in his/her teaching job.

6.5 LIMITATIONS

In general there are three limitations that seem to relate to the research approach used in this thesis which should be carefully considered when interpreting its conclusions.

First, the notion of teachers as active agents that are able to self-direct their learning was central to this thesis. It is important to note that self-directing your learning is not always feasible. Teachers are part of a school organization, and within this organization they take part in their subject and/or grade level department. As part of a larger organization, teachers have to deal with varied and changing demands (e.g., national and local reforms, policies, curriculum changes). As a consequence they do not have absolute autonomy over what they do in their classrooms, and thus, are also not fully autonomous in choosing the direction of their learning. Furthermore, teachers' self-directed learning implies that teacher learning is organized, well-planned and deliberate. However, teacher learning takes place in more emergent forms as well. Eraut (2000) distinguished implicit, reactive, and deliberate forms of learning. This study limited itself to only the deliberate form of teacher learning.

Secondly, the research focused particularly on teaching experience as an important factor to distinguish when teachers formulate learning goals for themselves. Other teacher background variables such as age, gender, subject, and education level/teacher degree were not taken into account. A possible caveat is the implicit relation between age and experience. Teachers with 20 years of experience are also very likely to find themselves in a particular life phase because of their age (i.e., mid-forties). When interpreting the results, the variation in learning goals could just as well be a consequence of teachers moving through different age phases. This is especially problematic as there were second-career teachers in our sample (e.g., 5 teachers in School 1, see Chapter 2), that fell in an experience range in which they looked less similar to their experience 'peers' because of their age difference and their previous experiences in their former career (Tigchelaar, Brouwer, & Korthagen, 2008). However, from a professional lives' perspective, teaching experience is a variable much more related to profession-related concerns than age. This argument has been made by Day et al. (2007) and Kington et al. (2014) who claim that the investigation of teachers' professional learning is influenced by complex factors independent of age (i.e., the interplay of professional, situated and personal factors), which gives central place to the

particularities of school context and the teaching job. Furthermore, the division into early-, mid-, and late-career teachers could have narrowed the focus down to only three general experience groups, whereas experience is described as being much more sophisticated in other empirical studies (cf. professional life phase models). To accommodate this possible variation within experience groups, the professional life phase models were used to interpret the findings. The authors of these models faced similar problems with explaining their phase-based models and explained their phases not as deterministic, nor as a vast trajectory all teachers go through, rather as a sequence many teachers follow with the central assumption of non-linear development (Day et al., 2007; Fessler & Rice, 2010; Huberman, 1993).

Third, in order to determine teachers' self-directed learning, the selection of teachers for the sample was very important. For the qualitative studies the teachers were selected carefully to arrive at a diverse sample, but the questionnaire study relied on teachers who volunteered to fill out the questionnaire. This selective sample bias might have influenced the findings since we were interested in how teachers themselves address their learning.

6.6 SUGGESTIONS FOR FURTHER RESEARCH

This section summarizes the most relevant suggestions for further research.

First, learning goals were only measured at one moment in time. This does not provide insight into how teachers develop over time and across phase transitions. For example, how do early-career teachers develop into mid-, and mid- develop into late-career teachers? How stable or phase-dependent are their learning goals anyway? A developmental approach is needed, therefore, for example a longitudinal study of teachers' learning (cf. Beck & Kosnik, 2014; Huberman, 1993; Mulholland & Wallace, 2005) to see how variation occurs within cases, not only across cases. It is important to see how stable teachers' learning goals are, or to what extent they are time-, task- or context- dependent (e.g., in the current timing of national policies, teachers getting other responsibilities, or moving between schools, respectively). Again the professional life phase models could be useful to interpret findings on how learning goals change as teachers transition between phases. For example, Fessler and Christensen (1992) explain how changes in tasks and responsibilities (e.g., teaching another grade level) might make an experienced teacher feel like a novice teacher again that needs to re-establish their repertoire of teaching.

Second, self-perceptions were used for teachers' learning and we chose the preparation phase (needs assessment in adult learning theories) for learning. No information was obtained on what teachers actually do to pursue their learning goals, or whether they consciously engage in learning at all. An interesting factor is how the school environment hinders or supports teachers' trying to pursue their learning goals: what support do teachers need to be able to pursue these goals? However, the question of time seems to be even more important: is there enough time for teachers to organize their own learning? Officially Dutch secondary school teachers have 10 percent of their time available for professional learning, but in practice, these hours are used variably (Diepstraten & Evers, 2012). This builds onto the findings of Chapter 4; how does teachers' perception of their workplace interact with their plans for pursuing these learning goals? Special attention

is drawn to the level of agency teachers have or show in pursuing their goals (Billett, 2011; Vähäsantanen, 2015). How much negotiation space is there for teachers in a school organization to actually pursue their goals? And what occurs with teachers' learning goals when the organizational goals do not match their individual goals? For example, there was one teacher (Bart) in our sample who formulated a clear goal to become coordinator of an extra elective curriculum in his subject domain for talented upper-grade students (see Chapter 3, Table 3.4). His ideas were approved by school management and he was really enthusiastic about this new goal because it would be a challenge for him to take on a coordinator role and it would call on new knowledge for subject-specific instruction. Two weeks later, Bart explained that his ideas had been rejected by his colleagues from the subject department and because he did not have their support, school management decided not to continue setting up a new curriculum. The case of Bart shows how particular individual goals are to be negotiated within an organizational context and therefore are not necessarily easy to pursue when multiple stakeholders are involved. Future research could try to explore this negotiation process related to teachers' professional agency in school organizational contexts (Billett, 2011; Opfer & Pedder, 2011).

6.7 PRACTICAL IMPLICATIONS

Several practical implications for teacher professional learning in schools can be drawn from this study on three levels: a) for teachers, b) for professional development facilitators including school leaders, and c) for policy makers. These implications relate to how teachers formulate learning goals for themselves (teachers and facilitators) and how (self-directed) teacher professional learning can be organized in schools (teachers, facilitators, and policy makers).

6.7.1 TALKING ABOUT LEARNING

Schools are places for students to learn and teachers to work, not necessarily for teachers to learn (Van Veen et al., 2012). Therefore, schools are not places where teachers frequently talk about their learning whereas this could be beneficial for the overall learning climate (Horn, 2005; Smith & Gillespie, 2007; Smylie, 1995). In this research project, we were able to set a climate and make time so that teachers could discuss their learning goals but this is quite uncommon in practice. Several instruments were used to start the conversation about learning and these could be helpful in assessing teachers' learning goals. In the learning goals interviews (Chapter 2 and Chapter 3) several perspectives were used to talk with teachers about their learning, including their history of learning experiences, their most recent learning experiences, their strengths and weaknesses, and their aims and ambitions for the next five years (see Appendix B). All of these perspectives helped to broaden the idea of teacher learning beyond the narrow view that teachers frequently have from following courses or attending workshops. The card sorting task (chapter 3) could shed light on what matters most to teachers in their current professional lives. This task provided a moment of reflection about where they find themselves in their career and was perceived as helpful in understanding which themes are most important for their learning and work.

The 15 teachers that did the card sorting task formulated learning goals predominantly from an improvement and growth perspective, from their core values about teaching that are always important, and from their current experience of managing their work. It is important, therefore, to start the dialogue about teachers' learning not only from which competencies teachers need to acquire (i.e., deficiency perspective), but also take a growth approach to learning by asking what a teacher wants to become better at or specialize in. In addition, a conversation partner can take into account how teachers stay committed to teaching and how they develop resilience (Day & Gu, 2007). Taken together, teacher professional learning is not only about becoming better in the teaching job, but also about personal development (e.g., learning which increases job satisfaction, well-being, commitment to teaching, Mackay, 2015) or about how to properly manage the demanding teaching job (e.g., dealing with high work load in teaching, work-life balance, time management). The latter has recently received more attention because in the Netherlands teachers' burnout rates have increased over the past couple of years[13].

In the dialogue about learning, it seems important who takes up the role of conversation partner. In the conversations that were held in our interview studies, the interviewer had no interest in the learning goals other than for research purposes, nor were there any consequences for teachers who participated in the interviews about their learning. This is different from a dialogue in which teachers experience an assessment component. In one case, a teacher sent the interviewer an e-mail saying: 'This isn't going to be a kind of performance interview?'. Apparently this teacher did not like the idea of being evaluated on her teaching skills together with a conversation on learning. In a reply email she was reassured that no evaluation of her teaching skills was involved and the interviews were held in a trustworthy atmosphere. Talking freely about learning and her accompanying concerns with her school manager in charge of the teacher evaluations in the school would not work for this particular teacher. As regards the positions of teachers and school managers in schools, power issues can play a role: a conversation about learning can be a sensitive topic because the school manager can also be the formal assessor of a teacher's performances (Blase, 1991; Kelchtermans & Ballet, 2002). The role of conversation partner can also be a colleague or outsider, as long as there is enough opportunity for reflection to arrive at clearly formulated learning goals.

6.7.2 ORGANIZING SELF-DIRECTED LEARNING IN SCHOOLS

In this thesis it has been shown that teachers' learning goals result from an interaction of many factors. It can therefore be complex for school leaders to organize individual teachers' learning processes (Poell & Van der Krogt, 2013). There is no one-way influence from the school and the school leader on teachers' self-directed learning: teachers interpret school messages through their own lens of accumulated beliefs about teaching and teaching experience and decide to act on what is afforded or not (Coburn, 2005; Imants & Van Veen, 2010). In addition, professional learning in schools is not only what teachers are offered, but more what teachers elect to engage in themselves and how they create learning opportunities for themselves. The findings from the interview study in Chapter 4 would seem to indicate that the extent to which teachers take ownership over their learning can be increased through a number of workplace conditions, such as: clear

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[13] In the Netherlands, teaching ranks first in the list of professions where employees have most burn out symptoms (CBS, 2015)

and shared school vision on good education; teachers feeling recognized in their teaching efforts; regular conversations in the school about the school's vision relating to teachers' professional development; teachers experiencing ownership over their work and learning; and teachers participating in collective decision-making. Most of these conditions relate to the cultural aspects of the workplace and the type of leadership in the school (cf. Little, 2012). A recent development of teachers learning collectively in professional learning communities seems a promising opportunity to address the abovementioned cultural conditions for self-directed learning (cf. Admiraal et al., 2015). As stated before, teachers work in teams in schools and therefore their professional learning is not an isolated event. Individual teacher learning should therefore be integrated into the school and sharing knowledge with colleagues could be beneficial for school-wide expertise development.

From a professional *learning* perspective, PD should not be organized top-down, but should be organized *with* teachers (Beck & Kosnik, 2014; Nilsson, 2012). A central implication of our thesis is that teachers need to be involved in setting the agenda for PD, both at school level and at the individual level. On a more individual level it is important for school leaders to show recognition and/or interest in teachers' teaching and their professional learning. A way to do this is through regular performance evaluation interviews and starting a dialogue on teachers' learning (see 6.7.1 talking about learning). Performance interviews should have a formative purpose with a focus on development, not summative purposes (Nishii & Wright, 2007) and the school leader should provide individual and intellectual support within a safe learning climate (Janssen, 2013).

The conclusion that can be drawn from this research is that teachers with different levels of teaching experience have different learning goals. These differences at different phases can inform a professional continuum that can serve as guide for the organization of PD for different groups of teachers (cf. Feiman-Nemser, 2001; McMahon, Forde, & Dickson, 2015). Consequently, it is important to understand what teachers need for their learning, so school leaders can provide the necessary workplace conditions. For example, for mid-career and late-career teachers that look for variation and challenge in their job, learning through task differentiation (e.g., teaching other grade levels, designing new curriculum) or developing into new roles and responsibilities (e.g., becoming a coach for novice teachers, a counselor) seem suitable instruments. On the other hand, early-career teachers might be offered more practical support in managing classrooms, refining their instructional practices, dealing with managing their work, and discovering new teacher roles and functions in additional responsibilities. In line with this, initial teacher education can prepare teachers for these induction tasks and ongoing professional learning (Feiman-Nemser, 2001) and in-school induction programs are essential to provide practical support for early-career teachers.

On a national level there is no continuous curriculum for teachers' professional learning yet, and the question is whether such a curriculum is desirable. Where such national professional curriculum are designed (cf. The Standards for Career-Long Professional Learning introduced in Scotland, 2013), this task is often approached through policy making and introducing different levels of teaching quality as incentives for teachers' to engage in professional development. It would be difficult to approach these measures from a professional *learning* and growth perspective and not from an accountability

perspective, especially if teachers are not involved in setting the agenda or designing such a continuous curriculum for teachers' professional learning. This thesis indicates that the level of autonomy for learning and shared responsibility for quality of education are better motivators for teacher professional learning than external policy incentives. If such a continuous curriculum were to be designed for the Netherlands, it would be best to design it at a local level, in schools, through an ongoing professional dialogue between teachers and school leaders.

REFERENCES
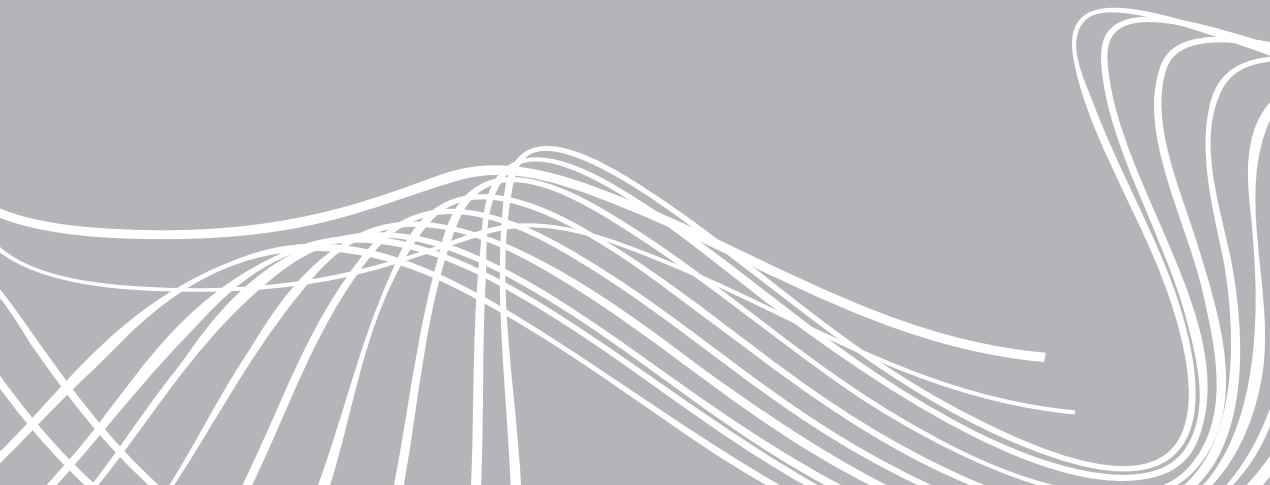
REFERENCES

Abrami, P. C., Poulsen, C., & Chambers, B. (2004). Teacher motivation to implement an educational innovation: factors differentiating users and non-users of cooperative learning. *Educational Psychology*, *24*(2), 201-216. doi: 10.1080/0144341032000160146

Admiraal, W. F., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., Smit, B., . . . de Wit, W. (2015), Affordances of teacher professional learning in secondary schools. *Studies in Continuing Education*, Advance online publication. doi: 10.1080/0158037x.2015.1114469

Anderson, L., & Olsen, B. (2006). Investigating early career urban teachers' perspectives on and experiences in professional development. *Journal of Teacher Education, 57*(4), 359-377. doi: 10.1177/0022487106291565

Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction*, *20*(6), 533-548. doi: 10.1016/j.learninstruc.2009.09.001

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, *22*(3), 309-328. doi: 10.1108/02683940710733115

Ball, D. L. (1996). Teacher learning and the mathematics reforms - What we think we know and what we need to learn. *Phi Delta Kappan*, 77(7), 500-508.

Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (Vol. 1, pp. 3-32). San Francisco: Jossey-Bass.

Beck, C., & Kosnik, C. (2014). *Growing as a teacher: Goals and pathways of ongoing teacher learning.* Rotterdam: Sense.

Berliner, D. C. (2001). Learning about and learning from expert teachers. *International Journal of Educational Research*, *35*(5), 463-482. doi: 10.1016/s0883-0355(02)00004-6

Berliner, D. C. (2004). Expert teachers: Their characteristics, development and accomplishments. In R. Batllori i Obiols, A. E Gomez Martinez, M. O. i. Freixa, & J. P. i. Blanch (Eds.), *De la teoria... a l'aula: Formacio del professorat ensenyament de las ciències socials* (pp. 13-28). Barcelona, Spain: Departament de Didàctica de la Llengua de la Literatura I de les Ciències Socials, Universitat Autònoma de Barcelona.

Beynon, J. (1985). Institutional change and career histories in a comprehensive school. In S. Ball & I. Goodson (Eds.), *Teachers' lives and careers* (pp. 158-179). London: Falmer Press.

Billett, S. (2004). Workplace participatory practices: Conceptualising workplaces as learning environments. *The Journal of Workplace Learning, 16*(6), 312-324. doi: 10.1108/13665620410550295

Billett, S. (2011). Subjectivity, self and personal agency in learning through and for work. In M. Malloch, L. Cairns, K. Evans, & B. N. O'Connor (Eds.), *The SAGE handbook of workplace learning* (pp. 60-72). London: SAGE.

Blase, J. (1991). *The politics of life in schools: Power, conflict, and cooperation.* Newbury Park: SAGE.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15. doi: 10.3102/0013189x033008003

Borko, H., Jacobs, J., & Koellner, K. (2010). Contemporary approaches to teacher professional development. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 7, pp. 548-556). Oxford: Elsevier.

Brekelmans, M., Wubbels, T., & Van Tartwijk, J. (2005). Teacher–student relationships across the teaching career. *International Journal of Educational Research, 43*(1-2), 55-71. doi: 10.1016/j.ijer.2006.03.006

Brown, J. D. (2009). Choosing the right type of rotation in PCA and EFA. *JALT Testing & Evaluation SIG Newsletter, 13*(3), 20-25.

Bryk, A. S., Sebring, P. B., Allensworth, E., Easton, J. Q., & Luppescu, S. (2010). *Organizing schools for improvement: Lessons from Chicago*. Chicago: University of Chicago Press.

Centraal Bureau voor Statistiek (2015). One out of seven employees has burnout symptoms. Retrieved 16-11-2015, from http://www.cbs.nl/nl-NL/menu/themas/arbeid-sociale-zekerheid/publicaties/artikelen/archief/2015/cbs-en-tno-een-op-de-zeven-werknemers-heeft-burn-outklachten.htm

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education, 18*(8), 947-967. doi: 10.1016/s0742-051x(02)00053-7

Coburn, C. E. (2001). Collective sensemaking about reading: How teachers mediate reading policy in their professional communities. *Educational Evaluation and Policy Analysis, 23*(2), 145-170. doi: 10.3102/01623737023002145

Coburn, C. E. (2005). Shaping teacher sensemaking: School leaders and the enactment of reading policy. *Educational Policy, 19*(3), 476-509. doi: 10.1177/0895904805276143

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Vol. 2). Hillsdale, NJ: Erlbaum.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Abingdon, OX: Routledge.

Confessore, S. J., & Kops, W. J. (1998). Self-directed learning and the learning organization: Examining the connection between the individual and the learning environment. *Human Resource Development Quarterly, 9*(4), 365-375.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (Vol 2). Thousand Oaks, CA: Sage.

Czerniawski, G. (2013). Professional development for professional learners: Teachers' experiences in Norway, Germany and England. *Journal of Education for Teaching, 39*(4), 383-399. doi: 10.1080/02607476.2013.769339

Dall'Alba, G., & Sandberg, J. (2006). Unveiling professional development: A critical review of stage models. *Review of Educational Research, 76*(3), 383-412. doi: 10.3102/00346543076003383

Darling-Hammond, L., & Bransford, J. (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the U.S. and abroad.* Stanford university: National Staff Development Council.

Day, C. (1999). *Developing teachers: The challenges of lifelong learning*. London: Falmer Press.

Day, C., & Gu, Q. (2007). Variations in the conditions for teachers' professional learning and development: Sustaining commitment and effectiveness over a career. *Oxford Review of Education, 33*(4), 423-443. doi: 10.1080/03054980701450746

Day, C., Sammons, P., Stobart, G., Kington, A., & Gu, Q. (2007). T*eachers matter: Connecting work, lives and effectiveness.* London: Open University Press.

Day, C., Stobart, G., Sammons, P., & Kington, A. (2006). Variations in the work and lives of teachers: relative and relational effectiveness. *Teachers and Teaching: Theory and Practice, 12*(2), 169-192. doi: 10.1080/13450600500467381

Day, C., Stobart, G., Sammons, P., Kington, A., Gu, Q., Smees, R., & Mujtaba, T. (2006). *Variations in teachers' work, lives and effectiveness* (RR 743). London: DfES.

Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.

Denessen, E., & Douglas, A. S. (2015). Teacher expectations and within-classroom differentiation. In C. M. Rubie-Davies, J. M. Stephens, & P. Watson (Eds.), *Routledge international handbook of social psychology of the classroom*. Abingdon, Oxon: Taylor & Francis.

Diepstraten, I., & Evers, A. (2012). *Leraren leren: een overzichtsstudie naar de professionele ontwikkeling van leraren* [Teachers learn: A review study on the professional development of teachers]. Heerlen: Open university.

Doyle, W. (2006). Ecological approaches to classroom management. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 97-125). Mahwah: Lawrence Erlbaum Associates.

Ellinger, A. D. (2004). The concept of self-directed learning and its implications for human resource development. *Advances in Developing Human Resources, 6*(2), 158-177. doi: 10.1177/1523422304263327

Ellström, P. (2001). Integrating learning and work: Problems and prospects. *Human resource development quarterly, 12*(4), 421-436. doi: 10.1002/hrdq.1006

Eraut, M. (1995). Developing professional knowledge within a client-centered orientation. In T. Guskey & M. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 227-252). New York: Teachers College Press.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology, 70*(1), 113-136. doi: 10.1348/000709900158001

Evers, A. (2012). *Teachers' professional development at work and occupational outcomes: An organisational and task perspective* (Doctoral dissertation). Open University, Heerlen, the Netherlands.

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record, 103*(6), 1013-1055. doi: 10.1111/0161-4681.00141

Fenstermacher, G. D. (1994). The knower and the known - the nature of knowledge in research on teaching. *Review of Research in Education, 20*, 3-56. doi: 10.3102/0091732x020001003

Fessler, R., & Christensen, J. C. (1992). *The teacher career cycle: Understanding and guiding the professional development of teachers.* Needham heights, MA: Allyn & Bacon.

Fessler, R., & Rice, E. (2010). Teachers career stages and professional development. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 3, pp. 582-586). Oxford: Elsevier.

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: SAGE.

Flores, M. A. (2005). How do teachers learn in the workplace? Findings from an empirical study carried out in Portugal. *Journal of In-service Education, 31*(3), 485-508. doi: 10.1080/13674580500200290

Fox, A., Wilson, E., & Deaney, R. (2010). Beginning teachers' workplace experiences: Perceptions of and use of support. *Vocations and Learning, 4*(1), 1-24. doi: 10.1007/s12186-010-9046-1

Fox, R. K., Muccio, L. S., White, C. S., & Tian, J. (2015). Investigating advanced professional learning of early career and experienced teachers through program portfolios. *European Journal of Teacher Education, 38*(2), 154-179. doi: 10.1080/02619768.2015.1022647

Friedrichsen, P. M., & Dana, T. M. (2003). Using a card-sorting task to elicit and clarify science-teaching orientations. *Journal of Science Teacher Education, 14*(4), 291-309. doi: 10.1023/B:JSTE.0000009551.37237.b3

Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal, 6*(2), 207-226. doi: 10.3102/00028312006002207

Gagne, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331-362. doi: 10.1002/job.322

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*(4), 915-945. doi: 10.3102/00028312038004915

Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly, 48*(1), 18-33. doi: 10.1177/074171369704800103

Geijsel, F., Sleegers, P. J. C., Stoel, R. D., & Krüger, M. L. (2009). The effect of teacher psychological and school organizational and leadership factors on teachers' professional learning in Dutch schools. *The Elementary School Journal, 109*(4), 406-427. doi: 10.1086/593940

Gorozidis, G., & Papaioannou, A. G. (2014). Teachers' motivation to participate in training and to implement innovations. *Teaching and Teacher Education, 39*, 1-11. doi: 10.1016/j.tate.2013.12.001

Gravani, M. N. (2007). Unveiling professional learning: Shifting from the delivery of courses to an understanding of the processes. *Teaching and Teacher Education, 23*(5), 688-704. doi: 10.1016/j.tate.2006.03.011

Grosemans, I., Boon, A., Verclairen, C., Dochy, F., & Kyndt, E. (2015). Informal learning of primary school teachers: Considering the role of teaching experience and school culture. *Teaching and Teacher Education, 47*, 151-161. doi: 10.1016/j.tate.2014.12.011

Grossman, P. L. (1992). Why Models Matter: An alternate view on professional growth in teaching. *Review of Educational Research, 62*(2), 171-179. doi: 10.3102/00346543062002171

Grundy, S., & Robison, J. (2004). Teacher professional development: Themes and trends in the recent Australian experience. In C. Day & J. Sachs (Eds.), *International handbook on the continuing professional development of teachers* (pp. 146-166). Berkshire: Open University Press.

Hargreaves, A., & Fullan, M. G. (1992). *Understanding teacher development.* New York: Teachers College Press.

Hawley, W. D., & Valli, L. (2000). Learner-centered professional development. *Phi Delta Kappa Center for Evaluation, Development, and Research, 27*, 7-10.

Hildebrandt, S. A., & Eom, M. (2011). Teacher professionalization: Motivational factors and the influence of age. *Teaching and Teacher Education, 27*(2), 416-423. doi: 10.1016/j.tate.2010.09.011

Hoban, G. F. (2002). *Teacher learning for educational change.* Buckingham: Open University Press.

Hodkinson, H., & Hodkinson, P. (2005). Improving schoolteachers' workplace learning. *Research Papers in Education, 20*(2), 109-131. doi: 10.1080/02671520500077921

Hoekstra, A., Beijaard, D., Brekelmans, M., & Korthagen, F. (2007). Experienced teachers' informal learning from classroom teaching. *Teachers and Teaching: Theory and Practice, 13*(2), 191-208. doi: 10.1080/13540600601152546

Hoekstra, A., Brekelmans, M., Beijaard, D., & Korthagen, F. (2009). Experienced teachers' informal learning: Learning activities and changes in behavior and cognition. *Teaching and Teacher Education, 25*(5), 663-673. doi: dx.doi.org/10.1016/j.tate.2008.12.007

Hoekstra, A., Korthagen, F., Brekelmans, M., Beijaard, D., & Imants, J. (2009). Experienced teachers' informal workplace learning and perceptions of workplace conditions. *Journal of Workplace Learning, 21*(4), 276-298. doi: 10.1108/13665620910954193

Horn, I. S. (2005). Learning on the job: A situated account of teacher learning in high school mathematics departments. *Cognition and Instruction, 23*(2), 207-236. doi: 10.1207/s1532690xci2302_2

Horn, I. S., & Little, J. W. (2010). Attending to problems of practice: Routines and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal, 47*(1), 181-217. doi: 10.3102/0002831209345158

Huberman, M. (1989). On teachers' careers: Once over lightly, with a broad brush. *International Journal of Educational Research, 13*(4), 347-362. doi: 10.1016/0883-0355(89)90033-5

Huberman, M. (1993). *The lives of teachers* (J. Neufeld, Trans.). New York, NY: Teacher College Press.

Imants, J., & Van Veen, K. (2010). Teacher learning as workplace learning. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (pp. 569-574). Oxford: Elsevier.

Imants, J., Wubbels, T., & Vermunt, J. D. (2013). Teachers' enactments of workplace conditions and their beliefs and attitudes toward reform. *Vocations and Learning, 6*(3), 323-346. doi: 10.1007/s12186-013-9098-0

Jansen in de Wal, J., den Brok, P. J., Hooijer, J. G., Martens, R. L., & Van den Beemt, A. (2014). Teachers' engagement in professional learning: Exploring motivational profiles. *Learning and Individual Differences, 36*, 27-36. doi: 10.1016/j.lindif.2014.08.001

Janssen, S. (2013). *Supporting the professional teacher: PDP design, support from the supervisor and organisational conditions* (Doctoral dissertation). Open university, Heerlen, the Netherlands.

Janssen, S., Kreijns, K., Bastiaens, T., Stijnen, S., & Vermeulen, M. (2012). Teachers' professional development: An analysis of the use of professional development plans in a Dutch school. *Professional Development in Education, 38*(3), 453-469. doi: 10.1080/19415257.2011.635307

Jöreskog, K. G. (1999). How large can a standardized coefficient be? Retrieved 30-10-2015 from http://www.ssicentral.com/lisrel/techdocs/HowLargeCanaStandardizedCoefficientbe.pdf

Jurasaite-Harbison, E., & Rex, L. A. (2010). School cultures as contexts for informal teacher learning. *Teaching and Teacher Education, 26*(2), 267-277. doi: 10.1016/j.tate.2009.03.012

Kagan, D. M. (1992). Professional growth among preservice and beginning teachers. *Review of Educational Research, 62*(2), 129-169. doi: 10.3102/00346543062002129

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*, 141-151.

