Sources for Learning
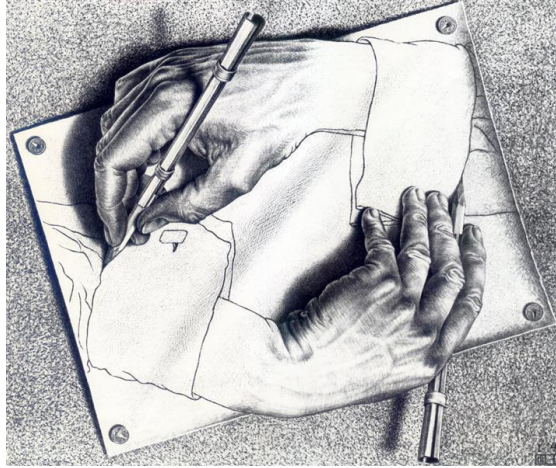

Source: https://www.wikiart.org/en/m-c-escher/drawing-hands/

Understanding the Role of Context

in Teacher Professional Learning

by

Andries Hessel Koffeman

UCL Institute of Education

Thesis submitted for the Degree of Doctor of Philosophy

Supervised by Prof. Dr. Caroline Daly, Prof. Dr. Martin Mills and
Prof. Dr. Marco Snoek

I, Andries Hessel Koffeman, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

27 December 2020

ABSTRACT

This thesis investigates how context serves as a source for teacher learning. The complexities of teaching are growing and so is the need for teacher life long learning. Recent studies suggest that professional learning can be understood as the result of an array of experiences, but only if existing ideas and practices are being challenged through these experiences. If indeed professional learning emerges out of challenge, then it is relevant to take a closer look at teachers' contexts, the kinds of challenges these contexts accommodate, and the ways they are perceived and processed by teachers.

Building on the principles of Participatory Action Research, this exploratory study addresses the question of how these processes can be understood: how teacher contexts can work as a source for teacher learning. The participants were teachers who followed a master's programme. In the first study their reflective work was explored to identify which context factors had served as a source for their professional learning. In the second study, these identified factors were used to co-construct a reflective tool to prompt and capture teachers' engagement with context factors. The master's students then had their workplace colleagues engage with the tool and Study 3 explores the data that were generated through this deployment.

The results suggest that teachers' contexts can be divided into three domains: a personal practice domain, a social domain, and a theoretical domain, and that confrontations within these domains can be the result of both planned and unplanned events. Teachers appear to have a preference for unplanned learning that emerges from their own personal experiences. The thesis examines the mechanisms behind this, and it explores how teachers might be stimulated to expand the reference points they tap into. The implications of these findings are discussed at macro, meso and micro level.

Impact statement

The impact of this thesis has been ongoing. I am obviously the first beneficiary of the understanding that was generated through this study, and with me my students. I am a tutor in a master's programme aimed at experienced teachers. The research question was in part induced by these students, and as a result, the answers to that question were as beneficial to them as they are to me. This particularly applies to the students who were participants in the study. Some of them used part of the data that their colleagues had produced for their own research projects; others adopted the Participatory Action Research principles for their own research, having become enthusiastic about its potential to empower colleagues.

New master's students experience this impact as well. The reflection tool that was at the heart of this thesis is now an integral part of the master's programme. We use it to have new students reflect on the sources of their own professional learning, and at a later stage they use the tool to start conversations with their colleagues. Moreover, I shared my findings with interested colleagues, both informally and in organised settings, and this attracted the attention of my department manager. It led to my appointment as senior lecturer and in that capacity I am consulted by the coordinators of other programmes. As a result, the findings of the study are now beginning to find their way into these programmes, particularly on the way to address the *sturing[1] paradox*, a concept that is discussed in the thesis and that adresses the problem of both recognising and acknowledging teacher autonomy, whilst at the same time stimulating teachers' professional development through interaction and reflection.

Another example of such 'bycatch' was that I was asked to participate in a programme organised by the municipality of Amsterdam, first to do research into the effects of a programme aimed at teacher development, and then to join a think tank that looks at ways to stimulate teacher retention. I also participate

---

[1] Literal translation: *steering*

in a programme that helps schools to improve their professional learning culture.

In terms of academic impact, with one of my supervisors, I presented a paper on the first study, at the international IPDA conference in 2017 and it was awarded *Conference Best Paper*, suggesting the findings are relevant to the academic community. The resulting journal article, published in *Professional Development in Education* in 2019, is beginning to get noticed as well. As an example, I was recently asked to review an article for *Teaching and Teacher Education* that drew on the concepts presented in our article. In 2019, I presented the findings of the second study at the biannual ISATT conference, and later that year I presented the reflection tool at a symposium organised by the University of Cambridge. In 2020 I was invited to present my work as a keynote speaker at the annual training school meeting organised by three Amsterdam universities.

I recently wrote an article for a Dutch academic journal on how perceived pressure can become a source for learning, if teachers feel enough psychological safety to question their ideas and practices. I just heard it was accepted. I intend to further publish the findings in the near future.

Acknowledgements

My PhD journey began a few years ago when my wife Maaike and I were playing around with a web application we had just discovered. The programme was called *Wordle* and it would reduce any text to a word cloud. It was a fun exercise and we tried different documents: study guides, my old dissertation, letters. Then Maaike – who is a brilliant scholar of French literature – tried her favourite novel: Flaubert's *Madame Bovary*. The biggest word in the cloud was *COMME*, the French word for *as* or *like.* My wife exclaimed: *ah, it's Girard in a nutshell!* Then she lectured me on the concept of *mimetic desire* and on how can be used to understand the psychology of the novel's protagonist – a young woman who desires to live the glamorous lives of the characters she reads about in romantic novels. This somehow triggered my thinking on the social dimension of teacher professionalism; on the question of where teachers get their inspiration and aspiration from, and with this began my quest to understand the concept of context as a source for learning. I thank my wife for this first in a long series of inspiring moments. I also thank her for rolemodeling me into the academic world that would become my workshop. I thank our wonderful children for keeping my feet on the ground. Abel, Anne and Ruben are everything.

I thank Gert Rijlaarsdam his inspiration and for giving me my shot.

I thank my illustrious supervisors for guiding me on my quest: Marco Snoek, Martin Mills and especially the amazing Caroline Daly, whose great patience, skill and tact helped me identify "the distinction between what is part of me versus what is not (yet) part of me," and inspired me to reach high and dig deep. If only every teacher had a Caroline in their lives.

I owe a great deal of gratitude to my students of *Professioneel Meesterschap*, who became my co-researchers. I thank them for trusting me enough to share their experiences with me, their hopes and fears. Their ideas are at the centre of this thesis.

I thank my parents for teaching me to work hard, and to remember the really important things in life.

