Cover Page

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GENERAL CONCLUSIONS AND DISCUSSION

6

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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

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[12] *Note: the Dutch 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.*

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 Kingston 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.