Kelchtermans, G., & Ballet, K. (2002). The micropolitics of teacher induction. A narrative-biographical study on teacher socialisation. *Teaching and Teacher Education, 18*(1), 105-120. doi: 10.1016/s0742-051x(01)00053-1

Kennedy, A. (2011). Collaborative continuing professional development (CPD) for teachers in Scotland: aspirations, opportunities and barriers. *European Journal of Teacher Education, 34*(1), 25-41. doi: 10.1080/02619768.2010.534980

Kington, A., Reed, N., & Sammons, P. (2014). Teachers' constructs of effective classroom practices: Variation across career phases. *Research Papers in Education, 29*(5), 534-556. doi: 10.1080/02671522.2013.825309

Knight, P. (2002). A systemic approach to professional development: Learning as practice. *Teaching and Teacher Education, 18*(3), 229-241. doi: 10.1016/S0742-051x(01)00066-X

Knowles, M. S. (1970). *The modern practice of adult education: From pedagogy to andragogy.* New York: Association Press.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development* (Vol. 8). Abingdon, Oxon: Routledge.

Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: Self-concordance plus implementation intentions equals success. *Journal of Personality and Social Psychology, 83*(1), 231-244. doi: 10.1037/0022-3514.83.1.231

Krečič, M. J., & Grmek, M. I. (2008). Cooperative learning and team culture in schools: Conditions for teachers' professional development. *Teaching and Teacher Education, 24*(1), 59-68. doi: 10.1016/j.tate.2007.02.011

Krosnick, J. A., & Presser, S. (2010). Question and questionnaire design. In J.D. Wright & P.V. Marshden (eds), *Handbook of survey research* (pp. 263-314). West Yorkshire, UK: Emerald group.

Kutner, M. H., Nachtsheim, C. J., & Neter, J. (2004). *Applied linear regression models* (4th ed.). New York: McGraw-Hill/Irwin.

Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education, 19*(2), 149-170. doi: 10.1016/s0742-051x(02)00101-4

Kyndt, E., Gijbels, D., Grosemans, I., & Donche, V. (2016). Teachers' everyday professional development: Mapping informal learning activities, antecedents and learning outcomes. *Review of Educational Research*. Advance online publication. doi: 10.3102/0034654315627864

Kyriakides, L., Christoforou, C., & Charalambous, C. Y. (2013). What matters for student learning outcomes: A meta-analysis of studies exploring factors of effective teaching. *Teaching and Teacher Education, 36*, 143-152. doi: 10.1016/j.tate.2013.07.010

Kyriakides, L., Creemers, B., & Antoniou, P. (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *Teaching and Teacher Education, 25*(1), 12-23. doi: 10.1016/j.tate.2008.06.001

Labaree, D. F. (2000). On the nature of teaching and teacher education: Difficult practices that look easy. *Journal of Teacher Education, 51*(3), 228-233. doi: 10.1177/0022487100051003011

Lareau, A. (1996). Common problems in field work: A personal essay. In A. Lareau & J. J. Shultz (Eds.), *Journeys through ethnography: Realistic accounts of fieldwork* (pp. 196-236). Boulder, CO: Westview Press.

Leithwood, K., & Jantzi, D. (1990). Transformational leadership: How principals can help reform school cultures. *School Effectiveness and School Improvement, 1*(4), 249-280.

Lichtman, M. (2012). *Qualitative research in education: A user's guide*. Los Angeles: Sage.

Lieberman, A., & Mace, D. H. P. (2008). Teacher learning: The key to educational reform. *Journal of Teacher Education, 59*(3), 226-234. doi: 10.1177/0022487108317020

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. UK: Sage.

Little, J. W. (2012). Professional community and professional development in the learning-centered school. In M. Kooy & K. Van Veen (Eds.), *Teacher learning that matters: International perspectives* (pp. 22-43). London: Routledge.

Lohman, M., & Woolf, N. (2001). Self-initiated learning activities of experienced public school teachers: Methods, sources, and relevant organizational influences. *Teachers and Teaching: Theory and Practice, 7*(1), 59-74. doi: 10.1080/13540600123835

Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago: The University of Chicago Press.

Loughran, J. (2006). *Developing a pedagogy of teacher education*. London: Routledge.

Lubberman, J., Van Kessel, N., Wester, M., & Mommers, A. (2013). *Rapport arbeidsmarktanalyse voortgezet onderwijs* [report labor market analysis secondary education]. Heerlen, the Netherlands: VOION.

Ludbrook, J. (1998). Multiple comparison procedures updated. *Clinical and Experimental Pharmacology and Physiology, 25*(12), 1032-1037.

Luttenberg, J., Imants, J., & Van Veen, K. (2013). Reform as ongoing positioning process: The positioning of a teacher in the context of reform. *Teachers and Teaching: Theory and Practice, 19*(3), 293-310. doi: 10.1080/13540602.2012.754161

Mackay, M. (2015). Professional development seen as employment capital. *Professional Development in Education*, Advance online publicaiont. doi: 10.1080/19415257.2015.1010015

Magnusson, S., Krajcik, J. S., & Borko, H. (1999). Nature, sources and development of pedagogical content knowledge. In J. Gess-Newsome & N. G. Lederman (Eds.), *Examining pedagogical content knowledge* (pp. 95-132). Dordrecht: Kluwer Academic.

Mansfield, C. F., & Beltman, S. (2014). Teacher motivation from a goal content perspective: Beginning teachers' goals for teaching. *International Journal of Educational Research, 65*, 54-64. doi: 10.1016/j.ijer.2013.09.010

Mansvelder-Longayroux, D. D. (2006). *The learning portfolio as a tool for stimulating reflection by student teachers* (Doctoral dissertation). ICLON, Leiden University Graduate School of Teaching, The Netherlands.

Manuti, A., Pastore, S., Scardigno, A. F., Giancaspro, M. L., & Morciano, D. (2015). Formal and informal learning in the workplace: A research review. *International Journal of Training and Development, 19*(1), 1-17. doi: 10.1111/ijtd.12044

Maulana, R., Helms-Lorenz, M., & Van de Grift, W. (2015). A longitudinal study of induction on the acceleration of growth in teaching quality of beginning teachers through the eyes of their students. *Teaching and Teacher Education, 51*, 225-245. doi: dx.doi.org/10.1016/j.tate.2015.07.003

McCormack, A., Gore, J., & Thomas, K. (2006). Early career teacher professional learning. *Asia-Pacific Journal of Teacher Education, 34*(1), 95-113. doi: 10.1080/13598660500480282

McMahon, M., Forde, C., & Dickson, B. (2015). Reshaping teacher education through the professional continuum. *Educational Review, 67*(2), 158-178. doi: 10.1080/00131911.2013.846298

Meijer, P. C. (2010). Experienced teachers' craft knowledge. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 7). Oxford: Elsevier.

Meijer, P. C., Verloop, N., & Beijaard, D. (1999). Exploring language teachers' practical knowledge about teaching reading comprehension. *Teaching and Teacher Education, 15*(1), 59-84. doi: dx.doi.org/10.1016/S0742-051X(98)00045-6

Meirink, J. A., Meijer, P. C., & Verloop, N. (2007). A closer look at teachers' individual learning in collaborative settings. *Teachers and Teaching: Theory and Practice, 13*(2), 145-164. doi: 10.1080/13540600601152496

Meirink, J. A., Meijer, P. C., Verloop, N., & Bergen, T. C. M. (2009). How do teachers learn in the workplace? An examination of teacher learning activities. *European Journal of Teacher Education, 32*(3), 209-224. doi: 10.1080/02619760802624096

Merriam, S. B. (2001). *Andragogy and self-directed learning: Pillars of adult learning theory.* In S. B. Merriam (ed.), The new update on adult learning theory (pp. 3-13). San Franciso: Jossey-Bass.

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide.* San Francisco: John Wiley & Sons.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook.* Thousand Oaks, CA: SAGE.

Ministerie van Onderwijs, Cultuur en Wetenschappen. (2013). *Lerarenagenda 2013-2020: de leraar maakt het verschil* [teacher agenda 2013-2020: the teacher makes the difference]. Den Haag: Ministerie van onderwijs, cultuur en wetenschap.

Muijs, D., Kyriakides, L., Van der Werf, G., Creemers, B., Timperley, H., & Earl, L. (2014). State of the art – teacher effectiveness and professional learning. *School Effectiveness and School Improvement, 25*(2), 231-256. doi: 10.1080/09243453.2014.885451

Mulholland, J., & Wallace, J. (2005). Growing the tree of teacher knowledge: Ten years of learning to teach elementary science. *Journal of Research in Science Teaching, 42*(7), 767-790. doi: 10.1002/tea.20073

Mushayikwa, E., & Lubben, F. (2009). Self-directed professional development – Hope for teachers working in deprived environments? *Teaching and Teacher Education, 25*(3), 375-382. doi: 10.1016/j.tate.2008.12.003

Ng, C.-H. (2010). Do career goals promote continuous learning among practicing teachers? *Teachers and Teaching: Theory and Practice, 16*(4), 397-422. doi: 10.1080/13540601003754806

Nilsson, P. (2012). From concept to school practice: Professional learning for sustainable change in the primary science classroom. In M. Kooy & K. Van Veen (Eds.), *Teacher learning that matters: International perspectives* (Vol. 62). New York: Routledge

Nishii, L. H., & Wright, P. M. (2007). Variability within organizations: implications for Strategic Human Management. *CAHRS Working Paper.* Retrieved 29-4-2015 from http://digitalcommons.ilr.cornell.edu/cahrswp/

OECD (2014). *PISA 2012 results in focus: what students know and can do.* Paris: OECD.

OECD Teaching and Learning International Survey (2013). *Teachers' needs for professional development* (pp. 109, Figure from TALIS 2013 Results: an international perspective on teaching and learning). Paris: OECD.

Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research, 81*(3), 376-407. doi: 10.3102/0034654311413609

Opfer, V. D., Pedder, D., & Lavicza, Z. (2011). The role of teachers' orientation to learning in professional development and change: A national study of teachers in England. *Teaching and Teacher Education, 27*(2), 443-453. doi: 10.1016/j.tate.2010.09.014

Parker, P. D., Martin, A. J., Colmar, S., & Liem, G. A. (2012). Teachers' workplace well-being: Exploring a process model of goal orientation, coping behavior, engagement, and burnout. *Teaching and Teacher Education, 28*(4), 503-513. doi: 10.1016/j.tate.2012.01.001

Poell, R. F., & Van der Krogt, F. J. (2013). The role of human resource development in organizational change: Professional development strategies of employees, managers and HRD practitioners. In S. Billet, C. Harteis, & H. Gruber (Eds.), *International handbook of research in professional and practice-based learning* (pp. 1043-1070). Dordrecht: Springer.

Postholm, M. B. (2008). Teachers developing practice: Reflection as key activity. *Teaching and Teacher Education, 24*(7), 1717-1728. doi: 10.1016/j.tate.2008.02.024

Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher, 29*(1), 4-15. doi: 10.3102/0013189x029001004

Richardson, V., & Placier, P. (2001). Teacher change. In V. Richardson (Ed.), *Handbook of research on teaching* (pp. 905-947). Washington, DC: American Educational Research Association.

Richter, D., Kunter, M., Klusmann, U., Lüdtke, O., & Baumert, J. (2011). Professional development across the teaching career: Teachers' uptake of formal and informal learning opportunities. *Teaching and Teacher Education, 27*(1), 116-126. doi: 10.1016/j.tate.2010.07.008

Rinke, C. R. (2008). Understanding teachers' careers: Linking professional life to professional path. *Educational Research Review, 3*(1), 1-13. doi: 10.1016/j.edurev.2007.10.001

Rolls, S., & Plauborg, H. (2009). Teachers' career trajectories: An examination of research. In M. Bayer, U. Brinkkjær, H. Plauborg, & S. Rolls (Eds.), *Teachers' career trajectories and work lives*. Dordrecht: Springer.

Rosenholtz, S. J., Bassler, & Hoover-Dempsey. (1986). Organizational conditions of teacher learning. *Teaching and Teacher Education, 2*(2), 91-104. doi: 10.1016/0742-051X(86)90008-9

Seidel, T., & Shavelson, R. J. (2007). Teaching effectiveness research in the past decade: The role of theory and research design in disentangling meta-analysis results. *Review of Educational Research, 77*(4), 454-499. doi: 10.3102/0034654307310317

Shoffner, M. (2011). Considering the first year: Reflection as a means to address beginning teachers' concerns. *Teachers and Teaching: Theory and Practice, 17*(4), 417-433. doi: 10.1080/13540602.2011.580518

Shriki, A., & Lavy, I. (2012). Perceptions of Israeli mathematics teachers regarding their professional development needs. *Professional Development in Education, 38*(3), 411-433. doi: 10.1080/19415257.2011.626062

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4–14. doi: 10.3102/0013189X015002004

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-23.

Sleegers, P. J. C., & Leithwood, K. (2010). School development for teacher learning and change. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 7, pp. 557-562). Oxford: Elsevier.

Smith, C., & Gillespie, M. (2007). Research on professional development and teacher change. *Review of Adult Learning and Literacy, 7*(7), 205-244.

Smylie, M. (1995). Teacher learning in the workplace: Implications for school reform. In T. R. E. Guskey & M. E. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 92-113). New York: Teachers College Press.

Tang, S. Y. F., & Choi, P. L. (2009). Teachers' professional lives and continuing professional development in changing times. *Educational Review, 61*(1), 1-18. doi: 10.1080/00131910802684748

Thomson, M. M., & Turner, J. (2013). Teaching motivations, characteristics and professional growth: Results from the Great Expectations (GE) programme in the United States. *Educational Psychology, 35*(5), 578-597. doi: 10.1080/01443410.2013.849796

Thoonen, E. E. J., Sleegers, P. J. C., Oort, F. J., Peetsma, T. T. D., & Geijsel, F. P. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly, 47*(3), 496-536. doi: 10.1177/0013161x11400185

Tigchelaar, A., Brouwer, N., & Korthagen, F. (2008). Crossing horizons: Continuity and change during second-career teachers' entry into teaching. *Teaching and Teacher Education, 24*(6), 1530-1550. doi: 10.1016/j.tate.2008.03.001

Timperley, H., & Alton-Lee, A. (2008). Reframing teacher professional learning: An alternative policy approach to strengthening valued outcomes for diverse learners. *Review of Research in Education, 32*(1), 328-369. doi: 10.3102/0091732x07308968

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2008). *Teacher professional learning and development.* Brussels, Belgium: International Academy of Education.