CONTENTS

7

List of tables:

List of figures:

1. Introduction

This thesis is about understanding the role of context as a source for teacher learning. It is an exploratory study which has grown out of my twenty-five years of experience as a teacher and teacher educator in the Netherlands. My role as tutor in a master's programme for experienced teachers has exposed me to the experiences of many teachers like me and has allowed me to explore teacher professional learning from multiple perspectives. My work with these and other teachers increasingly suggested that their learning is not so much the result of pro-activity, of planned activities, but rather the consequence of re-activity, of teachers' responses to unplanned or unexpected challenges and events. Leaving learning up to chance would be problematic in a profession that is getting increasingly complex: it requires professionals who take care of their own learning. The research focus is to understand the influences that contribute to teachers' learning. This exploratory study is about appreciating how professional development is prompted by the domains in which teachers operate, about how learning opportunities are accommodated by teacher context.

My experiences with these teachers and my own role in supporting their professional learning means that this thesis is as much about me as it is about my teacher colleagues. My master's students, all reflective practitioners themselves, shared my curiosity about teacher learning, and they became both respondents and co-researchers. Through a process of co-operation and co-creation, a project was developed around the construction of a reflection tool that was designed and deployed with teachers, and both the construction process and the deployment allowed close observation of teachers' reflections on professional learning. It became a project that offered a rich potential for me to investigate the way teachers' contexts serve as a source for professional learning.

In this chapter, I outline the context of the project: professional learning in the Netherlands, its challenges and key features. I will discuss the Dutch setting for teachers' professional learning, which is becoming increasingly complex and – to some extent – problematic. Perceptions of teacher quality and status are explored, as are the pressures that teachers experience and the effects these

pressures have on their self-image and their professional learning. These effects appear to be paradoxical: pressures can be a catalyst for change, but also for conservatism, if they lead to withdrawal and self-referentiality. The key concepts that are presented in this introductory chapter underpin the study and will be further explored in the literature review in Chapter 2.

1.1 A paradoxical profession

The teaching profession is characterised by a number of paradoxes. Whilst there is consensus that teacher quality is key when it comes to supporting pupil learning (e.g. Hattie, 2003; Van de Grift, 2010; Muijs *et al.*, 2014), in the Netherlands teacher learning is viewed as problematic. Arguably, the profession that should be the role model for professional learning has a poor track record with regard to organising its own professional development, especially regarding that of veteran teachers (Inspectie van het Onderwijs, 2013, 2017). In many Dutch schools and for many teachers, teacher learning is still perceived as the result of formal, organised learning activities such as workshops and courses. Recent studies suggest a complementary stance: that professional learning can also be understood as the result of an array of experiences through which existing ideas and practices are being challenged (Akkerman & Bakker, 2011a, 2011b; Beijaard, Verloop, & Vermunt, 2000; Eraut, 2004; Kelchtermans, 2012; Lankveld & Volman, 2009). If indeed professional learning emerges out of challenge, then a closer look at teachers' contexts is warranted, the kinds of challenges these contexts accommodate, and the ways they are perceived and processed by teachers.

1.1.1 Education does better than ever, but is pressured to do even better

In a study into the future of the teaching profession, Macbeath (2019) argues that whilst the quality of education is improving worldwide, teachers are increasingly subject to new and multiple pressures. New demands and an uncertain future

require teachers "to be able to constantly reflect on and evaluate their work and to innovate and adapt accordingly" (OECD, 2014, p. 97). However, for many teachers this "adaptive expertise", this "capacity to innovate" (Darling-Hammond & Bransford, 2005, p. 360, 362) is not self-evident, and neither is teacher lifelong learning (Muijs *et al.*, 2014).

The pressure on the teaching profession is high and it comes from various sources (Flores & Day, 2006; Hargreaves, 2000; Coonen, 2006). On the positive side there is Macbeath's assertion that "schools worldwide are now better places for children, for parents and for teachers" (2019, p. 16). The importance of education is self-evident: research suggests that a good education leads to increasing economic prosperity (Fraser, Kennedy, Reid & Mckinney, 2007; Van de Grift, 2010) and even better health (OECD, 2009). At the same time, in many parts of the world the teaching *profession* is increasingly burdened by complexities (Day & Gu, 2007; Hargreaves, 2000). In his inaugural lecture at the University of Utrecht, Vermunt (2006) explained how not only parents, but also pupils become increasingly mature in their demands – they have become informed consumers, both with regard to requiring good learning facilitation (focusing on process) and learning results (focusing on product). And it is not just parents and pupils who impose demands: society too demands that schools and teachers deliver high standards of performance for pupils and students (Hargreaves, 2000). This demand is underpinned by Educational Effectiveness Research (EER), which increasingly focuses on 'improving' teachers' practice: in studying 'what works' in education, the quality of teaching is identified as the most important factor (e.g. Hattie, 2003; Kelly, 2006; Kyriakides, Creemers, & Antoniou, 2009; Onderwijsraad, 2009). Ball (2017) argues that this EER induced 'gold standard' approach produces a paradox. Whilst it is aimed at increasing teacher quality, it also leads to a *restriction* of professionalism: Ball argues that the Global Educational Reform Movement (GERM), a term coined by Sahlberg (2011), has pushed the education discourse in the direction of standardisation and international comparative surveys, and of corporate management models as a framework for quality improvement, and the practice of test-based accountability policies (Sachs, 2016; Stray, 2017). These are all factors that

pressurise teachers to enable pupils to perform in ways that can be valued in standardised test results. Macbeath (2019, p. 83) speaks of an accountability paradox: "while the nature of learning has been shown to be more determined by influences that lie outside of schools, teachers have become increasingly more accountable for the performance of their pupils." Wiliam (2014), for example, embraces this assumption: according to him, teachers *should be* held accountable, when he recommends a system in which teachers are stimulated to systematically work on improvement, suggesting that "teachers' contracts should include an explicit expectation that they improve their practice every year, that the improvement should be focused on aspects of practice that are likely to improve outcomes for their students" (Wiliam, 2014, p. 32). In this performance discourse, pupils and parents are sometimes redefined as customers that acquire the commodity that is education, produced by schools and teachers, and overseen by government and inspection (Biesta, 2015; Kelchtermans, 2012). This selective focus on performance can be a threat to teacher professionalism if it means limiting the teacher's job to doing what is prescribed by EER. Moreover, the expectations and accountabilty that comes with it increases the pressures on teachers.

1.1.2 Pressure is both a reason to learn – and it is not

It might be expected that these growing pressures on teachers are a stimulus for the development of the profession and for teacher learning, but there is a paradox here, too. Sahlberg (2011) argues that whilst some manifestations of GERM may have had positive influences on education reforms in general, he warns it comes at a price. It could have a negative effect on examining the moral purposes of education. It could mean less opportunity for creativity and innovation in teaching and learning, as it "narrows teaching to the desired content only and promotes the use of teaching methods beneficial to attaining preset results" (p. 180). Ball (2003) refers to this exclusive focus on what can be measured in test results as 'the terrors of performativity', where "[t]he policy technologies of market, management and performativity leave no space of an autonomous or collective ethical self" (p. 226).

