

Understanding teachers' professional learning goals from their current professional concerns

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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 secondary school teachers to elicit teachers' learning goals and current professional concerns. By conceptually combining teachers' learning goals with professional concerns in concern-goal pairs, we sought to understand the different reasons for teachers' learning. These concern-goal pairs were characterized in three different types of reasons: continuous, growth and improvement, and work-management. The results showed that early career teachers have mainly growth and improvement concerns, whereas mid- and late-career teachers have both continuous and growth and improvement concerns. Work-management concerns differ for early- and late-career teachers. Results are further discussed in terms of professional life phase models and teachers' developmental tasks throughout their career.

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Introduction

Most teacher learning occurs in the workplace and does not necessarily depend on centrally organized learning activities (Kwakman, 2003). There is hardly any research on how teachers direct their learning in these day-to-day settings (cf. Hoekstra, Beijaard, Brekelmans, & Korthagen, 2007), or what drives them to engage in continuous learning (Day et al., 2006; Van Eekelen, Vermunt, & Boshuizen, 2006).

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We argue that existing research on teachers' continuous professional development (CPD) in school contexts can be informed by the research tradition of describing and understanding teachers' professional lives and careers (Rinke, 2008). Day, Sammons, Stobart, Kington, and Gu (2007) argue that teacher learning is driven not only by the teachers' sense of efficacy, but also by personal and professional lives and the school context. Their VITAE studies suggest that professional learning over time plays an important role in teachers remaining committed and effective, because CPD 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 teacher professional development (Grundy & Robison, 2004). Day et al. (2007) did not yet explore the relationships between professional lives and teacher learning in depth. We aim to further examine these relationships in this study. Knowing what drives 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).

Moreover, only rarely do studies address what teachers *themselves* would like to learn (i.e. what are their professional learning goals) (Janssen, Kreijns, Bastiaens, Stijnen, & Vermeulen, 2012). Also, teachers in different phases of their career can vary in their approach to choosing their learning goals, because '[...] the reasons that teachers undertake CPD may change over time – focusing on different “developmental tasks”' (Day 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). Also, beginning teachers face many challenges when entering the profession and are introduced to the complicated nature of teaching (Meijer, de Graaf, & Meirink, 2011; Pillen, Den Brok, & Beijaard, 2013). Teacher educators can use these first year teachers' concerns to adapt their teacher preparation practices (Shoffner, 2011). However, for all professionals, irrespective of their experience, it can be expected that they develop continuously (Avalos, 2011; Van Veen & Kooy, 2012). 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).

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 teaching experience?

Conceptual framework

Teachers' professional learning and learning goals

Unlike studies on teachers' CPD in which teachers are seen as recipients of professional training efforts, we prefer to talk about teachers' professional *learning* (Hoban, 2002). 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). In our study, teachers are viewed as active agents directing their own development 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 toward planning their own learning (Janssen et al., 2012). We define learning goals as teachers' *desired change in behavior or cognition*, with cognition regarded as 'the integrated whole of theoretical and practical insights, beliefs, and orientations on the part of the individual' (Zwart et al., 2008, p. 983).

Professional life phases and professional concerns

Studies on professional life phases represent 'models of sequential stages that mirrored the timeline of teachers' experiences' (Fessler & Rice, 2010, p. 582). These phases integrate models of teachers' professional, personal and contextual lives to understand teachers' development (Day et al., 2007; Fessler & Christensen, 1992; Huberman, 1993). As a teacher progresses through the professional life phases, specific needs emerge, some related to changes in job demands and some related to changes in teachers' personal lives. Such needs may be addressed by participating in appropriate programs for professional development (Fessler & Christensen, 1992; Kyndt, Gijbels, Grosemans, & Donche, 2016; Rinke, 2008; Van Veen & Kooy, 2012).

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). The induction phase is characterized by becoming socialized in the profession and developing basic teaching skills, and is referred to as easy/painful beginnings (Huberman). After induction comes a phase in which teachers try to become stabilized in their profession, characterized as pedagogical mastery (Huberman), committing to the teacher profession (Huberman), and increasing perceived effectiveness (Day et al.). 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), also referred to as diversification and change (Huberman). 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 is always different for different individuals.

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).