Tough, A. (1979). *The adult's learning projects: A fresh approach to theory and practice in adult learning.* Toronto: Ontario institute for studies in education.

Tynjälä, P. (2008). Perspectives into learning at the workplace. *Educational Research Review, 3*(2), 130-154. doi: 10.1016/j.edurev.2007.12.001

Tynjälä, P. (2012). Toward a 3-P model of workplace learning: A literature review. *Vocations and Learning, 6*(1), 11-36. doi: 10.1007/s12186-012-9091-z

Vähäsantanen, K. (2015). Professional agency in the stream of change: Understanding educational change and teachers' professional identities. *Teaching and Teacher Education, 47*, 1-12. doi: 10.1016/j.tate.2014.11.006

Van Braak, J., Tondeur, J., & Valcke, M. (2004). Explaining different types of computer use among primary school teachers. *European Journal of Psychology of Education, 19*(4), 407-422.

Van de Grift, W. J. C. M., Van der Wal, M., & Torenbeek, M. (2011). Ontwikkeling in de pedagogisch didactische vaardigheid van leraren in het basisonderwijs [Development of teachers' teaching skills in primary education]. *Pedagogische Studieën, 88*, 416-432.

Van den Broeck, A., Vansteenkiste, M., & De Witte, H. (2008). Self-Determination theory: a theoretical overview in occupational health psychology. In J. Houdmont & S. Leka (Eds.), *Occupational health psychology: European perspectives on research, education, and practice* (Vol. 3, pp. 63-88). Nottingham: Nottingham University Press.

Van Driel, J., & Berry, A. (2010). Pedagogical content knowledge. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 7, pp. 656-661). Oxford: Elsevier.

Van Eekelen, I. M., Boshuizen, H. P. A., & Vermunt, J. D. (2005). Self-regulation in higher education teacher learning. *Higher Education, 50*(3), 447-471. doi: 10.1007/s10734-004-6362-0

Van Eekelen, I. M., Vermunt, J. D., & Boshuizen, H. P. A. (2006). Exploring teachers' will to learn. *Teaching and Teacher Education, 22*(4), 408-423. doi: 10.1016/j.tate.2005.12.001

Van Exel, J., & de Graaf, G. (2005). Q methodology: A sneak preview. Retrieved 9-4-2013 from http://qmethod.org/articles/vanExel.pdf

Van Veen, K., & Kooy, M. (2012). Stepping back and stepping in: Concluding thoughts on the landscapes of teacher learning that matters. In M. Kooy & K. Van Veen (Eds.), *Teacher learning that matters: International perspectives* (pp. 255-260). New York: Routledge

Van Veen, K., & Sleegers, P. (2009). Teachers' emotions in a context of reforms: To a deeper understanding of teachers and reforms. In P. A. Schutz & M. Zemblyas (Eds.), *Advances in teacher emotion research: The impact on teachers' lives.* New York: Springer.

Van Veen, K., Zwart, R. C., & Meirink, J. A. (2012). What makes teacher professional development effective? A literature review. In M. Kooy & K. Van Veen (Eds.), *Teacher learning that matters: International perspectives* (pp. 3-21). London: Routledge.

Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational Psychologist, 41*(1), 19-31. doi: 10.1207/s15326985ep4101_4

Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology, 101*(3), 671-688. doi: 10.1037/a0015083

Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research, 54*(2), 143-178. doi: 10.3102/00346543054002143

Veldman, I., Van Tartwijk, J., Brekelmans, M., & Wubbels, T. (2013). Job satisfaction and teacher–student relationships across the teaching career: Four case studies. *Teaching and Teacher Education, 32*, 55-65. doi: 10.1016/j.tate.2013.01.005

Vermunt, J. D., & Endedijk, M. D. (2011). Patterns in teacher learning in different phases of the professional career. *Learning and Individual Differences, 21*(3), 294-302. doi: 10.1016/j.lindif.2010.11.019

Watt, H. M. G., Richardson, P. W., & Wilkins, K. (2013). Profiles of professional engagement and career development aspirations among USA preservice teachers. *International Journal of Educational Research, 65*, 23-40. doi: 10.1016/j.ijer.2013.09.008

Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research, 79*(2), 702-739. doi: 10.3102/0034654308330970

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). *Organizing and the process of sensemaking. Organization Science, 16*(4), 409-421. doi: 10.1287/orsc.1050.0133

Wermke, W. (2011). Continuing professional development in context: Teachers' continuing professional development culture in Germany and Sweden. *Professional Development in Education, 37*(5), 665-683. doi: 10.1080/19415257.2010.533573

Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education, 24*(1), 173-209. doi: 10.3102/0091732x024001173

Zwart, R. C., Wubbels, T., Bergen, T. C. M., & Bolhuis, S. (2007). Experienced teacher learning within the context of reciprocal peer coaching. *Teachers and Teaching: Theory and Practice, 13*(2), 165-187. doi: 10.1080/13540600601152520

Zwart, R. C., Wubbels, T., Bolhuis, S., & Bergen, T. C. M. (2008). Teacher learning through reciprocal peer coaching: An analysis of activity sequences. *Teaching and Teacher Education, 24*(4), 982-1002. doi: http://dx.doi.org/10.1016/j.tate.2007.11.00
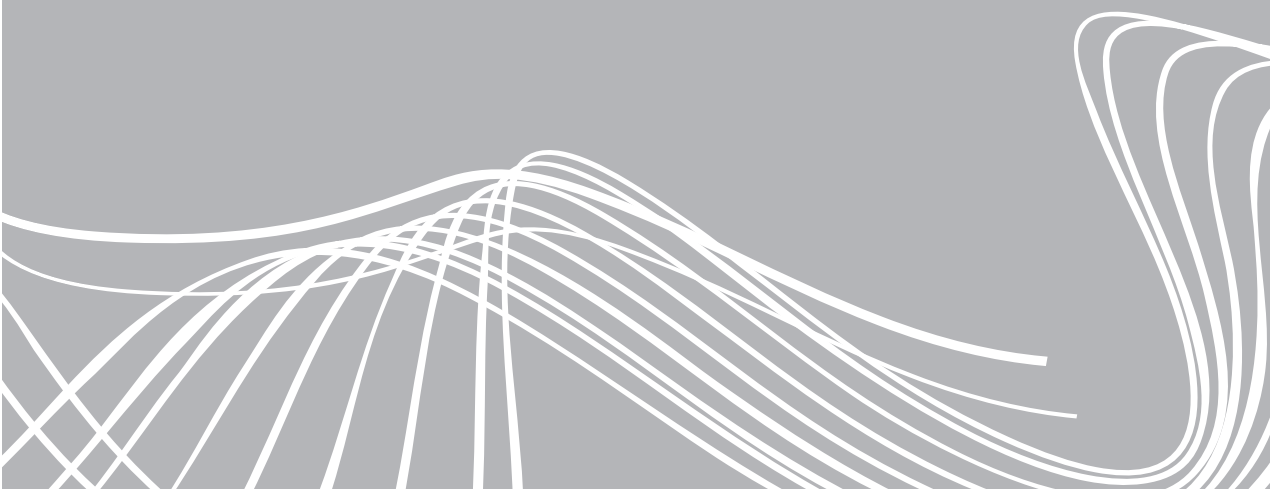
SAMENVATTING

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Politiek-maatschappelijke debatten in Nederland focussen zich al geruime tijd op de kwaliteit van leraren (bijvoorbeeld *Actieplan Leerkracht! 2020 en Lerarenagenda 2013-2020*). Dit betreft dan discussies over het opleidingsniveau van leraren (bijv. het verschil tussen bevoegd en bekwaam), het tekort aan gekwalificeerde leraren, en de pedagogisch-didactische vaardigheden van leraren (vooral de complexere vaardigheden, zoals het afstemmen van het onderwijs op verschillen tussen leerlingen). Parallel hieraan zijn er discussies over het imago van het beroep van leraren. In het kader van het versterken van het imago van het beroep zijn de laatste jaren enkele initiatieven geïntroduceerd, waaronder een lerarenregister waarin alle bevoegde leraren zich moeten registreren. Om het imago van het beroep te versterken, wordt in de *Lerarenagenda 2013-2020* (Ministerie van OCW, 2013) ingezet op de kwaliteit van lerarenopleidingen, verschillende professionaliseringsinitiatieven en het vergroten van de 'stem' van de leraar. Leraren zouden meer zeggenschap moeten hebben over hun eigen professionele standaard en professionele ontwikkeling. Ondanks het toedichten van een centrale rol aan leraren om het beroep 'sterker' te maken, worden ze nauwelijks betrokken bij de totstandkoming van professionaliseringsbeleid in scholen of het ontwerp van professionaliseringsinitiatieven. Binnen deze context is het interessant wat leraren aangeven *zelf* te willen leren.

In **Hoofdstuk 1** wordt de rationale voor dit onderzoek en het conceptueel raamwerk uitgelegd. Er is nauwelijks onderzoek gedaan naar de 'stem' van de leraren in hun eigen professionele ontwikkeling. De bedoeling van dit promotieonderzoek is een bijdrage te leveren aan de huidige literatuur over professionele ontwikkeling van leraren vanuit een leraarsperspectief. De centrale onderzoeksvraag luidt: wat, hoe en waarom willen leraren leren?

Een andere kwestie bij het beleid ter bevordering van professionele ontwikkeling is dat er nauwelijks aandacht is voor de jaren ervaring en kunde die een leraar (reeds) bezit. Onderzoek naar de beroepsloopbaan van leraren laat zien dat er professionele werkfasen ('professional life phases') te onderscheiden zijn (Day, Sammons, Stobart, Kington, & Gu, 2007; Fessler & Christensen, 1992; Huberman, 1993). Deze fasen worden ingedeeld naar het aantal jaren dat een leraar lesgeeft en elke fase wordt getypeerd door een andere thematiek (bijvoorbeeld betrokkenheid, motivatie, expertise). In het kader van de professionele ontwikkeling van leraren is het relevant om zicht te hebben op wat, hoe en waarom leraren in deze werkfasen leren. Het is zeer aannemelijk dat leraren in verschillende fasen van hun loopbaan verschillen in hun leerbehoeften. In aanvulling op de centrale onderzoeksvraag wordt in dit onderzoek telkens nagegaan hoe het aantal *jaren leservaring* een rol speelt voor de professionele ontwikkeling van leraren.

Verder wordt er in dit onderzoek van uitgegaan, dat het leren van leraren niet gezien moet worden als een individuele of geïsoleerde activiteit. Het leren van leraren wordt beïnvloed door de lespraktijk, collega's, de school, recente leeractiviteiten, huidige taken en verantwoordelijkheden en nationaal en lokaal beleid. Wanneer leraren voor zichzelf beslissen wat ze willen leren (dat wil zeggen, hun leerdoelen bepalen) gebeurt dit onder invloed van verschillende interne en externe factoren. In dit onderzoek is het leren van

leraren gedefinieerd als verandering in gedrag of cognitie, waarbij cognitie verwijst naar het totaal aan kennis, opvattingen en houdingen van leraren. Er werd uitgegaan van een complex proces van leren waarin de verandering in gedrag of cognitie tot stand komt in interactie met zelfpercepties en de (school)context.

In dit onderzoek staat het perspectief van *zelfgestuurd leren* centraal en ligt de nadruk op leerdoelen die leraren formuleren als de initiële stap in hun leerproces. Vanuit theorieën over volwassenenonderwijs waarin dit zelfgestuurd leren centraal staat, wordt beargumenteerd dat volwassenen graag controle en eigenaarschap hebben over de doelen van het leren (Knowles et al., 2015; Merriam et al., 2007). Dit perspectief sluit nauw aan bij het leraarsperspectief op professionele ontwikkeling. Het concept van zelfgestuurd leren hebben we uitgesplitst in wat, hoe en waarom leraren willen leren om zo meer inzicht te verwerven in het beslisproces van leraren om zich professioneel te ontwikkelen.

De volgende onderzoeksvragen werden geformuleerd:
1. Wat is de relatie tussen professionele leerdoelen van leraren en hun jaren leservaring? (Hoofdstuk 2)
2. Hoe kunnen leerdoelen van leraren worden begrepen vanuit hun huidige professionele concerns, en hoe hangt dit samen met jaren leservaring? (Hoofdstuk3)
3. Welke relatie bestaat er tussen de percepties van leraren van de aanwezige werkplekcondities en hun professionele leerdoelen? (Hoofdstuk 4)
4. Hoe hangt het zelfgestuurde leren van leraren (wat, hoe, en waarom leraren willen leren?) samen met jaren leservaring? (Hoofdstuk 5)

Om deze onderzoeksvragen te beantwoorden is gekozen voor een onderzoeksopzet dichtbij de context van leraren. De onderzoeksopzet bestond uit drie kwalitatieve studies en één grootschalige vragenlijststudie. Elke kwalitatieve studie bestond uit een uitgebreid schoolbezoek van vier maanden voorafgaand aan interviews met leraren (in School 1 en 2). Tijdens dit schoolbezoek werden lessen geobserveerd en informele gesprekken gehouden met schoolleiders en leraren om eerst de specifieke schoolcontext te begrijpen alvorens de leraren te interviewen over hun specifieke leerdoelen en perceptie van de aanwezige werkplekcondities (zie Appendix A voor een uitgebreide beschrijving van deze schoolbezoeken van vier maanden). In de vragenlijststudie (Hoofdstuk 5) werden de verschillende aspecten van zelfgestuurd leren (wat, hoe, en waarom leraren willen leren) gemeten met een grotere steekproef (309 leraren) om zo uitspraken te kunnen doen over de relatie van zelfgestuurd leren met jaren leservaring.

In **Hoofdstuk 2** wordt een kwalitatieve studie beschreven, waarin 16 leraren van een havo/vwo school (School 1) geïnterviewd zijn over hun leerdoelen. Deze leraren varieerden in jaren leservaring, vakken, en sekse. De leraren werden benaderd voor een interview van circa 75 minuten. Omdat het formuleren van leerdoelen lastig kan zijn voor leraren, hebben we vanuit verschillende perspectieven het leren van leraren besproken. De interviewvragen betroffen onder andere wat leraren vroeger hebben moeten leren,

welke moeilijkheden ze ervaren in het lesgeven, en waar ze zichzelf zien over 5 jaar. In de analyses van de interviews hebben we leerdoelen toegekend als een leraar aangaf te willen veranderen in gedrag of cognitie. Er waren twee leraren die geen expliciete leerdoelen voor zichzelf formuleerden. We kenden vervolgens codes toe aan elk leerdoel gebaseerd op de inhoud, waarbij een algemeen onderscheid werd gemaakt tussen leerdoelen die gaan over het primaire proces (het lesgeven zelf) en leerdoelen die gaan over niet-lesgebonden onderwerpen.