Historically, teachers in the Netherlands have always experienced much autonomy (Inspectie van het Onderwijs, 2013). That might be the reason why in spite of all these pressures (or maybe because of them!) Dutch teachers appear not to be too exposed to external forces. The presence of pressure could be a motive to engage in professional learning activities, but only if identified and addressed as such. If pressure is perceived as a threat, then it could lead to to withdrawal and self-referentiality. Many Dutch teachers appear to focus on their own personal experience as the most important source for professional learning (Eekelen, 2005; Hoekstra, 2007). Self-referentiality, however, can stand in the way of professional learning: the concern that many teachers operate in relative isolation might explain the reported static nature of the profession (Hargreaves, 2000; OECD, 2014). Akkerman and Bakker (2011) suggest that – generally speaking – interaction in and with additional sources for learning can help to avoid stagnation of learning. Actively engaging with *external* points of reference can be used as a perpetual source for learning. These sources do not restrict the role of the teacher – they do not tell him or her what to do – but they offer alternative views or practices that can be critically engaged with, so that new views and new practices can emerge out of these confrontations. Such external reference points could be social in nature (Bandura, 1977; 1997; Wenger, 1998; Vries, Jansen & Van de Grift, 2013). They could involve ideas and practices of *near others*, of workplace colleagues. They could also be derived from theory (Buitink, 2009; Wenger, McDermott & Snyder, 2002; Hargreaves, 2000). These are the ideas and practices of *distant others*, of education colleagues outside of one's immediate school context.

1.1.3 Addressing the paradox – the aim and context of this study

The aim of this study is to examine what role such reference points – both the external ones near and far and those grounded in personal experience – play as a source for professional learning. How do teachers deal with the contextual confrontations they experience personally and how do these affect their practices? How can engaging with colleagues near and far provide external points of reference, and what role does theory play as a possible external point of reference? In short: how can teacher context serve as a source for learning? The

thesis explores these issues through the literature, and through three studies that were developed with groups of students. I work as a tutor in *Professioneel Meesterschap* (MPM), a Dutch master's programme that aims at developing *teacher leadership* based on "the process by which teachers, individually and collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, p. 287). The master's programme is meant for experienced teachers and – to a lesser extent – school leaders in primary, secondary and tertiary education, and the students' ambitions coincide with mine in the sense that they too wish to gain a better understanding of how to stimulate professional learning, both their own, and also that of their colleagues. This put me in a unique position. Not only did I have access to a group of very relevant and articulate respondents that could work with me to develop the project and generate rich data as part of their activity on the programme, but also to a group that was willing and able to serve as co-researchers to explore the research question with me: ***What role does context play as a source for teacher professional learning?***

In the following sections, the Dutch context for teachers' professional learning is discussed: I will explore teacher quality and teacher professional learning, as perceived and observed in the Netherlands.

1.2 Teacher quality and teacher professional learning in the Netherlands

1.2.1 A profession under pressure

While there is general consensus about the importance of improving the quality of education, there is less agreement about the nature of the learning outcomes that are to be pursued: the realisation grows that today's pupils are educated for a future that is largely unknown, and for jobs that quite possibly do not yet exist (e.g. Vermunt, 2006; Meirink, Imants, Meijer & Verloop, 2010). In the

Netherlands, this theme was addressed by the 'Platform Onderwijs 2032', a working group set up by the Ministry of Education to produce a white paper on the future of Dutch education (Schnabel *et al.*, 2016). Following a national brainstorm, a public dialogue and a series of orientation debates, the Platform published its first findings in January 2016. One of the Platform's key findings was that an ever-changing world requires education – and by proxy educators – capable of adapting to those changes. The white paper suggests that *teacher agency* is the key factor in creating and sustaining such capacity. It requires teachers who not only have specific competences and routines to do the job now, but who are flexible enough to develop additional skills if and when future situations require so (see also Vermunt, 2006; Lankveld & Volman, 2009). The design of 'future proof' education features high on the political agenda in Europe. In their conclusions on effective teacher education the Council of the European Union (2014; p. 1) stated that

> In a fast-changing world, the role of teachers - and the expectations placed upon them – are evolving too, as they face the challenges of new skills requirements, rapid technological developments and increasing social and cultural diversity, and the need to cater for more individualised teaching and special learning needs.

One of the Council's conclusions is that professional development programmes "should be sufficiently flexible to respond to changes in teaching and learning" (Council of the European Union, 2014, p. 2). If teachers are to address all of these demands, not only do they need adequate initial teacher education, but also a system that helps them organise their continuing professional development (CPD). In the Netherlands, the 'Platform Onderwijs 2032' argues that teachers should be allowed access to good practices and literature, and be stimulated to take part in networks that promote innovation (Schnabel *et al.*, 2016).

Teachers' own perspectives of their effectiveness indicate a challenge in addressing professional learning needs. According to the Dutch Inspectorate, most teachers in the Netherlands have too positive an image of their own teaching qualities (Inspectie van het Onderwijs, 2013). The inspectors visited hundreds of lessons of teachers in 186 different schools, and compared their

findings with the results of a survey conducted among the observed teachers and their school leaders. According to the report, more often than not the positive image that teachers have of themselves is inaccurate. The research suggests that almost two thirds of Dutch secondary school teachers are more optimistic about their own abilities than the inspectors were. The Inspectorate partly blames this on the absence of reference points for what constitutes a good lesson: in many of the schools, it is up to the individual teacher to set the bar. This concept of using external points of reference as a source for learning is a key concept that will be further examined in the literature review.

According to Vermeulen (2003), in the Netherlands, the public status of the profession is somewhat complicated. For a start, whilst teachers tend to overrate their own teaching qualities (Inspectie van het Onderwijs, 2013), they also underrate their professional status: they are more pessimistic about their status than society is, when they report that recent years have seen a decline in recognition (Vermeulen, 2003). In the Netherlands, Plantinga, Van Diepen, Schildmeijer and Van Bruxvoort (2008) identify a noticeable difference between the appreciation of teachers by the general public and by parents, though. On a ten point scale, parents score the quality of their children's teachers 7.7 (primary schools) and 7.1 (secondary schools). The general public's scores for the quality of teachers are considerably lower, namely 6.6 (primary schools) and 6.4 (secondary schools). They seem to say that whilst parents feel education of *their* children is satisfactory, education in general is not. Something similar applies to the teachers themselves: although nine out of ten Dutch teachers value their jobs, only four out of ten report that society appreciates their profession (OECD, 2016). Ton Bastings (2018) studied the image of the Dutch teacher as portrayed in narrative fiction. He analysed ten popular Dutch novels that have teachers as their protagonists and found that six of the fictional teachers were heavy drinkers, seven had inappropriate relations with pupils, three committed suicide, and all of them considered leaving the profession. What the protagonists had in common was that they took pride in their perfect command of the subject knowledge but disliked educational innovation and colleagues that focused on

didactics or pedagogy. Notably, nine out of the ten authors of these novels were or had been teachers themselves.

According to a recent Dutch study by the Research Centre for Education and the Labour Market (Cörvers, Mommers, Van der Ploeg, & Sapulete, 2017), teachers in the Netherlands feel they do not get the appreciation they deserve, and this is part of a negative trend. The report looked at teacher status from the perspective of the Dutch people in a *beroepenladder[2]*, an instrument that is used to compare the status of 138 different professions. The instrument was first applied in 1983, and the research was replicated in 2007, and then again in 2016. Between 1983 and 2007, there were hardly any differences in teacher status, but the 2016 research suggests that teachers have dropped twenty positions on the professional ladder (Cörvers *et al.*, 2017), results that were widely discussed in the Dutch media. From an international perspective, this perceived low status is confirmed by a recent study by The Varkey Foundation (Dolton, Marcenaro, De Vries, & She, 2018), who compared teacher status in 35 different countries. With a score of 31 (on a 100 points scale) the Netherlands are in 24th position in the index. China and Malaysia are at the top, Israel and Brazil are at the bottom. As a comparison: the UK is in 13th position, with a score of 47.