Method

Participants and context

We approached 15 teachers from one secondary school to participate in a study on teacher learning. This school was located in a sub-urban area and had approximately 1200 students and 100 teachers. 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 which was facilitated by school-based teacher training on learning how to integrate ICT in teaching. Other emphases in the school were on induction of beginning teachers and on encouraging teachers to obtain a university teaching degree if they had not already done so. During a regional meeting of school leaders, schools were invited to be part of data collection for the first author's PhD study on teachers' professional development. The school leader of the secondary school responded to this invitation and his school agreed to participate after meeting with the first author.

The first author spent four months in this particular school to become acquainted with the school context and teachers' day-to-day working lives. During this time, she visited lessons of 30 teachers and had informal conversations with teachers in the staff room. The observations were used to get acquainted with the teachers' daily practice and to ensure variety in teaching styles in the selection of teachers to be interviewed. 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 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. As part of the informed consent procedure, the teachers 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. The fact that the selected teachers had been observed in their classroom and were familiar with the researcher before the interviews started ensured the ecological validity of the interviews. 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. Afterward, 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.

Table 1. Background characteristics of selected teachers.

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

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 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.

Interviews

Learning goals interview

The focus of this interview was on eliciting teachers' learning goals. Because teachers may experience difficulty articulating concrete learning goals for themselves (Van Eekelen et al., 2006), we used many perspectives to elicit these goals (e.g. previous learning experiences, involvement in current learning activities, future aims). 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 assertion that phases reflect a mix of components which is different for different individuals, 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 1). 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, judgment 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.

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: The first author made summaries of the transcripts of the first interview. For each summary, both first and second author 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 behavior 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. The five cards not relevant or important for the teacher's work situation right now were not taken into account in the concern-goal pair, because we were interested in their actual concerns. Typically, a teacher remarked about one of these cards: 'I used to be concerned about this, but not anymore'.

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 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 by the first, second, and third authors. They discussed these three teachers regarding the question whether the right concerns were matched with the right goals on the basis of content. During this discussion counter-examples of pairs were explored. After agreement had been reached on how the pairing should be done content-wise, the first author constructed all the remaining pairs.

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 that teachers used to talk about their learning in combination with their professional concerns. To this

Table 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	<ul style="list-style-type: none"> • 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	1 Coaching beginning teachers 2 Guiding special needs students	<ul style="list-style-type: none"> • 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

^aNumber codes indicate the content of the learning goal, 1 = classroom-context, 2 = school-context, 3 = the teacher as professional.

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:

- (1) through learning something that is always important to the teacher and closely related to their deep intrinsic values (keywords: 'continuous', 'always', 'ongoing', 'main task', 'good teacher', 'never finish learning', 'daily', 'satisfaction', 'highly value', 'commitment', 'important')
- (2) through learning for personal growth and improvement 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')
- (3) through managing work 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 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 in the Results section).

Results

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).

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'

Table 3. Overview of concern-goal pairs for early-, mid-, and late-career teachers.

Continuous concern-goal pairs		Growth and improvement concern-goal pairs		Work-management concern-goal pairs	
Learning which requires continuous development		Learning for personal growth and improvement of (teaching) skills		Learning to manage work practices	
Teacher	Short description	Teacher	Short description	Teacher	Short description
EARLY CAREER	Johan	Hanna	Focus on students' needs > learn about differentiation and anticipating students' answers (1)	Hanna	High work load in combination with moral obligations > organize school work and pay attention to work-life balance (3)
	Erik	Hanna	Restoring disturbed relationships with students (1)	Alissa	Tough combination of studying and work > manage work load and ask for compensation (3)
		Hanna	Stable position in school organization > curriculum development and mentoring (1 & 2)	Erik	Guarding boundaries is necessary to be able to develop into a good teacher (1)
MID CAREER		Alex	Ambition: become excellent teacher > optimize differentiation & handling student misconduct (1)		
		Alex	Challenging myself in designing language skills assignments (1)		
	Helen	Alissa	Ambition: Teach upper grades (pedagogies & content knowledge) (1)	Nicole	Burn-out 3.5 years ago > indicate boundaries and worry less about interpersonal situations (3)
	Vera	Erik	To become a good teacher > activating instruction, differentiation, subject content (1)		
	Helen	Vera	Start something new > coaching beginning teachers & guiding special needs students (2)	Bart	Professional identity and contact with students > professional ethics in online communication (3)
	Helen	Ferdinand	Incident with student & changing schools > control emotions & better assess student behavior (1 & 3)	Bart	Professional identity and reassessing myself as teacher > where am I in teaching? (3)
	Vera	Bart	Invest in curriculum development > organizational skills & instruction (2)		
	Bart	Bart	Continuous learning & main task as teacher (1)		
			Always adapting instruction and learning about subject (1)		

(Continued)



Table 3. (Continued).