In de analyses hebben we zes verschillende typen leerdoelen onderscheiden, namelijk communicatie en klassenmanagement, curriculum en instructie, socialisatie in het beroep, technologieën en innovaties, extra-curriculaire taken, en leren over de leraar als professional. De meeste leerdoelen werden geformuleerd over curriculum en instructie. Daarom hebben we subcategorieën van curriculum en instructie onderscheiden: instructiestrategieën, het leerproces van leerlingen, curriculum ontwikkeling, toetsing en assessment, en vakkennis. Als we kijken naar de inhoud van de leerdoelen in relatie tot jaren ervaring, dan valt op dat leraren in de beginfase van hun loopbaan (inductiefase) leerdoelen formuleren over klassenmanagement, curriculum en instructie, en zichzelf als professional. Meer ervaren leraren (meer dan 7 jaar ervaring) formuleerden 'bredere' leerdoelen die niet alleen op effectief lesgeven waren gericht, maar ook op extra-curriculaire taken (bijvoorbeeld coach van beginnende leraren) en technologische innovaties in de school. De leraren in de laatste fasen van hun loopbaan (meer dan 20 jaar ervaring) formuleerden minder leerdoelen. De leerdoelen die deze groep leraren noemden waren minder vaak gericht op het primaire proces en meer gericht op technologische innovaties in de school.

In **Hoofdstuk 3** staat de tweede onderzoeksvraag centraal. In Hoofdstuk 2 hebben we de leerdoelen van leraren in verband gebracht met aantal jaren leservaring, en in dit hoofdstuk zijn we een stap verder gegaan. We hebben geprobeerd om met behulp van werkfasenmodellen de oorsprong van leerdoelen van individuele leraren beter te kunnen duiden.

Het leren van leraren vindt vaak plaats op de werkplek en kan worden gezien als onderdeel van het dagelijkse professionele leven van leraren. In sommige studies naar de professionele ontwikkeling van leraren wordt het leren van leraren niet alleen beschreven als een gevolg van zelfpercepties (self-efficacy), maar wordt het leren ook beïnvloed door professionele, persoonlijke en contextuele factoren. Om met name de professionele factoren beter te begrijpen, veronderstelden we dat de huidige professionele *concerns* van leraren een belangrijke invloed kunnen uitoefenen op de leerdoelen. Professionele concerns werden in deze studie gedefinieerd als de belangrijkste thematieken uit het professionele leven van leraren, die voor leraren variëren in verschillende professionele werkfasen. Een belangrijke assumptie in deze studie luidt dan ook dat leraren met verschillende jaren leservaring andere professionele concerns hebben en dat ze als gevolg hiervan ook andere leerdoelen formuleren.

In deze interviewstudie zijn 15 leraren met diverse achtergronden (sekse, vakgebied, jaren leservaring) van een havo/vwo school (School 2) twee keer geïnterviewd: de eerste keer over hun leerdoelen en de tweede keer met behulp van een kaartentaak over hun professionele concerns. Deze kaartentaak combineert technieken uit de card-

sorting task en Q-sort methodologie om iedere leraar aan de hand van 33 themakaarten zelf hun huidige professionele concerns te laten construeren. De thema's op de kaarten waren afgeleid uit modellen van professionele werkfasen (Berliner, 2001; Day et al., 2007; Fessler & Christensen, 1992; Fuller, 1969; Huberman, 1993)(zie appendix C). In de analysefase zijn deze concerns vervolgens aan de leerdoelen gekoppeld en sleutelwoorden geselecteerd die deze combinatie kenmerkten. Er werden 33 combinaties van concerns en leerdoelen onderscheiden. De koppeling van concerns aan leerdoelen resulteerde in drie verschillende categorieën vanwaaruit leraren hun leerdoelen formuleren:

a) omdat het iets is wat altijd belangrijk is om over te leren (8 combinaties);
b) leren voor persoonlijke groei en verdere verbetering van vaardigheden (17 combinaties);
c) leren om je werk te managen (8 combinaties).

Nadat deze verschillende combinaties waren gerelateerd aan jaren leservaring, werd duidelijk dat beginnende, ervaren en zeer ervaren leraren in alle categorieën voorkwamen. Het onderscheid in jaren leservaring zat vooral in de manier waarop 'groei en verbetering' een rol speelde: beginnende leraren zoeken een stabiele positie in de school, willen hun lesrepertoire uitbreiden en verder perfectioneren, terwijl (meer) ervaren leraren op zoek zijn naar variatie, zich willen voorbereiden op een nieuwe taak, of zichzelf willen uitdagen. Ervaren en zeer ervaren leraren waren sterker vertegenwoordigd in de 'altijd belangrijk' categorie. Het continue leerproces van deze leraren lijkt te worden gestuurd vanuit hun kernwaarden over lesgeven. Het leren om je werk te managen werd genoemd door beginnende leraren als belangrijk om te leren omgaan met de dagelijkse organisatie van je werk en door (zeer) ervaren leraren als belangrijk om de balans goed te houden en in enkele gevallen voor het voorkomen van een burn-out.

In **Hoofdstuk 4** richten we ons op de relatie tussen leerdoelen die leraren voor zichzelf formuleren en hun perceptie van werkplekcondities. We veronderstelden dat niet zozeer de objectieve werkplekcondities maar de *perceptie* van leraren van de werkplek inzicht kunnen geven in welke leerdoelen leraren formuleren. Vanwege de complexe relatie tussen enerzijds de betekenisverlening aan de werkplek (percepties) en anderzijds de leraar die daar vervolgens actie op onderneemt (leerdoelen formuleert) kozen we voor een kleinschalige kwalitatieve onderzoeksopzet. Uit de interviews met alle 31 leraren van zowel School 1 als School 2 over de perceptie van de werkplek als stimulerend of belemmerend kwam naar voren dat leraren tussen en binnen scholen sterk verschilden in hun werkplekpercepties. Om deze variatie in percepties nader te bestuderen, selecteerden we vier leraren die uiteenliepen in hun perceptie van de werkplek als stimulerend of belemmerend. Van elke school selecteerden we twee leraren: één die de werkplek als stimulerend ervoer en één die vooral opmerkingen maakte over de school als belemmerend voor het leren.
       In de analyses van deze vier leraren viel op dat niet zozeer de percepties over structurele werkplekcondities (zoals budget, tijd) een rol speelden in het formuleren van leerdoelen, maar de percepties over culturele werkplekcondities (zoals samenwerking, gedeelde visie) en leiderschap. Zo bleek dat het ontbreken van een gedeelde visie in de

school voor twee leraren betekende dat ze hun leerdoelen formuleerden naar eigen interesses en niet zozeer op basis van onderwerpen waar de school zich mee bezig hield. Een ander resultaat was dat waardering en erkenning voor de leraar als professional ('gehoord worden') een positieve invloed kan hebben op de mate waarin leraren zelf leerdoelen formuleren. Uit de analyse van deze vier casussen concludeerden we dat de inhoud van leerdoelen een resultaat zijn van de interactie tussen de eigen concerns van leraren (context van de klas) en de perceptie van de werkplek als leeromgeving (context van de school).

In **Hoofdstuk 5** staat de vierde onderzoeksvraag centraal. Nederlandse leraren ervaren redelijk veel eigenaarschap over het leren op de werkplek: zij maken keuzes (bijvoorbeeld in welke leeractiviteiten ze participeren) uit de leermogelijkheden die de context ze aanreikt. Om meer inzicht te krijgen in dit zelfgestuurde leren van leraren was deze vragenlijststudie gericht op wat, hoe en waarom leraren willen leren. Bovendien blijkt uit Hoofdstuk 2 en 3 dat dit zelfgestuurde leren mogelijk anders is voor leraren variërend in jaren leservaring. Vandaar dat we in deze studie het zelfgestuurde leren van leraren hebben gerelateerd aan hun jaren leservaring.

In totaal hebben 309 leraren uit het voortgezet onderwijs een online vragenlijst ingevuld over hun leervoorkeuren voor verschillende leerdomeinen ('wat'), leeractiviteiten ('hoe') en redenen om te leren ('waarom'). De leraren varieerden in vakgebied, sekse, en jaren leservaring. In de analyses werden zowel lineaire en non-lineaire verbanden getoetst tussen jaren leservaring en wat, hoe en waarom leraren willen leren.

De beschrijvende statistieken lieten zien dat leraren een sterke voorkeur hebben voor het leren over vakspecifieke leerdomeinen (vakinhoud & vakdidactiek) en toepassing van ICT in de klas. Leraren blijken een lichte voorkeur te hebben voor het leren door experimenteren, samenwerken en reflectie op de lespraktijk boven het leren door training en jezelf up-to-date houden. Verder bleek dat leraren voornamelijk autonome redenen ('omdat ik het als leuk en interessant ervaar', 'omdat ik het persoonlijk belangrijk vind') hebben om te leren in vergelijking met gecontroleerde redenen om te leren ('omdat anderen dit van mij verwachten', 'omdat ik me anders een slechte leraar voel').

Uit de analyses bleek verder dat er een curvi-lineaire relatie bestaat tussen het leerdomein 'klassenmanagement' en 'jaren ervaring'. Dat houdt in dat beginnende en zeer ervaren leraren graag over dit onderwerp willen leren, maar de midden-categorie leraren (tussen 8 en 20 jaar ervaring) in vergelijking minder graag. Ook was er sprake van een negatieve relatie tussen 'experimenteren' en 'jaren leservaring': hoe meer leservaring, hoe minder interesse er is om te leren door te experimenteren met bijvoorbeeld alternatieve werkvormen in de les. Eenzelfde negatieve relatie werd gevonden voor de reden om te leren: 'omdat ik het persoonlijk belangrijk vind'. Voor deze drie gevonden relaties bleek het effect van jaren ervaring relatief klein te zijn. Naast jaren leservaring zijn waarschijnlijk andere factoren (zoals zelfpercepties, schoolcontext) van belang om de variatie in wat, hoe en waarom leraren willen leren te verklaren.

In **Hoofdstuk 6** worden de belangrijkste conclusies en discussiepunten samengenomen uit de resultaten van de interviewstudies en vragenlijststudie.

Wat leraren willen leren blijkt te verschillen voor beginnende en (zeer) ervaren leraren. De meeste leerdoelen van leraren zijn gericht op vakspecifieke leerdomeinen, namelijk vakinhoud en vakdidactiek (bijvoorbeeld differentiatie in de les, instructiestrategieën en toetsing van vaardigheden). Dit blijkt een veelvoorkomend leerdoel voor leraren ongeacht hun jaren leservaring. Goede en adaptieve instructie wordt ervaren als de kern van het beroep en als een belangrijk kenmerk van de expertise van leraren. Andere studies lieten al zien dat het aanpassen van instructie naar verschillende type leerlingen één van de moeilijkste vaardigheden van het leraarsvak is (Van de Grift, Van der Wal, & Torenbeek, 2011). Bovendien zorgen regelmatige vak- en curriculumveranderingen voor de noodzaak om voortdurend up-to-date te blijven in het vakgebied.

Beginnende leraren willen graag leren over klassenmanagement, over hoe een goede relatie aan te gaan met leerlingen, over het verfijnen van instructiestrategieën, en over groeien als professional en een stabiele positie in de school verwerven. Beginnende leraren zijn daarnaast geïnteresseerd om te leren over een verbreding van hun taken en verantwoordelijkheden (bijvoorbeeld mentorschap) en het leren organiseren van alle werktaken. Deze laatste twee leerdomeinen worden niet vaak genoemd in literatuur over de inductiefase (cf. Anderson & Olsen, 2006; Feiman-Nemser, 2001).

In vergelijking met beginnende leraren hebben (zeer) ervaren leraren een sterkere voorkeur om te leren over educatieve technologieën (bijvoorbeeld multimedia gebruik, ICT) in de klas. Daarnaast blijkt dat het leren over klassenmanagement en goede relaties met leerlingen aangaan niet alleen relevant is voor beginnende leraren. Uit de vragenlijststudie blijkt dat ook zeer ervaren leraren dit als leerdoel noemen. Dit kan ermee te maken hebben dat zeer ervaren leraren een goede relatie met leerlingen als 'altijd belangrijk' ervaren (professional concern zoals in Hoofdstuk 3). Het aangaan van goede relaties met leerlingen wordt gezien als voorwaardelijk voor het motiveren van leerlingen en een goed verloop van de lessen. Ook geven zeer ervaren leraren aan dat ze graag willen aansluiten bij de leefwereld van leerlingen, waarschijnlijk vanuit de zorg dat het leeftijdsverschil steeds groter wordt naarmate leraren meer ervaren worden.

Met betrekking tot *hoe* leraren willen leren blijkt uit de vragenlijststudie dat leraren een sterkere voorkeur hebben om te leren door te experimenteren in de les en leren door samenwerken met collega's en reflectie op de lespraktijk in vergelijking met het leren door trainingen te volgen en up-to-date te blijven. Wat het aantal jaren ervaring betreft, vonden we dat (zeer) ervaren leraren minder interesse hebben om te leren door te experimenteren in de les dan beginnende leraren.

Met betrekking tot *waarom* leraren willen leren, blijkt dat leraren hun leren aansturen vanuit autonome redenen, omdat ze het onderwerp interessant of belangrijk vinden. De keuze voor het onderwerp wordt beïnvloed vanuit de professionele concerns van leraren. Redenen om zelfgestuurd te leren zijn gericht op beheersing van het leraarsvak ('mastery') voor beginnende leraren en gericht op interesse, uitdaging of het beheersen van een specifieke taak voor ervaren en zeer ervaren leraren.

DISCUSSIEPUNTEN EN IMPLICATIES

1. Leerdoelen van leraren

Leraren zijn goed in staat om leerdoelen voor zichzelf te formuleren. Deze bevinding is in tegenstelling tot ander onderzoek waarin geconcludeerd werd dat sommige leraren niet willen leren of niet weten hoe ze moeten leren (Van Eekelen, Vermunt, & Boshuizen, 2006). Ook kunnen we concluderen dat deze leerdoelen een afspiegeling zijn van wat er in de klassencontext speelt en waar de school zich mee bezig houdt.

In veel studies naar professionele ontwikkeling van leraren wordt gesproken over wat leraren zouden moeten leren als gevolg van lokaal of nationaal voorgestelde veranderingen. Daarnaast wordt regelmatig vanuit een competentie-raamwerk gekeken naar professionele ontwikkeling van leraren. Er lijkt dan nauwelijks aandacht voor hoe leraren hun leren zelf vorm geven en vanuit welke motivatie leraren hun leren sturen. Professionele ontwikkeling wordt door leraren niet alleen als een kwestie van competentieontwikkeling ervaren (dat wil zeggen een vaardigheid niet beheersen), maar ook als een kwestie van persoonlijke groei, socialisatie in het beroep, en het beroep uitdagend en gevarieerd houden voor jezelf. Het leraarsperspectief op de professionele ontwikkeling van leraren (hier: zelfgestuurd leren) biedt daarmee een waardevolle aanvulling op de huidige literatuur en kan de discussie over professionele groei van leraren verder helpen.