In 2015, the AOB – the biggest of Dutch teacher trade unions – published a report which summarises ten years of press coverage of the teaching profession (Sikkes, 2015). The overall approach is a negative one: newspapers for instance report a decline in the knowledge level of teachers; they are negative about the quality of teacher training institutes; they tell readers that if one is interested in status or money, becoming a teacher is a bad idea. Printed press suggests that where the profession was once met with respect and praise for those who pursued it, beginning teachers are now often met with pity. Drawing on Kelchtermans (1996), and work of Jeffrey and Woods (1996), according to Flores and Day (2006, p. 221):

> teachers' feelings of vulnerability, engendered when professional identity and moral integrity are questioned either by policy changes, parents, inspectors, or

---

[2] Literally: a ladder of professions

colleagues in the light of unrealistic expectations or their failure to help students achieve higher standards…[leading to] professional uncertainty, confusion, inadequacy, anxiety, mortification and doubt among teachers

According to Hargreaves (2000, p. 169): "teachers must counter the discourses of derision, of blaming and shaming, among politicians and the media, that have helped create and sustain a loss of public faith in, and regard for, teachers and their work," a position in line with what Flores and Day (2006) concluded. It is difficult to determine whether negative media attention is simply the result of the profession being under considerable pressure, or maybe also the cause thereof. In any case, public concern will have worked as a catalysing force to put teacher quality high on the political agenda. Paradoxically, this has led to yet another complexity: many politically imposed educational innovations have been met with little enthusiasm by teachers (Bolt, Studulski, Vegt & Bontje, 2006). It has given the profession the reputation of being conservative or even cynical (Snoek, 2004).

To summarise: Coonen (2006) situates the Dutch teaching profession in a context in which many teachers might feel ignored, cornered, and even held in contempt. In such a context it is hardly surprising that teacher professional learning is not thriving. The negative reputation of the profession, and the constant pressure of society and politics to do better and to do more, might well lead to a "leave me alone" attitude of teachers (Bolt *et al.*, 2006). According to Hargreaves (1994, p. 167) "classroom isolation offers many teachers a welcome measure of privacy, a protection from outside interference which they often value."

Whilst teacher autonomy is generally seen as a good thing (e.g. Sahlberg, 2011; Admiraal *et al.*, 2016), isolation is not, and the two should not be confused. Drawing on the Greek terms that the word *autonomy* is derived from (*self* and *law*), Hooge (2013) defines autonomy as the space one has to judge, decide and operate according to one's own responsibilities. When we talk about *professional* autonomy, these responsibilities are (or should be) informed by the knowledge base agreed upon by the professional body, according to the Dutch Inspectorate (2013). Professional autonomy in that sense does not mean freedom to isolate

oneself from the world outside – it requires an active dialogue with colleagues near (within one's school) and far (external to the school). The question is how to stimulate this dialogue: how to organise this voluntary form of self-commitment to the professional body. In the Dutch discourse this complex problem is sometimes referred to as the *sturingsparadox*[3]: if bottom-up decision making works better than top-down control, how can that be organised by school leaders? And so one of the challenges we are facing is to address this paradox, to find ways that both recognise and acknowledge teacher autonomy, and that at the same time stimulate professional development through interaction and reflection.

1.2.2 Teacher quality

In spite of the decline in status discussed in the previous section, the Dutch school system performs well. According to the OECD (2016, p. 11):

> The Dutch school system is one of the best in the OECD, as measured by the Programme of International Student Assessment (PISA) and the Survey of Adult Skills (PIAAC). It is also equitable, with a very low proportion of poor performers. Basic skills are very good on average, while the system minimises weak basic skills among teenagers as effectively as the East Asian champions of Japan and Korea.

If indeed pupil performance correlates with teacher quality, one could wonder whether the discussed pessimism is justified. Notably, the good news got very little coverage by the Dutch press. At the time of writing the first draft of this review (which was half a year after the report was published), only one national Dutch paper had reported entirely positively on the OECD results[4]; the others focused on negative details in the report. This might explain why both the general

---

[3] Literal translation: steering (or leading) paradox
[4] Source: I used the LexisNexis search engine, looking for PISA or OECD or OESO in Dutch national newspapers of the past year. Except for one newspaper, the references found all had a negative tone: "OESO doesn't want teachers to give school advice to pupils"; "pupils might score okay, but they are bored"; OESO forgets that teachers have no time (for professional learning]"; "education is top, but inflexible", etc.

public and the teachers have a less optimistic view on the performance of the Dutch school system than would be justified by the results .

Among the few OECD recommendations, there is the advice to strengthen teacher professionalism and further develop the career structure, and to develop a leadership strategy that promotes professional collaboration and a culture of continuous improvement. In the Netherlands, the debate on teacher professional development was revived when in 2010 Van de Grift presented his research on teacher quality. Van de Grift observed teaching skills in teachers' classrooms and measured them against their years of experience. These observed teaching skills are built up from basic (e.g. maintaining a safe and stimulating learning climate, or giving clear instructions) to complex (e.g. stimulating pupils to develop their own learning strategies, and encouraging pupils to become critical thinkers). Van de Grift (2007; 2010) claims that the high point of pedagogic potential is reached about ten to fifteen years into the profession. Moreover, he claims that the average Dutch teacher only accomplishes about 60% of their potential. Not only is the average teacher insufficiently equipped for a complex teaching practice, it appears that the teaching quality decreases in the second half of the teaching career, a stage at which saturation seems to be reached, an *okay* level of practice. According to Wiliam (2014, p. 30) this okay level can be understood as "once teachers reach a particular level of performance, further improvement is difficult." Macbeath (2019) calls this the 'if it ain't broke don't fix it' aphorism. Sammons *et al.* (2007, p. 693) argue that "increased vulnerability, combined with a drop in commitment, is likely to underpin the relatively lower effectiveness of those teachers in the late PLPs[5]."

In their 2013 report, the Dutch Inspectorate concluded that professional development of teachers in primary, secondary and vocational education has little focus in that it is insufficiently aimed at specific goals (Inspectie van het Onderwijs, 2013). Their research suggests there are two reasons for this. First of all, teachers report significant autonomy, which – as discussed – could be a good thing, as professional space is generally considered to be beneficial for the

---

[5] professional life phases

individual learning process (e.g. Snoek & Volman, 2014). However, at the same time it leaves little room for specific direction by school leadership – the earlier discussed *sturingsparadox*. Moreover, "good teachers engage more in professional learning than struggling ones, also because the struggling ones have less insight into their own shortcomings. The teachers who need it the most, benefit from it the least [6]" (Inspectie van het Onderwijs, 2013, p. 21). The concept of teacher quality will be further explored in Chapter 2.1 of the literature review.