Continuous concern-goal pairs		Growth and improvement concern-goal pairs		Work-management concern-goal pairs	
Learning which requires continuous development		Learning for personal growth and improvement of (teaching) skills		Learning to manage work practices	
Teacher	Short description	Teacher	Short description	Teacher	Short description
LATE CAREER	Hester Daily learning about subject through lesson preparation and reflection on the lessons (1)	Rick	Focus on coaching and contact with students > monitoring students' progress (1)	Rick	In recovery after burn out > focus on planning and work-life-study balance (3)
	Caspar To be a good teacher > always maintain good contact with students and stay connected with their world (1)	Rick Lois Lois	Focus on students' learning and instruction > varying instruction (1) Laptops in classroom > exploring digital content to motivate students (1) Experiment with instruction > assessment of language skills (1)	Hester	Task description is full > Learn to say 'no' to tasks that are outside teaching (3)
		Caspar Karel Karel	Laptops in classroom > different classroom management (1) Conscious of my role in enhancing students' learning > motivate students for my subject and integrate content and the 'real world' (1) Conscious of my role in enhancing students' learning > how students learn to learn (1)		

Notes: Number codes in the short description refer to the content of teachers' learning goals, 1 = classroom-context, 2 = school-context, 3 = teacher as professional.

(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 12 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 were an important *prerequisite* for being a good teacher and motivating students (one early-career, one mid-career, and 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). Another 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.

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 always important to teachers and closely related to their deep intrinsic values, (b) learning for personal growth and improvement of current (teaching) skills, and (c) managing work practices. We labeled these continuous, growth and improvement, and work-management pairs, respectively (see Table 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 organize 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.

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 found for 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 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 behavior (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 organize 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 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?'

Conclusion and discussion

In this study, we aimed to acquire more detailed understanding of what drives teachers' continuous 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 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 function as driver for 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).

We looked for an answer to the second research question on teaching experience by analyzing early-, mid-, and late-career teachers' concern-goal pairs. First, we found that learning goals of early-career teachers are not solely focused on classroom management and disruptive student behavior, as suggested in various professional life phase models (Fuller, 1969; Kagan, 1992; Rolls & Plauborg, 2009); rather, their learning goals are 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. CPD tasks as described 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, p. 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 development, 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).

Relation with school context

Since the teachers from our sample all worked in the same school context, some of these teachers' concerns might be particular for this school because of its specific school climate or leadership. We discuss some particularities in teachers' concerns and goals that seem school-specific. This school was strongly investing in digital technologies (ict). We saw that the growth and improvement concerns for two late-career teachers (Lois and Caspar) were focused on how they could integrate technological innovations in their classrooms. Also, the high number of professional concerns about work management among teachers from our sample might have been influenced by the school culture of high work load. For example, Hanna felt moral obligations to be present at every school event in the evenings which made her concerned about her work-life balance. In Rick's case, management demanded that he obtained a teaching degree for a new subject (two-year part-time) which, together with demands from family life and 'just' good teaching, contributed to the development of burn-out. During the time of interviewing, school management initiated a small survey for staff on how experiences of high work load could be reduced. Thus, with work load as a school theme this might have influenced teachers to think more about their work-life balance.

Another contextual factor that could be at stake for teachers' professional concerns is the influence of colleagues or the culture within a subject department. For example, Bart explained that he wants to develop himself as coordinator of curriculum development. However, after the interview study was done, he said to the first author that he needed to negotiate his individual needs within the school context and that he failed to do so. Although school management gave permission for his ideas to develop a new course, his colleagues from the subject department did not agree because they were concerned about extra work

load. These examples show how individual teachers' concerns and professional learning goals are not constructed in vacuum, but are constructed within a school context.

Implications

The qualitative methodology used in this study proved useful for eliciting teachers' underlying concerns, which in turn 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 the personal drivers 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. The variety in reasons for professional learning that exists among teachers, especially with different backgrounds and teaching experience, is rarely taken into account when professional learning is organized in schools (Czerniawski, 2013; Fessler & Rice, 2010; Van Veen & Kooy, 2012). For principals, professional learning facilitators and teacher educators our study implies that they should be aware that teachers' current concerns and learning goals might be different for teachers in different phases of their career and in different school contexts. Recognizing this diversity can help to motivate teachers to continuously develop their teacher expertise.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix 1. Themes deducted from professional life phase models.

Origin	Professional life 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 behavior