*2. Jaren leservaring en professionele werkfasemodellen*

Om de gevonden verschillen met betrekking tot jaren leservaring te duiden zijn professionele werkfasemodellen gebruikt (Day et al., 2007; Fessler & Christensen, 1992; Fuller, 1969; Huberman, 1993). De werkfasemodellen leggen zelf nauwelijks een verband tussen de onderscheiden fasen en het leren van leraren. De werkfasemodellen onderscheiden persoonlijke, professionele en contextuele factoren die zich in verschillende fasen van de loopbaan van leraren anders manifesteren. In Hoofdstuk 3 hebben we meer inzicht gekregen in de rol die vooral de professionele factoren in de leerdoelen kunnen spelen. Daaruit blijkt dat thema's die voor beginnende leraren een rol spelen (bijvoorbeeld 'een stabiele positie krijgen binnen de school') een andere achterliggende reden voor leren veroorzaken dan thema's die voor ervaren leraren een rol spelen (bijvoorbeeld 'voorkomen dat ik alleen op routine ga draaien'). Ook blijkt dat het zelfgestuurde leren van beginnende en ervaren leraren een andere achtergronden hebben die te maken hebben met de huidige werkfase waarin leraren zich begeven. Dat zou betekenen dat scholen rekening moeten houden met jaren leservaring van leraren bij het organiseren van professionele ontwikkeling in de school.

3. De rol van de schoolorganisatie en schoolleider in het zelfgestuurd leren van leraren

De richting waarin leraren hun leren sturen wordt mede bepaald door hun perceptie van de school als leeromgeving. Dat heeft als implicatie dat het in het belang van de schoolorganisatie is om zoveel mogelijk gunstige werkplekcondities te creëren die het zelfgestuurd leren van leraren bevorderen (denk aan: gedeelde visie over goed onderwijs, waardering voor en feedback op prestaties van leraren, inspraak en gezamenlijk beslissingen nemen). Daarnaast blijkt het in de praktijk lastig voor leraren om tijd vrij te maken om

onderling en met leidinggevenden te spreken over hun eigen leerdoelen, met als gevolg dat een dergelijk gesprek nauwelijks plaatsvindt. De dagelijkse gang van zaken op school betreft het leren van leerlingen, niet dat van leraren. Een laatste implicatie is dat schoolbeleid voor professionele ontwikkeling *met* leraren moet worden vormgegeven.

APPENDICES
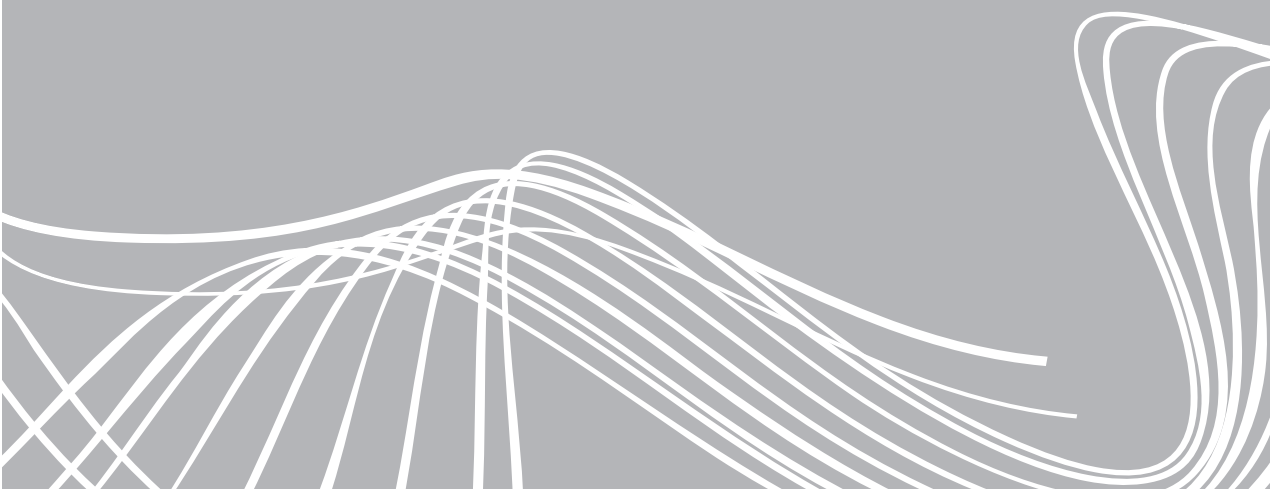
APPENDICES

APPENDIX A - INTERNSHIP IN TWO SECONDARY SCHOOLS

EEN STAGEPERIODE IN SCHOOL ALS ONDERDEEL VAN KWALITATIEF ONDERZOEK

INTRODUCTIE

> *'Je gaat voor drie maanden de school in voor je onderzoek'*
> *'Oké, leuk idee, maar wat ga ik daar zo lang doen dan?'*

Dit zou zomaar een deel van een gesprek kunnen zijn tussen mij en mijn promotor aan de start van mijn promotieonderzoek. Ik wist op dat moment nauwelijks wat voor onderzoeksinstrumenten ik zou hanteren, noch wat de specifieke onderzoeksvragen zouden worden. Wel had ik het boek 'Schoolteacher' van Dan Lortie (1975) gelezen waarin de term *apprenticeship of observation* wordt uitgelegd. Dat houdt in dat veel mensen denken onderwijsexpert te zijn omdat iedereen vele jaren onderwijs heeft genoten als leerling of student. Echter, het perspectief van leerling of student biedt nauwelijks inzicht in hoe complex het is om onderwijs zelf te organiseren. Ondanks mijn ervaringen uit mijn masterstudie waarin ik ruim 60 lessen op basisscholen heb geobserveerd voor mijn masterthesis, had ik nog nauwelijks vanuit het perspectief van leraar gekeken naar het organiseren van lessen, laat staan het leren van leraren in een schoolomgeving. De doelstelling van de stageperiode in de school was daarom tweeledig: enerzijds zou ik de periode gebruiken om data te verzamelen voor mijn promotieonderzoek, anderzijds – en hier zou ik mee beginnen tijdens mijn eerste stageperiode – was deze periode belangrijk voor mij als beginnende onderwijsonderzoeker om te leren over het dagelijkse werk van leraren en de gang van zaken op een school. Vandaar ook de term stageperiode: ik zou er in het kader van ontwikkeling als promovendus veel van kunnen opsteken.

Deze appendix is geschreven om uitleg en voorbeelden te geven bij deze intensieve onderzoeksaanpak die is gehanteerd voorafgaand aan en tijdens de interviews met 31 leraren in School 1 en 2. Het dient daarmee een informerende functie: het geeft een beschrijving van de variatie aan ervaringen en onderzoeksactiviteiten in twee periodes van vier maanden (nl. winter/voorjaar 2012 op School 1, winter/voorjaar 2013 op School 2). Vanuit deze beschrijvingen kan worden beargumenteerd dat een dergelijke intensieve onderzoeksaanpak de validiteit van de verzamelde data ten goede is gekomen. Een andere reden om deze appendix te schrijven is dat ik graag recht wil doen aan de tijd die leraren, schoolmanagers, onderwijsondersteunend personeel en leerlingen hebben besteed aan deelname aan mijn promotieonderzoek. Vier maanden rondlopen op een school voor circa drie dagen per week betekent met heel veel mensen praten, veel lessen observeren en vele aantekeningen (of: fieldnotes) schrijven. Het merendeel van deze gegevens is niet gebruikt voor data-analyses omdat ze niet geschikt was om specifieke onderzoeksvragen mee te beantwoorden (zie punt 8, deze appendix), maar ze heeft me wel inzichten

geboden in het dagelijkse (werkende) leven in een school en de specifieke schoolcontext die het leren van leraren kan beïnvloeden. Daarbij zijn in deze appendix niet te veel specifieke schoolkenmerken en kenmerken van leraren beschreven om zo de anonimiteit te waarborgen.

Een laatste reden voor het schrijven van deze appendix is het informerende karakter ten behoeve van andere onderwijsonderzoekers die eenzelfde onderzoeksaanpak zouden willen hanteren. Want zoals Lareau (1996) schreef, is het zeldzaam dat onderzoekers een gedetailleerde beschrijving geven van het veldwerk wat ze hebben ondernomen, en welke methodologische overwegingen en nadelige aspecten van veldwerk (denk aan: vertragingen, organisatorische moeilijkheden, en persoonlijke frustraties) daarbij komen kijken.

Deze appendix is geschreven in het Nederlands omdat de ervaringen, de fieldnotes en observaties ook in het Nederlands zijn genoteerd. Bovendien kan ik op deze wijze beter uitleggen welke specifieke begrippen ik ben tegen gekomen die van toepassing zijn bij het werken op een Nederlandse school voor voortgezet onderwijs (denk aan begrippen als: havo-didactiek, BAPO, en verlengde brugperiode). Daarnaast is deze appendix geschreven in de ik-vorm, simpelweg omdat de stageperiode alleen door mij werd uitgevoerd. Door het tweeledige karakter van deze periode (onderzoek en ontwikkeling voor promovendus) is het van belang om uit te leggen hoe deze periode is ervaren door de promovendus. Daar wil ik wel graag bij opmerken dat de doelstelling van deze appendix vooral informerend is en de appendix niet gelezen moet worden als persoonlijk reflectieverslag. In kwalitatief onderzoek geldt dat de onderzoeker altijd zichzelf mee neemt in de te observeren context en dat deze persoonlijke account de methodologische overwegingen kan kleuren (Cohen, Manion, & Morrison, 2011). Om die reden is het belangrijk om enkele persoonlijke achtergronden te delen.

1. Voorbereiding

Ongeveer twee maanden na de start van mijn promotieonderzoek werd ik geïntroduceerd aan de schoolleider van School 1. Tijdens de voorbereiding voor de eerste stageperiode nam ik mezelf voor om vooral data te gaan verzamelen die een antwoord zou gaan geven op de hoofdvraag uit het onderzoeksvoorstel. Daarbij had ik bedacht om van tevoren duidelijke afspraken te maken met de schoolleider over welke onderzoeksactiviteiten ik zou uitvoeren en welke instrumenten ik daarvoor zou gebruiken. Daarna zou de schoolleider me in contact brengen met enkele leraren en regelen dat ik lessen zou kunnen observeren. Mijn rol in de school zou die van 'fly on the wall' zijn (Lichtman, 2012): ik zou vooral observeren, noteren, vastleggen maar niet participeren. Deze voorgenomen 'objectieve' houding vloeit voort uit mijn achtergrond als kwantitatief geschoolde onderzoeker waarin ik geleerd heb zo min mogelijk te interfereren in authentieke situaties en waarnemingen proberen te objectiveren en generaliseren. Zoals later in deze appendix zal blijken mislukte mijn rol als fly on the wall en bleek de praktijk weerbarstiger dan mijn voorgenomen aanpak. De gesprekken en observaties werden uiteraard niet voor me geregeld door de schoolleider. Hij bracht me in contact met de directiesecretaresse die me introduceerde bij enkele leraren en teamleiders tijdens de rondleiding door de school en ze regelde een toegangspas voor de lokalen, e-mailadres en inlogcode zodat ik de roosters kon inzien. De schoolleider gaf me in feite een vrijbrief om mijn eigen gang te gaan. Dat hield in dat ik zelf

aan de slag kon en leraren kon aanspreken, gesprekken kon houden met teamleiders en een leslokaal kon binnen stappen en vragen of ik een les bij mocht wonen. In beide scholen ben ik heel gastvrij ontvangen door de schoolleider, leraren en onderwijsondersteunend personeel; alsof ik onderdeel mocht uitmaken van de school zoals een stagiair.

School 1 gaf toestemming voor de stageperiode vanwege de nauwe band die het ICLON heeft met deze school. School 2 heeft gereageerd op een algemene oproep tot deelname tijdens een schoolbesturen-overleg. De afspraken waren vervolgens snel gemaakt en niet veel later kon de stageperiode beginnen. Beide schoolleiders moeten dit als een experiment hebben ervaren: er komt een onderzoeker voor een lange tijd op bezoek waarvan we niet goed weten wat voor onderzoeksactiviteiten die gaat ondernemen en wat we er als school van zouden kunnen gebruiken. Het gestelde vertrouwen in de onderzoeker is een hele belangrijke voorwaarde geweest voor een dergelijke intensieve onderzoeksaanpak. De schoolleider zegt met het akkoord geven voor dit project namelijk impliciet 'wat de onderzoeker hier ook wilt ondernemen, ik zal zorgen dat er niets in de weg staat, en het zou mooi zijn als het ons wat oplevert, maar dat hoeft niet'.

Het belangrijkste in deze voorbereidende fase was het advies van mijn promotor die zei dat ik eerst maar eens een paar weken moest acclimatiseren en observeren, en later maar vragen moest gaan stellen voor de dataverzameling. Dat heb ik in beide stageperiodes gedaan, hoewel de tijd van acclimatisering in School 2 sneller verliep dan in School 1 omdat ik niet meer volledig blanco de school in ging. In School 2 was ik ook iets doelgerichter vanaf de start omdat ik duidelijk voor ogen had welke onderzoeksaanpak ik zou gaan hanteren en wat voor organisatorische uitdagingen ik tegen zou kunnen komen.

2. Kennismaking in de school

In beide scholen werd mijn onderzoek geïntroduceerd in de wekelijkse nieuwsbrief voor het personeel. In deze korte introductie schreef ik dat ik promoveerde bij het ICLON en dat ik een paar maanden onderzoek zou komen doen naar de professionele ontwikkeling van leraren tijdens hun dagelijkse werkzaamheden en een relatie probeerde te leggen met jaren leservaring van leraren.

In school 2 kreeg ik daarnaast een reader bedoeld voor alle nieuwe leraren met daarin een lokalenoverzicht en een smoelenboek. Dit was zeer behulpzaam om namen van leraren te leren en letterlijk mijn weg te vinden in de school. Ook het onderwijsondersteunend personeel (bijv. directiesecretaresse en roostermakers) was van onschatbare waarde bij het wegwijs worden op een school.