1.2.3 Teacher professional learning

In the Netherlands, engaging in continuing professional development (CPD) activities is not (yet) compulsory for teachers. A few years ago a professional register was introduced to promote CPD, but it was met with very little enthusiasm by teachers and in 2019 the government put the plans on hold. The average Dutch teacher does engage in CPD activities regularly, but the effects on his or her pedagogic repertoire are limited, according to a review study on the effectiveness of CPD (Veen, Zwart, Meirink & Verloop, 2010). In a discussion on educational innovation, Meijer, Verloop and Van Driel (2001) concluded something similar: most educational innovations are not sustainable. They fail after some time because the teachers are inclined to return to their old routines. Vermeulen, Klaeijsen and Martens (2011) looked at Dutch school policies. There are no collective employment agreements for the amount of time available for CPD; schools can determine their own policies. Most of them state they apply a 10% norm. There is no record of how much really is spent, but based on previous research, Vermeulen *et al.* (2011) suggest it is closer to 1% than the reported 10%.

CPD's often somewhat voluntary and individualistic character is unlikely to stimulate strong commitment on the teacher's side (Inspectie van het Onderwijs, 2013). If indeed professional autonomy is understood as the voluntary self-commitment to judge, decide and operate from one's own responsibilities (Hooge

---

6 My translation

2013), informed by the knowledge base agreed upon by the professional body, through an active dialogue with colleagues near and far (Coleman, Gallagher & Job, 2012), then the way CPD is organised shows room for improvement. Craig and Fieschi (2007) define teacher professionalism as a set of collectively held norms that regulate the teaching profession according to values and practices that are embedded in shared professional goals and relationships. If indeed we follow that definition, so including a strong sense of collectiveness, of sharing, then isolation is the enemy of professionalsm.

1.3 Outline of the thesis

In this first chapter, I argued that whilst the general quality of education in the Netherlands is good according to certain indicators, there is room for improvement with regard to teacher professionalism. I argued that isolation is the enemy of professionalism as it can lead to self-referentiality, a state in which teachers use their own personal experiences as the measure of things. In the current dynamics of education, self-referentiality, self-confirmation and isolation are problematic. Context could be part of the solution if more can be understood about how it can be a source for teacher professional learning. This study thus explores the research question:

> *What role does context play as a source for teacher professional learning?*

This research sets out to provide understandings of context through identifying and conceptualising three 'contextual domains': the domain of personal experience; the domain of the social; and the domain of theory. For this three studies were carried out. The first of these was an exploration of context factors in each of these three domains. These factors not only help explore the role of context in teacher professional learning, they also formed the starting point for the second study, in which a reflective tool was developed to explore teachers' exposure to these three domains. In the third study this tool was deployed, prompting teachers to both collectively and individually reflect on their

engagement with and within each of the three contextual domains. All three studies explored the teachers' own perspectives on their professional learning in each context. A participatory methodology was developed that involved master's students in contributing to the development and deployment of the tool, and included their sense-making of the outcomes.

Chapter 2 presents a review of the literature to establish the conceptual framework for the study. It is based on three core contextual domains for teacher professional learning, as indicated above: the domain of personal experience, the domain of the social and the domain of theory. In the literature review, I first conceptualise teacher learning and problematise it, and it will be argued that the more or less traditional view that learning is something that is mainly organised in pre-organised formal settings, is a problematic one. To address that problem, a complementary perspective on teacher learning is explored, which includes non-formal and unplanned learning. From this perspective I then discuss how the three contextual domains can function as sources for professional learning. Finally, I explore ways to mobilise these three context factors, so professional learning can be promoted.

In Chapter 3 the overall methodological and analytical approach is explored. The research question warrants a qualitative exploratory approach, and this approach is discussed. In this introductory chapter, I have already explored how there is something paradoxical about the role of context as a source for teacher professional. I discussed how contextual pressure can be both a reason to learn as well as a reason not to, if it is perceived as invasive. I realised that my research project could be seen as invasive, if respondents would perceive my involvement as normative; if in any way they would feel like they were held to account. If I truly wanted to explore the role of context as a source for learning, I needed the respondents to 'let their guard down'. To address this challenge, I decided to include elements of Participatory Action Research (PAR) in the methodological approach. A participatory approach would invite participants to help produce reliable – i.e. truthful – data. I felt including elements of Action Research would add to the validity of the data, if that action resulted in professional learning that could be studied *in vivo*. This is further explored in Chapter 3.

In Chapter 4 the results of the first of the three studies is presented. It includes an explanation of the early formation of the project, that began with my analysis of student coursework that prompted questions about the contexts affecting the learning of teachers. In Study 1 master's students' reflective work was explored to identify which context factors serve as a source for teacher professional learning.
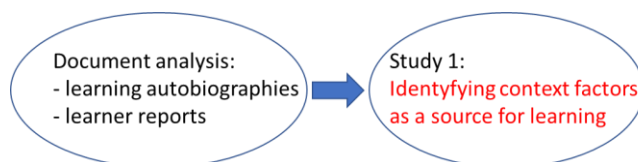
Fig. 1: Study 1: Identifying context factors as a source for learning

In Chapter 5 the findings of the second study are presented, and it builds on the results from the first study. Here these identified factors are used to develop a reflective tool to prompt and capture teachers' engagement with context factors. The reflection tool consisted of three components and each of these were designed on the basis of participant data: (I) the tool's introductory text, that was informed by focus groups, to explain what was required of participants; (II) questionnaire items in the tool, developed from Study 1, and a follow-on activity that would help the respondents to make sense of the results, which was also informed by focus groups. These focus groups identified *design rules.* Design rules can be seen as hypotheses, each describing a mechanism, a relation between a goal and a means (Bimmel, Canton, Fasoglio, & Rijlaarsdam, 2008); (III) finally, the tool concluded with an 'interpretation framework'. This was a text containing a set of suggestions that would help respondents to consider follow up activities. To inform this final section of the tool a teacher think tank was organised.
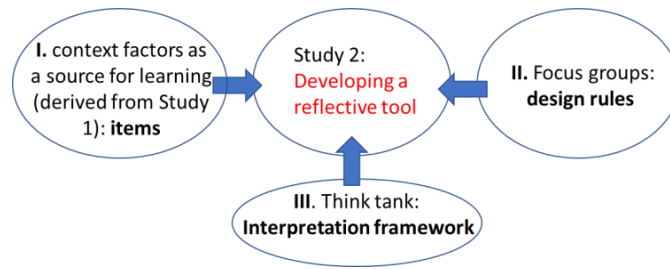
Fig. 2: Study 2: Developing a reflective tool

