Professional learning: what teachers want to learn

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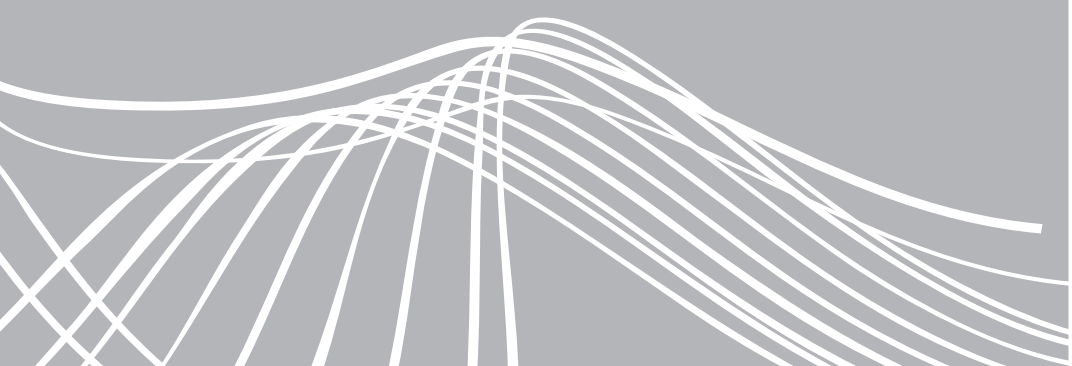
INTRODUCTION



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,

[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

[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,

[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

[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.