In de eerste vier tot zes weken probeerde ik voornamelijk veel (verschillende) lessen te observeren om een idee te krijgen van de type lessen, leerlingen en leraren die de school rijk was. Daarvoor benaderde ik leraren en vroeg welke les ik mocht komen observeren of ik zocht in het rooster op wanneer de leraren les gaven en vroeg aan het begin van de les of ik er bij mocht komen zitten. Zo heb ik onder andere lessen Nederlands, filosofie, mathematics (tweetalige afdeling), scheikunde en gym geobserveerd. In totaal bezocht ik lessen van 30 (School 1) tot 40 (School 2) verschillende leraren (25% van het totaal onderwijspersoneel). De keuze voor welke lessen ik wilde observeren verliep volgens een sneeuwbalmethode. In het gesprek na afloop van een lesobservatie kreeg ik regelmatig tips bij welke leraar ik eens zou moeten gaan kijken. Soms kwam deze tip ook van leerlingen.

Ook gebruikte ik het officiële overzicht van al het onderwijzend personeel om te zorgen dat ik een grote diversiteit aan vakken, jaarlagen, en leraren met verschillende jaren leservaring zou observeren. Ik maakte dan een lijstje namen van leraren die ik wilde observeren en zocht ze op of stuurde ze een e-mail.

De beginperiode kenmerkte zich ook door vele gesprekken met schoolleiders, teamleiders en coördinatoren voor professionele ontwikkeling van leraren (bijv. schoolopleiders van het inductieprogramma). In de gesprekken met schoolleiders en teamleiders probeerde ik er achter te komen welke schoolkenmerken de schoolcultuur karakteriseerde en, meer algemeen, inzicht te krijgen in organisatiestructuren, personeels- en professionaliseringsbeleid van de school. Ik stelde daarvoor hele open vragen als '*wat maakt deze school uniek?*' en '*wat is een goede leraar volgens u?*'. Ook besprak ik hoe de kwaliteit van de lessen wordt gewaarborgd en wat de rol van de schoolleiding daarin is. Tevens gingen de gesprekken over uiteenlopende thema's als de bevordering van Lc-docent naar Ld-docent, beoordelings- en ontwikkelgesprekken met leraren voeren op basis van lesobservaties en leerlingvragenlijsten, en hoe schoolbrede veranderingen worden geïntroduceerd en hoe studiedagen/scholing daarvoor worden ingezet. In beide scholen bleek er geen expliciet scholingsplan of professionaliseringsbeleid voorhanden maar impliciet was er wel een prioritering voor professionele ontwikkeling aanwezig. Ook beschikten beide scholen over voldoende budget om leraren te ondersteunen in hun professionele ontwikkeling. Bovendien was er in beide scholen veel aandacht voor begeleiding en het leren van beginnende en nieuwe leraren in de school; dat komt omdat beide scholen een zogeheten *opleidingsschool* zijn.

3. De klas in

Zoals eerder gemeld heb ik veel verschillende lessen geobserveerd. Tijdens het lesbezoek hanteerde ik geen observatie-instrument, maar noteerde ik opvallende gebeurtenissen, handelingen en uitspraken van leraar en leerlingen. Ik had van collega-lerarenopleiders als tip gekregen om op de lesstart en lestransities te letten omdat hier de verschillende rollen van de leraar goed duidelijk worden (bijvoorbeeld de pedagoog, de interpersoonlijke rol, de vakdidacticus, de organisatorische rol). In mijn observaties viel het mij op dat de lesstart werd gekenmerkt door het scheppen van condities voor een effectieve les: werd er gecontroleerd of alle leerlingen aanwezig waren, zat iedereen op z'n plek en klaar om te beginnen (of hielden leerlingen hun jas aan en tas op tafel?), hadden leerlingen hun spullen bij zich, stond het digitale whiteboard aan (en werkte het naar behoren?), werd het lesdoel uitgelegd (of bekend verondersteld?), en werd een gedeelte uit de vorige les herhaald en/of werd het opgegeven huiswerk behandeld?

Tijdens de lesstart viel het mij ook op dat ik als onderzoeker in sommige gevallen helemaal niet werd geïntroduceerd en dat leerlingen en leraar mij negeerden. De leraren en leerlingen leken gewend om bezoekers te hebben in de klas. In een wiskundeles gaf een leerling me op eigen initiatief zijn wiskundeboek zodat ik mee kon kijken met de opdrachten die besproken werden tijdens de klassikale instructie. De leerling keek vervolgens met zijn klasgenoot mee. In andere gevallen lieten leraren het aan mij om mezelf en mijn promotieonderzoek te introduceren. In een enkel geval merkte ik dat leraren zich zeer bewust waren van mijn aanwezigheid en bijvoorbeeld veel oogcontact

met mij onderhielden. Ik begrijp dat mijn lesbezoek in die gevallen gevoeld kon hebben als een beoordeling of evaluatie, iets wat absoluut niet mijn bedoeling was.

In het begin van mijn lesbezoeken schreef ik vooral opmerkingen over het veilige klasklimaat, de relatie tussen leraar en leerlingen en het klassenmanagement. Een chaotische of zeer gestructureerde lessensituatie vallen namelijk op en de aanwezige structuur blijkt een belangrijke invloed te hebben op hoe de lessen verlopen. Bij latere bezoeken ging ik me ook meer focussen op (vak)didactische aspecten van de les, bijvoorbeeld de lesopbouw en de mate van uitdaging van de opgegeven opdrachten. Leidende vragen daarvoor waren; wat doen de leerlingen tijdens de les en is het duidelijk wat er van hen wordt verwacht?

Na afloop van een les sprak ik vaak kort met de leraren de les na. Als leraren me vroegen wat ik ervan vond, dan liet ik me niet verleiden om hele evaluatieve opmerkingen te maken. Ik was daar niet in de les om een oordeel te vellen, maar om een indruk te krijgen, en dat wilde ik ook communiceren. Wel gaf ik altijd aan wat ik bijzonder vond tijdens de les en stelde ik vragen over de lesstof, de gehanteerde werkvorm of over specifieke leerlingen in die klas.

4. De personeelskamer

Bij 'tussenuren' zat ik vaak in de personeelskamer om observaties en gesprekken uit te werken en plannen te maken voor nieuwe lesbezoeken (voornamelijk in School 2). Het uitwerken van korte gesprekjes met leraren, lesobservaties en samenvattingen van interviews maken kost veel tijd en kon niet wachten tot aan het eind van de dag omdat ik dan de meeste details weer was vergeten. Daarom gebruikte ik minimaal twee tussenuren per dag om dit soort aantekeningen tussendoor te verwerken (digitaal of in mijn notitieboek). In de personeelskamer hield ik mijn ogen en oren open; wat was de sfeer, wat was het gesprek van de dag, peilen van de stressniveaus bij leraren, en hoe gingen leraren met elkaar om? Volgens Lareau is 'hanging out' met het lerarenteam een goede manier om te integreren in de school, en dat merkte ik ook. De drempel was laag om leraren aan te spreken en een kletspraatje te maken. Maar ook dat lukte niet altijd, want in één van mijn evaluaties noteerde ik: 'Ik typ te veel, maak eens gebruik van de leraren die in de lerarenkamer zitten!'.

Doordat ik zo veel in de publieke ruimte aan het schrijven was op mijn laptop of in notitieboekje, kreeg ik ook vragen van leraren. Dat schrijven en typen was een onderzoeksactiviteit die weinig transparant voor leraren was. Leraar Johan noemde me bijvoorbeeld een spion; wat deed ik toch in de school, wat observeerde ik, en wat schreef ik op? Hij voelde zich deelnemer van een psychologisch experiment. Het gedeelte over de spion klopt ook wel een beetje, want als ik een leraar nodig had (vraag om les te observeren, uitnodigen voor interview, etc.) dan zocht ik in het rooster op wanneer en waar deze leraar les gaf en liep deze leraar dan 'toevallig' tegen het lijf na afloop van deze les. Voor Johan, maar misschien ook voor andere leraren, was mijn aanwezigheid toch meer ingrijpend dan ik zelf wilde. Aan Johan heb ik uitgelegd waarom ik notities maakte en vervolgens stelde hij me gerust dat ik zijn opmerkingen als grapje moest opvatten. In dergelijke situaties probeerde ik mijn onderzoeksactiviteiten toe te lichten en inzichtelijk te maken.

Ik kwam er al gauw achter dat mijn voornemen om als *fly on the wall* te observeren in school niet zo werkte. Ik participeerde in de school omdat ik er simpelweg 2 à 3 dagen in de week rond liep, lessen observeerde en veel met leraren sprak. Daarom zocht ik naar een nieuwe rol, naar een manier om mezelf te introduceren. Mijn basishouding werd 'ik wil van jullie leren want ik ben zelf geen leraar (geweest) en ik begin net met mijn onderzoek'. Maar dat is niet helemaal waar; ik heb ervaring als werkgroepdocent op een universiteit en heb leerlingen begeleid in mijn bijbaan als huiswerkbegeleider. Mijn onderwijservaringen zijn echter van een heel ander kaliber en niet vergelijkbaar met de dagelijkse praktijk van leraren op een school voor voortgezet onderwijs.

Elke keer als ik aan leraren uitlegde dat mijn stageperiode onderdeel was van mijn promotieonderzoek kreeg ik uiteenlopende reacties. Sommige leraren vonden vier jaar onderzoek doen ontzettend lang en zouden niet met mij willen ruilen. Afgezet tegen de realiteit van school met een tijdsbestek van een schooljaar, semester, lesweek of lesuur, klinkt een periode van vier jaar waarschijnlijk als oneindig. Andere leraren waren in de veronderstelling dat ik bachelor- of master-onderzoek deed. Dit heb ik in de meeste gevallen maar zo gelaten, tenzij er al een bepaalde vertrouwdheid tussen mij en de leraar was waardoor ik een dergelijke correctie wel kon maken. Ik ben van mening dat het belangrijker was dat leraren het leuk vinden om aan mijn onderzoek deel te nemen, of althans, met mij te praten over mijn onderzoek, dan dat ik ze de les zou lezen over de verschillende soorten typen onderzoek die in de academische wereld worden onderscheiden. Het laatste wat ik wilde was dat leraren me arrogant of beterwetig zouden vinden. Ik corrigeerde overigens wel altijd de misvatting dat ik in opleiding tot leraar was. Er waren ook enkele leraren die een gepromoveerde in hun omgeving hadden of zelf gepromoveerd waren. Zij wisten heel goed wat promotieonderzoek inhield en waren geïnteresseerd in mijn onderzoeksaanpak en vroegen ook naar het publiceren van artikelen. Een van deze leraren verbaasde zich over mijn leeftijd (toen 26 jaar) en reageerde met: 'Je bent zo jong en dan nu al aan het promoveren'. Net zoals leraren een spiegel door leerlingen wordt voorgehouden, gebeurde dit met mij ook. Mijn volgende e-mail aan deze leraar sloot ik af met 'de jonge promovenda'. Dergelijke opmerkingen gericht aan mij als persoon wendde ik liever af met een knipoog, dan dat ik me er al te veel door liet beïnvloedden.

In de lange periode op school heb ik met enkele leraren ook een soort vriendschappelijke band opgebouwd. Naast het praten over onderwerpen voor mijn onderzoek ging het soms ook over de vakantie, het weer en mijn woonplaats Den Haag. Waarschijnlijk door mijn enthousiasme voor het onderwijs en mijn waardering voor het werk van leraren kreeg ik ook regelmatig de vraag of ik zelf voor de klas zou willen. Deze vraag beantwoorde ik altijd door te zeggen dat dit voor mij geen optie is omdat ik geen echt (school)vak heb geleerd en me thuis voel in de sociale wetenschappen. Een risico van een vriendschappelijke band opbouwen met leraren is dat je niet voldoende objectief bent in je analyses van de data van deze leraren ('going native') (Creswell, 2007; Lincoln & Guba, 1985). Om deze bias zoveel mogelijk in te perken vroeg ik mijn begeleiders om kritisch mee te kijken en te helpen in de analyses van de interview gegevens.

In de beginperiode van mijn onderzoek (vooral School 1) vroeg ik aan enkele leraren om met me mee te denken over mijn aanpak en instrumentarium. Ik testte de

interviewvragen met leraren die niet in mijn selectie zaten, maar waarvan ik wist dat ze een hele kritische blik op het onderzoek zouden hebben. Ik 'gebruikte' dus redelijk wat tijd van leraren voor mijn onderzoek, maar andersom kon ik een aantal leraren helpen. Zo heb ik observatieverslagen geschreven voor beginnende leraren die ze konden gebruiken voor hun opleiding. Ook werd ik ingezet om te helpen met een profielwerkstuk van twee leerlingen. Als 'normale' onderzoeker zou je dergelijke dingen niet zo snel kunnen doen, maar in een stageperiode heb je gelegenheid om te participeren in de school en een kleine bijdrage te kunnen leveren. Ik vond het dan ook vanzelfsprekend dat ik iets terug deed voor de inspanningen die leraren leverden voor mijn onderzoek. Van mijn rol als *fly on the wall* groeide ik dus langzaam naar een participerend observator (Cohen et al., 2011).

6. School ontwikkeling

Om te begrijpen hoe het reilen en zeilen van een school werkt, heb ik vergaderingen, bijeenkomsten en studiedagen bijgewoond. Elke bijeenkomst bekeek ik vanuit het idee dat hier mogelijkheden voor leraren om te leren zouden kunnen zijn. Zo maakte ik een vergadering van de Wiskunde-sectie mee waarin één leraar een korte presentatie gaf over de verschillende type toetsvragen (reproductie, inzicht, toepassingsvragen) die je kunt stellen en hij bracht daarmee een discussie op gang welke verdeling de sectie idealiter zou willen nastreven bij het maken van nieuwe toetsen. Tijdens een studiedag deed ik mee met een workshop over de mogelijkheden van het software programma dat hoorde bij het digitale whiteboard. En ik zat bij een bijeenkomst die onderdeel uitmaakte van het inductieprogramma voor beginnende en nieuwe leraren waarbij oefeningen gedaan werden over de non-verbale signalen die je als leraar kunt uitstralen naar leerlingen.

In School 2 was een groep afdelingsleiders en leraren bezig met het gezamenlijk schrijven van teksten voor het schoolplan voor de komende vijf jaar. Ik mocht de bijeenkomsten die daarvoor werden georganiseerd bijwonen. Het was bijzonder om in deze besprekingen de visie van de school te horen. Ook bleek het toekomstbeeld voor de school gekleurd te worden door de invloed van 'het ministerie' en 'de inspectie'.