In Chapter 6 the last and most substantial of the three studies is introduced. Study 3 was developed with a group of master's students, who became co-researchers. This third study explores how the reflection tool was deployed by these master's students, using it with their teacher colleagues in their schools as respondents. It reports the data generated by the tool in this context and how they were analysed. Because this is a substantial contribution to the exploration of the role played by context in professional learning, Study 3 is divided into three stages. Stage 1 – which is presented in Chapter 7 – explores the results of the students engaging with a small group of their workplace colleagues to deploy the tool. Then, in Chapter 8, Stage 2 explores the results of a follow-up activity: after their workplace colleagues had deployed the tool and reflected individually, the master's students organised a collective reflective discussion about contexts for professional learning. These sessions were recorded; the transcripts formed the data explored in Stage 2. Finally, in Chapter 9, Stage 3 of the third study is presented. The master's students were divided into three focus groups. Each of these focus groups discussed and analysed the findings from their colleagues' reflections on engaging with the tool. In addition, they reflected on the research question, drawing from their experiences as aspiring teacher leaders, and from their experiences in Stage 2, so as participant researchers.
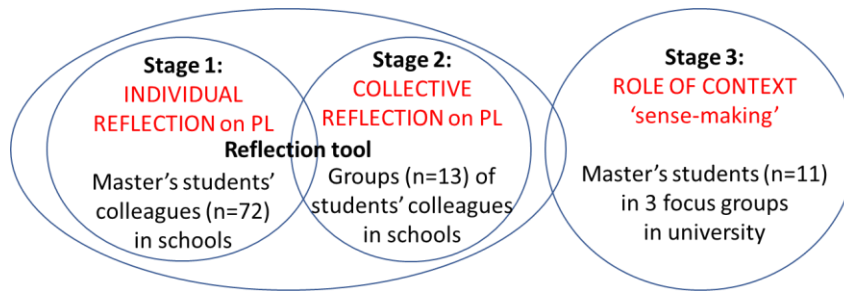
Fig. 3: Study 3: Teachers reflecting on context as a source for professional learning (PL)

Chapter 10 presents and evaluates the implications of the three studies in terms of the overarching research question, to explore the role of context in teacher professional learning. First the most significant findings are summarised and discussed, and then the implications of these findings are explored. In this first chapter I have already explored the wide scope of the challenges in teacher professional learning. To address that scope, the implications of the findings are discussed on macro, meso and micro level. The chapter continues with a critical reflection on the project as a whole and its methodological approach and includes suggestions for further research.

2. Literature Review

This literature review focuses on the role of context in teacher learning. To understand teacher learning, it is important to first understand what is defined as teacher quality. This is discussed in Chapter 2.1. I will argue that – whilst there is consensus that developing teacher quality is the main purpose of teacher learning – the literature is not conclusive on what exactly constitutes 'quality,' and that makes it difficult to design support for teacher learning. In Chapter 2.2 I then explore dominant ways in which professional learning is conceptualised: first I discuss how it is aligned with the stages of teacher careers: initial teacher education, novice teacher learning and veteran teacher learning. What follows in Chapter 2.3 is a short but crucial exploration of *teacher isolation* and *teacher autonomy* as two recurring topics in the literature related to professional learning. There exists a tension between these two concepts and examining this tension helps to understand the role of context in teacher learning. This complexity is further explored in Chapter 2.4, through a consideration of the role of non formal learning and tacit knowledge in teachers' professional learning. In Chapters 2.5 and 2.6 – which form the heart of the literature review – I will discuss the concept of contextual learning: context being defined as those domains in which teachers feel that their knowledge and skills are being contested, and where – as a result – new knowledge and skills are (or need to be) developed. What follows is an extensive exploration of three core domains for learning that are identified as the personal, the social and the theoretical, and the kinds of confrontations they accommodate. In Chapter 2.7, I will look at catalyst forces for learning in these context domains in order to examine how context can serve as a source for teacher learning.

2.1 Why professional learning is both important and complex: competing discourses on teacher quality

Professional learning is aimed at the improvement of teaching quality. There is, however, ambivalence about what exactly constitutes teaching quality. On the one hand there are those who define it in terms of improvement of pupil performance with regards to their cognitive development; on the other hand there are those who advocate a more holistic view, focusing rather on the ethical, social and moral purposes of teaching. In the latter, a good teacher is not so much someone who prepares pupils to perform well in tests, but who helps them to fulfil their intellectual, social and emotional potential. Good teachers prepare them for society in a broader sense, and not only for society as we perceive it here and now, but for future society as well. Hodkinson and Hodkinson (2005) argue that the performance discourse leads to a restricted perspective on teacher quality. Ball (2016) claims that if indeed education is considered a commodity, a product, and the teacher the producer of that commodity, it becomes logical (but very wrong) to measure the quality of the teacher only in terms of pupil learning results. In a study on teacher quality, Hanushek and Rivkin (2006, p. 1053) call teachers "the largest single budgetary element in schools". In times of budgetary restrictions, such views could lead to defining teacher quality as teacher effectiveness in terms of measurable outcomes (e.g. Onderwijsraad, 2009).

Hattie (2003, p. 1) argues that in the US this focus on performance should be seen as a reaction to years of poor school performance and is meant to restore trust in the public school system. Hattie goes as far as to call this

> [...] "idiot-proof" solutions where the proofing has been to restrain the idiots to tight scripts – tighter curricula specification, prescribed textbooks, bounded structures of classrooms, scripts of the teaching act, and all this underpinned by a structure of accountability. The national testing movements have been introduced to ensure teachers teach the right stuff, concentrate on the right set of processes (those to pass pencil and paper tests), and then use the best set of

teaching activities to maximise this narrow form of achievement (i.e., lots of worksheets of mock multiple-choice exams).

In the Netherlands, especially the work of Van de Grift (2010) has fed the performance debate. He states that 20% of pupils' learning outcomes can be attributed to teacher quality, using it as an argument to promote a strong, almost exclusive focus on the instructional qualities of teachers. Hattie (2003) steps up the pressure – according to his analysis teachers account for about 30% of the variance. The "what works" discourse is not only frequently heard among the general public or within the political debate, but it is present among the teachers themselves, too. For example, according to Guskey (2002, p. 382) "for the vast majority of teachers, becoming a better teacher means enhancing student learning outcomes". Hattie (2003, p. 5) defines expert teachers as those who "can identify essential representations of their subject, can guide learning through classroom interactions, can monitor learning and provide feedback, can attend to affective attributes, and can influence student outcomes". Although Hattie adds teacher behaviour to the equation, measurable student outcomes are still at the centre of his definition.

There is, however, a growing body of opinion that takes another view. In a much-quoted essay, Gert Biesta (2015) promotes a more integral, multidimensional perspective, when he identifies three functions of education, and three domains of educational purpose: qualification, socialisation and subjectification. The first of these, qualification, is about the acquisition of knowledge, skills and dispositions, in order to prepare pupils for a job or for further education. Not every job is for everyone and not every pupil is suitable for every kind of further education. As a result, regular assessment is needed, not only for adequate feedback – i.e. assessment *for* learning (Hattie, 2003; 2009), but also for selection – i.e. assessment *of* learning (Hooge, 2013). This qualification function – with its focus on assessment – is not very different from what is advocated in the performance discourse. However, Biesta does not leave it there. The second function he identifies is socialisation. This is about the integration of pupils into social structures, and for this they need to acquire social, cultural and political values and standards (Hooge, 2013). The third function, subjectification,

concerns "the way in which children and young people come to exist as subjects of initiative and responsibility rather than as objects of the actions of others" (Biesta, 2015, p. 77). This second and third function of education require different kinds of teacher qualities, and other types of expertise. They complicate teacher professional learning: these are expertises that are difficult to acquire without a strong professional body of knowledge – and the willingness to tap into such a body of knowledge. Shulman and Shulman (2004) use the term "accomplished" when defining the expert teacher. According to them, teachers should be "Ready (possessing vision). Willing (having motivation). Able (both knowing and being able "to do"). Reflective (learning from experience), and Communal (acting as a member of a professional community)" (p. 259). Notably, only the third of these five teacher qualities identified by Shulman and Shulman refers to abilities that can be measured in terms of pupil learning outcomes.

Judging from these views, defining teacher quality is problematic for two reasons. The first is that the definition depends on what is seen as the function of education (and views vary on this). The second is that teacher quality is not so much a state, but rather a process. Kelly (2006, p. 514), for example, states that "teacher learning is the process by which teachers move towards expertise". This complexity puts pressure on the organisation and expectations of professional learning. In the next section, I will first discuss formal professional learning and how it is structured, and then broaden the perspective by including non formal learning.

2.2 How formal learning is organised in the stages of teachers' careers

2.2.1 Initial Teacher Education (ITE)

In the previous section it was argued that the level of expectations teachers have to meet is high. The same goes for the responsibilities teachers are given. Moreover, in the Netherlands, there is little development of these expectations and responsibilities over the course of the teaching career. Whether they are a

novice or a veteran, the teacher's responsibilities largely remain unaltered (Sikkes, 2015). The same applies to the level at which the job is expected to be carried out. That could be problematic in a number of ways (McDaniel, Neeleman, Schmidt, & Smaling, 2009; Sikkes, 2015). If the level of responsibility is this high from day one in the job, Dutch teachers might implicitly conclude that after completing their initial training – and a short period of induction – they have little left to learn about teaching pupils: they have acquired all the formal qualifications they will need for the rest of their professional careers. It could be argued that this is a design fault in the way teacher professional learning is organised. It does not stimulate lifelong learning, but achieves the opposite effect. It sends the message that being a competent teacher is an acquired status, rather than the result of an ongoing process. Moreover, this design problematises initial teacher education (ITE). As a result of how professional learning is organised, ITE is expected not only to equip beginning teachers for what is needed in the first years of their careers – what is sometimes referred to as the "threshold period" (Flores & Day, 2006) – but for all kinds of future duties and responsibilities as well, all kinds of possible challenges that lie far ahead. This very full agenda is problematic for a number of reasons. In the Netherlands, there are different routes to obtain a teaching qualification. One of these is by first doing a subject masters, followed by a one year master's in education. Students who follow this route only have one year of training and they are relatively dissatisfied with how they are prepared for their professional lives, especially with regard to those teaching skills that are considered complex and therefore less proximal (Inspectie van het Onderwijs, 2016). They might not yet be ready to acquire those skills, but since it is 'now or never' from the perspective of the teacher education institute, there is a timing problem: student teachers who are still struggling with basic skills like maintaining order in the classroom, are asked to experiment with complex teaching activities such as differentiating or teaching their pupils metacognitive strategies.

There is another complicating factor for ITE. Its curriculum is not only informed by what new teachers require to be prepared for their roles, but it is also informed by political demands. Rogers (2011) argues that policy interventions

have resulted in a teacher education curriculum that is driven by an urgency to comply with a set of standardised professional practices. This could result in ITE that has an instrumentalist approach, rather than being focused on developing a strong profession – one in which teachers move away from traditional individual professional autonomy, and appreciate the value of relationships with colleagues, with students and with parents (Hargreaves, 1994).

There is a third complicating factor for ITE. In the neoliberal discourse, teaching is to some extent seen as following scripts (Hattie, 2003) – and thus as something that teachers can be trained to do. An almost opposite argument is made by Braun (2012, p. 243), who argues that whilst

> the official discourses profess to come with a set of skills that can be taught, acquired and mastered, the concept of the charismatic subject frames teaching as a matter of having 'what it takes'—a teacher being born, rather than made.

This deterministic stance suggests that there is not much point in teacher professional learning in the first place, and this too complicates the discourse on teacher quality.

2.2.2 Teacher learning for novice teachers

In the Netherlands, expectations and responsibilities for veteran and novice teachers are almost equal and as a consequence the latter by definition begin their careers underprepared (cf. Flores & Day, 2006). Moreover, teaching in many Dutch schools is organised as an isolated activity where individual teachers work with a group of pupils in closed classrooms (Onderwijsraad, 2009). Bruining, Loeffen, Uytendaal and Koning (2015) call it 'professional loneliness'. This isolation in combination with the level of responsibility expected from teachers puts a lot of pressure on novice teachers (Ashby *et al.*, 2008). Zwart, Korthagen and Attema-Noordewier (2014) summarise this period as one in which working conditions are hard and support is low, and beginning teachers are frustrated as a result of not being able to achieve their own teaching standards. Because of that, many teachers are prone to choosing the easiest solution: adapting to what experienced colleagues in their schools are doing (Kessels, 2010). Rather than

bringing newly acquired innovative theoretical perspectives into their schools, they tend to copy local practices and existing cultures. Macbeath (2019, p. 43) refers to this as "the inertia of 'the way we do things round here'". In the Netherlands, this process of professional socialisation was studied by Lunenberg and Korthagen (2009). Drawing on work by Wideen and Cole (1998), they define this particular process of socialisation as problematic, arguing that it often leads to a dislike for reflection and theoretical deepening. Moreover, the CPD habitus seems to be more about learning to teach as a practical set of skills than learning to learn (Rogers, 2011). This increases the likelihood of a conservative effect on the teaching profession, making it relatively static, and potentially preventing new ideas to enter.

2.2.3 Veteran teacher learning

If there is indeed much left to learn after ITE, and if the profession is becoming more complex, one would expect all teachers – both novices and veterans – to regularly engage in professional learning activities. And yet, in many European countries there seems to be a divide between initial and post initial teacher learning (Vermunt, 2006). On the one hand, according to the 2013 TALIS report (OECD, 2014), most teachers say that they regularly participate in professional development activities. Of teachers in lower secondary education, for instance, 88% said they had engaged in professional development in the past year. 'Engaging in professional development' is a broad concept, though. The ones who reported not to engage in CPD blamed it on lack of facilitation in either time or money: "many teachers noted that they have persistently unmet professional development needs" and "teachers listed work schedule conflicts and a lack of opportunity as common barriers to pursuing professional development" (p.24).

Research suggests the effects of traditional CPD are limited (e.g. Van de Grift, 2007; 2010; Veen *et al.*, 2010; Guskey, 2002). According to Kwakman (2003), this lack of effect might have to do with the nature of the activities that are pursued, as she reports "great discrepancies between theory and practice in opportunities for professional learning at the workplace" (p.149). Hustler, Mcnamara, Jarvis, Londra and Campbell (2003) associate limited effects with 'one size fits all'

standardised CPD provision. According to Kelly (2006) the problem is that many current CPD opportunities assume it is easy to make the transfer from knowledge-of-practice, which is what is taught in CPD, to the teacher's own classroom practice.