Beide scholen waren bezig met het thema 'ICT' in de school. De fase, achtergronden en aanpak van deze schoolbrede veranderingen verschilden per school. Zo waren ze in School 1 in een oriënterende fase om te kijken welke betekenis ICT zou kunnen hebben voor de lessen en in School 2 was een groot gedeelte van de brugklassen een laptopklas: deze leerlingen hadden allemaal een laptop. Bij sommige vakken ontbrak het aan digitaal lesmateriaal van de educatieve uitgever, waardoor de vakgroep verantwoordelijk was voor het zelf ontwikkelen van digitaal lesmateriaal. De fase van de schoolontwikkeling had ook invloed op de gesprekken die ik had met leraren over hun leerdoelen. Het thema ICT was relatief nieuw voor leraren in School 1 en er was interesse om hier meer over te weten te komen. Voor leraren in School 2, waar ze al 3 jaar bezig waren met de voorbereiding voor laptopklassen, was ICT niet zozeer een nieuwe trend maar meer een realiteit en (noodzakelijk) onderdeel van de lessen. Juist de personeelskamer- en wandelganggesprekken met leraren en schoolleiding leverde me inzichten over de heersende ideeën over onder andere ICT waardoor ik de interviews met leraren in de specifieke schoolcontext kon plaatsen.

Voor de semigestructureerde interviews maakte ik een selectie uit de leraren waarvan ik lessen had geobserveerd. Daarvoor maakte ik eerst een lijst met alle geobserveerde leraren en zocht naar een evenwichtige balans in jaren leservaring, sekse, en vakgebied. Als ik in een bepaalde ervaringscategorie te weinig keuze had, dan regelde ik nog enkele observaties met leraren uit de desbetreffende categorie. Ik lette er overigens ook op dat de geselecteerde leraren varieerden in hun opvattingen over lesgeven en betrokkenheid bij de school. Dit soort selectievariabelen zijn niet zo goed hard te maken; ik probeerde er bijvoorbeeld voor te zorgen dat geselecteerde leraren niet in dezelfde mate betrokken waren in commissies en schoolactiviteiten of bekend stonden als onderwijsvernieuwer. Ik nodigde de geselecteerde leraren mondeling uit en stuurde ze per mail een overzicht van wat ze konden verwachten, wat ik met de gegenereerde data zou doen, garandeerde ze dat ik hun gegevens vertrouwelijk zou behandelen en dat hun deelname vrijwillig was. Alle geselecteerde leraren wilden meedoen aan het onderzoek. Nadat we een afspraak hadden gemaakt voor het interview stuurde ik ze per mail de interviewleidraad op en legde het doel van het interview uit. De leraren konden zo alvast nadenken over hun antwoorden op de vragen.

Tijdens de interviews liepen we de interviewleidraad door, maar niet altijd in dezelfde volgorde. Als iets ter sprake kwam dat specifiek ging over de rol van de school in hun leren, dan stelde ik voor om gelijk de vragen die over de school gingen te behandelen. In de interviews probeerde ik me aan het beschikbare tijdschema (1 lesuur of 1 uur) te houden, maar vaak liep het uit. In School 1 heb ik in een aantal gevallen het interview over twee interviews verdeeld. In School 2 werden er twee interviews gepland waardoor vragen waar we niet aan toekwamen in het eerste interview tijdens het tweede interview konden worden behandeld. De tijd tussen deze interviews was gemiddeld twee tot drie weken. In de tussentijd probeerde ik een korte samenvatting te sturen zodat we verder konden waar we in het eerste interview gebleven waren. Alle interviews werden volledig uitgewerkt en voorgelegd aan de leraren ter controle (member check). De voorgestelde aanpassingen verwerkte ik voordat ik de interview data ging analyseren. Een gedetailleerde beschrijving van de analyses van de interviewgegevens zijn terug te vinden in Hoofdstuk 2, 3 en 4.

8. Analyse fase & achteraf

Met mijn onderzoeksteam hebben we besloten om de data-analyses te beperken tot de semi-gestructureerde interviews die antwoord gaven op de hoofdvraag. De fieldnotes, interviews met schoolleiding en observaties hebben we niet mee genomen in de analyses. Dit vond ik een moeilijke beslissing: ik had redelijk veel data verzameld over de lessen en de wandelganggesprekken met leraren dat ik voor elke leraar een gedetailleerde casusbeschrijving had kunnen maken. Maar omdat de nauwkeurigheid en mate van detail niet voor elke leraar hetzelfde was zou dat de vergelijkbaarheid tussen de casussen niet ten goede komen. De interviewvragen waren wél voor alle leraren hetzelfde en waren de voornaamste bron om de onderzoeksvragen mee te kunnen beantwoorden. Maar de belangrijkste reden om uit te gaan van de interviews was dat we geïnteresseerd waren in wat leraren *zélf* aangaven wat hun leerdoelen waren en naar *hun* perceptie van de school. Dat houdt in dat observaties van een onderzoeker of andere bronnen (collega's,

schoolleiding) niet kunnen vaststellen wat de belangrijkste leerdoelen van een leraar zijn. In het introductiehoofdstuk van dit proefschrift heb ik nog wel de fieldnotes en interviews met schoolleiding geraadpleegd om een beschrijving te kunnen geven van de twee scholen.

In de periode na afloop van de stageperiode heb ik een schoolrapport geschreven waarin ik de belangrijkste bevindingen over de school op basis van verschillende bronnen (documentanalyse, interviews met schoolleiders, interviews met leraren) heb samengevat. Alle bronnen waren geanonimiseerd en niet herleidbaar tot de deelnemers aan het onderzoek. Dit schoolrapport is intern verspreid in de scholen. Na afloop van beide stageperiodes heb ik beide schoolleiders uitgenodigd voor een duo-interview. Ik maakte in mijn analyses een vergelijking tussen beide scholen, maar ik was benieuwd naar hoe zij deze vergelijking tussen hun scholen zouden zien. Beide schoolleiders gaven in dit gesprek aan het experiment met de onderzoeker in de school als nuttig te hebben ervaren. De belangrijkste les die ze er uit trokken is dat er veel expertise onder leraren in de school aanwezig is en dat er daardoor veel mogelijkheden zijn om leraren van elkaar te laten leren. Beide scholen hebben daarnaast de leervraag van leraren centraler gemaakt in hun functioneringsgesprekken. Uit dit gesprek is een gezamenlijke studiedag ontstaan waar leraren van beide scholen workshops voor elkaar verzorgden.

9. Waarom dit promotieonderzoek er beter van werd

Om een aantal redenen heeft deze stageperiode de dataverzameling verrijkt, met name de ecologische validiteit van het onderzoek. Onder ecologische validiteit wordt verstaan het integreren van specifieke kenmerken van de onderzoek context in de analyses om zo de gedachten en handelingen van deelnemers goed te kunnen plaatsen in die context (Cohen et al., 2011).

Ten eerste was er het voordeel dat leraren wisten wie ik was voordat we de interviews hielden. Deze vertrouwdheid zorgde ervoor dat we dieper op persoonlijke ervaringen van leren in hebben kunnen gaan. Ten tweede zorgde de stageperiode er voor dat ik goed op de hoogte was van de schoolstructuur- en cultuur en ontwikkelingen die er speelde in de school waardoor leraren daar naar konden verwijzen in het interview. Of als er gesproken werd over de nieuwe collega wist ik wie dat was en wat voor persoon dit was. Ik had namelijk ook bij de sectie- of teamvergadering gezeten. Ook als gesproken werd over recente ontwikkelingen begreep ik waar dit over ging, maar ook de ontwikkelingen uit het verleden van de school waren me bekend. Leraren konden gemakkelijk informatie met mij delen waarvan ze wisten dat ik er wat van af wist. Dit vergrootte het tempo in het interview (er hoeft minder uitgelegd te worden). Ten derde zorgde de stageperiode er voor dat ik een aanlooptijd had om een gevarieerde selectie leraren te maken. Daardoor kon ik ook de minder 'toegankelijke' leraren betrekken in mijn onderzoek. Eén leraar gaf bijvoorbeeld na afloop van de interviews toe dat hij mijn verzoek tot deelname had afgewezen als hij me niet had gekend. Als laatste was de stageperiode handig om de instrumenten te piloten voordat ik ze zou toepassen in de interviews met de geselecteerde leraren. Kortom, deze intensieve vorm van dataverzameling vergrootte de validiteit van de interviews. Een nadeel van deze vorm van dataverzameling is dat het een lange periode en daarom weinig efficiënte methode betreft die niet in elk onderzoeksproject is toe te passen. Desalniettemin is een periode van acclimatisering om de schoolcontext te leren

kennen een zeer effectieve aanpak om de ecologische validiteit te vergroten (Cohen et al., 2011).

Ik zou deze onderzoeksaanpak kunnen omschrijven als een etnografische aanpak om de context en participanten te begrijpen alvorens over te gaan tot interviews. Een etnografische studie heeft namelijk als doelstelling om de gedragingen, opvattingen, waarden en taal van een groep mensen of cultuur te begrijpen. De methodiek die daarbij past wordt omschreven als 'extended observations of the group, most often through participant observation, in which the researcher is immersed in the day-to-day lives of the people and observes and interviews the group participants' (Creswell, 2007, p. 68). De analyses van de semi-gestructureerde interviews zijn echter niet op etnografische wijze aangepakt, dat wil zeggen, alleen de interview transcripts zijn geanalyseerd, en dus niet de observaties, fieldnotes en gesprekken met andere leraren en schoolleiding. Hoewel de langdurige stageperiode in school de ecologische validiteit van de onderzoeksaanpak heeft vergroot, zijn er ook risico's van deze aanpak voor de drie belangrijkste kwaliteitskenmerken van kwalitatief onderzoek: geloofwaardigheid (credibility), navolgbaarheid (transferability), en onafhankelijkheid (dependability) (Lincoln & Guba, 1985). Deze risico's hebben onder andere betrekking op selectiviteit in participanten (bijvoorbeeld alleen de 'toegankelijke' leraren selecteren) en een te grote vertrouwdheid van de onderzoeker in interactie met leraren waardoor de onderzoeker te weinig kritisch is over de uitspraken van leraren en daardoor te snel conclusies trekt. Manieren waarop ik deze risico's heb proberen te voorkomen zijn: *progressive focusing* (van brede blik in de observaties, naar specifieke instrumenten om onderzoeksvraag mee te beantwoorden) (Cohen et al., 2011), grote variëteit aan observaties om selectie van leraren uit te maken, selectie van leraren maken op basis van vooraf vastgestelde criteria, fieldnotes maken, een reflectief dagboek bijhouden om werkhypothesen te noteren en plannen te maken over stageaanpak (bijv. 'volgende stagedag bij leraar X langs'), en, als laatste, in de analyses ervoor zorgen dat coauteurs nauw betrokken zijn bij het proces van ruwe data, naar samenvatting, naar coderingen en conclusies staven zodat de navolgbaarheid en onafhankelijkheid kon worden vergroot.

10. Waarom alle beginnende onderwijsonderzoekers stage zouden moeten lopen in school

Naast dat deze stageperiode mijn onderzoeksmethode heeft verrijkt, was het ook een zeer rijke leerervaring voor mij als onderwijsonderzoeker. Daarom zou ik het elke startende onderwijsonderzoeker aanraden om een tijdje in een school rond te lopen en dan met name voor onderwijsonderzoekers zonder leservaring die zich willen focussen op leraarsgedrag, cognities en attituden. Ik kan me ook voorstellen dat onderwijsonderzoekers geïnteresseerd in instructie en het leerproces van leerlingen kunnen profiteren van observaties van klassensituaties als verkenning van wat hun onderzoek aan praktijkimplicaties kan opleveren. Het was voor mij een unieke kans om te leren over een hele normale schoolomgeving.

Een tweede reden waarom ik een stageperiode zou adviseren voor beginnende onderwijsonderzoekers heeft te maken met het beeld wat is ontstaan van onderwijsonderzoekers die 'ver van de praktijk staan' . Om die reden ervaren veel onderzoekers moeilijkheden om scholen en leraren te enthousiasmeren voor hun onderzoek. Een schoolleider vertelde me ooit over 'onderzoeksmoeheid' onder de leraren van zijn school (m.n. het invullen van vragenlijsten). Dit in tegenstelling tot mijn kwalitatieve

onderzoek waarin meerdere deelnemers vertelden dat ze het heel waardevol vonden om deel te nemen. Ze kregen een moment van reflectie op hun leerdoelen en loopbaan en het was fijn om een betrokken buitenstaander als gesprekspartner te hebben in deze reflectie. Als schoolleiders en leraren het samenwerken met onderwijsonderzoekers als nuttig blijven ervaren (wat wel een behoorlijke tijdsinvestering vraagt), dan kan er een positieve waardering van onderwijsonderzoek ontstaan en dan kan de toekomst van participatie aan onderzoek beter worden gewaarborgd.

Daarnaast lijkt het me van belang dat je als onderwijsonderzoeker begrijpt hoe de praktijk van de school er uit ziet en wat het betekent om als leraar te werken in zo'n schoolcontext. Het vergroot het begrip van de overwegingen van je onderzoeksparticipanten. In een ideale situatie hoop ik dat als meer onderwijsonderzoekers investeren om de schoolcontext en leraren beter te begrijpen door de ogen van diegene die aan het roer staan, de afstand tussen academische wereld en onderwijswereld verder wordt verkleind.

APPENDIX B – INTERVIEW QUESTIONS

Table. *Interview questions to elicit teachers' professional learning goals*

Perspective on teacher learning	Interview question
Past learning	*What did you have to learn in the past?*
Day-to-day learning	*What do you learn on a daily basis?*
Challenges in the workplace	*Do you experience challenges in your job? And if yes, what do you want to learn from them?*
Learning goals	*(If there were no restrictions whatsoever..) What do you want to develop/ learn?*
Recent learning	*What have you learnt from the most recent learning activity you undertook in the school?*
School-based learning	*What learning opportunities are there in your school, and how much do you wish to use these opportunities?*
Future learning	*How do you see yourself as a teacher in 5 - 10 years?*

APPENDIX C – THEMES FOR CARD-SORTING-TASK

Table. *Themes deducted from professional life phase models*

Origin	Professional life phase theme
Day/Huberman	Survival
Huberman	Learning from trial and error
Day	Commitment to colleagues
Day	Commitment to school
Day	Focus on good teaching
Day	Support from colleagues
Day	Acceptance in the school
Fuller	Being in control of my teaching
Fuller/Huberman	Focus on self during teaching
Fuller	Focus on students' learning process
Fuller	Focus on instructional strategies
Berliner	Being conscious of my own role in class
Huberman	Classroom management
Day	Knowing what kind of teacher I am
Huberman	Feelings of independence
Berliner	Being able to distinguish what deserves most attention in class
Day	Work-life balance
Day/Huberman	Searching for new challenges
Day	Changes in tasks and responsibilities
Day/Huberman	Changes in professional identity
Huberman	Experimenting with instruction
Huberman	Personal ambitions
F&C	Indicating my boundaries
Day	Motivation for my job
Day	Work load
Huberman	Teaching is easy
Huberman	Invest in my own development
Huberman	Contact between teacher and student
Day/Huberman	Career exit
F&C	Teaching as calling
F&C	Working within task description
Day/Huberman	External policies and innovations
Day/Huberman	Undesirable pupil behaviour