If we want to understand the role of context in teacher learning, then the point made in Chapter 1.1.2 is crucial: the notion that many teachers operate in relative isolation has implications for their professional learning following the period of initial qualification. In a paper on professionalism and professional learning, Hargreaves (2000) identifies a number of stages and practices. The one in which teachers "improved mainly by trial and error, in their own isolated classes", he calls a form of "restricted professionalism" (Hargreaves, 2000, p. 156), thus implying that isolation is the adversary of professionalism. Hermes, Adolfsson, Versluis and Geugten (2008) call it the biggest threat for the teaching profession: the nostalgic image of the teacher as an autonomous figure who has a unique relationship with their pupils (and not so much with colleagues). In the next section this notion of isolation will be further explored within the context of workplace learning.

2.3 Working and learning in isolation

In a study into the degree of isolation of teachers in technical and vocational training for 16-18 year-olds, McDaniel, *et al.* (2010) compared Dutch teachers to other professional bodies. They conclude that where professionals like nurses, lawyers, architects, accountants and researchers find their professional context structurally influenced by external parties, clients, compulsory CPD, etc., teachers have much freedom of action: many (can) do their work in relative professional isolation, a conclusion that confirms earlier research by Van Driel (2006). Eekelen, Vermunt and Boshuizen (2006) researched teachers' will to learn, identifying three groups of teachers: those who do not see the need to learn; those who wonder how to learn; and those who are eager to learn. They state that "teaching experiences fail to be educative when existing knowledge is taken for

granted and the desire to see something new is absent. Then the perception of classroom events tends towards self-confirmation" (Eekelen *et al.*, 2006, p. 410).

The Dutch situation reflects wider international trends. TALIS[7] data (OECD, 2014, p. 19) confirm the impression that many teachers do their work in isolation, as

> [...] over half of teachers report very rarely or never team-teaching with colleagues, and two-thirds report the same rates for observing their colleagues teach. Some 46% of teachers report never receiving feedback on their teaching from their school leader, and 51% have never received feedback from other members of the school management.

Many teachers do not get any feedback; many of them do not seem to seek it either (Inspectie van het Onderwijs, 2013). In a paper on Psychological Safety and Learning Behavior, Edmondson (1999, p. 352) discusses how "asking for help, admitting errors, and seeking feedback exemplify the kinds of behaviors that pose a threat to face, and thus people in organizations are often reluctant to disclose their errors or are unwilling to ask for help, even when doing so would provide benefits for the team or organization." Kelchtermans and Ballet (2002) discuss the high degree of visibility of teachers' activities ('working in a fishbowl'). They studied the career stories of beginning teachers and found that these teachers

> [...] were highly aware that their actions were perceived, interpreted and judged by others and that these perceptions and judgements determined the image others built from them. What these others see (or believe they see) determines their evaluation of the beginning colleagues.

This could be the reason why some teachers feel threatened, and that self-defence mechanisms and self-interests emerge. Staton and Hunt (1992, p. 130) argue that "teaching norms tend to stress individualism and egalitarianism, leaving teachers unwilling to critique other teachers." It implies that many teachers depend on their own experience as the main source of professional learning. Van Driel

---

[7] TALIS stands for Teaching and Learning International Survey, a worldwide evaluation on teaching and learning. It is coordinated by the Organisation for Economic Co-operation and Development (OECD).

(2006) goes as far as to suggest that Dutch teachers mistake isolation for autonomy and foster rather than fight it.

In Chapter 2.2, I discussed how in the Netherlands, after ITE there is relatively little room for formal, organised professional learning for teachers. That suggests that teacher learning largely depends on informal, unorganised opportunities. In this section, I argued that working in relative isolation means many teachers lack the opportunities for feedback and interaction. It makes them depend on personal experience as the main source for learning. This raises serious questions about the degree and quality of professional learning for teachers in the Netherlands. This is explored in the next section, in which the role of non-formal conditions for learning is further explored.

2.4 Non-formal learning

If formal, organised professional learning opportunities are indeed few and not very effective, and if teachers indeed do much of their work in relative isolation, then that begs the question how teachers do develop their professional knowledge and skills. According to Hoyle (1982, p. 161) "professionalization is normally understood to refer to the process whereby an occupation increasingly meets the criteria attributed to a profession." He then continues to explain how teacher professionalisation is problematic in that the development of teacher skills is much more informed by practice than by theory. Fraser *et al.* (2007, p. 156) argue that the discourse on professional development is characterised by 'conceptual vagueness', stating that "the use of the term 'development' rather than 'learning' seems to depend on a somewhat arbitrary attribution of a broader, more general meaning to professional development and a more specific individual meaning to professional learning." Day (1999, p. 4) suggests the following alternative definition:

> Professional development consists of all natural learning experiences and those
> conscious and planned activities which are intended to be of direct benefit to the
> individual, group or school and which contribute, through these, to the quality of

education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives.

For the sake of clarity, it might therefore be more constructive, when discussing professionalism, to talk about *professional learning,* including 'natural learning experiences' and informal learning, rather than about CPD. Billett (2010a, p. 2) proposes the following perspective on professional learning: he defines lifelong learning as "both a component and outcome of individuals' engagement in work and work-related activities and interactions". This perspective situates learning much more in the individual experienced workspace of the individual teacher than in the formal, externally organised one. In another paper, Billett (2010b) goes on to suggest that learning should be regarded as a socio-personal process and a personal fact, especially in professions in which experiences are dominated by context. In a paper on informal learning in the workplace, Eraut (2004, p. 249) problematises this type of learning, as it is

> [...] largely invisible, because much of it is either taken for granted or not recognised as learning; thus, respondents lack awareness of their own learning; the resultant knowledge is either tacit or regarded as part of a person's general capability, rather than something that has been learned.

Eraut then goes on to suggest that learning is determined by two seemingly opposite processes. On the one hand there is experiential learning, in which explicit knowledge is derived from reflection on experiences; on the other there is routinisation, in which explicit knowledge is converted to tacit knowledge through repetition. Eraut suggests that professional learning is not so much what people do to prepare them for the workplace, but that the actual workplace *is* the learning place. That means that, in order to understand professional learning, the professional context must be understood, and the way this context serves as or is perceived as a source for learning.

Drawing on Eraut's (2000) ideas, Eekelen *et al.* (2006) describe a typology of informal learning processes based on the intention to learn. In addition to intentional, deliberate learning, they discuss *implicit learning* (with no intention to learn and no awareness of the learning when it takes place) and *reactive learning* (spontaneous and unplanned, but with the incidental notation of facts, or the recognition of learning opportunities occurring within the workplace). As for the effects of implicit and reactive learning in and through context, this type of learning is likely to result in tacit knowledge. The concept of *tacit knowledge* and how it is developed might further help to understand the problematic nature of teacher learning. According to Schön (1983, p. 49) "our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is in our action." Lunenberg and Korthagen (2009, p. 226) define this tacit knowledge as "the capacity to make holistic judgments of high quality, i.e., to deal 'wisely' with particular situations in the course of teaching." In a paper on non-formal learning and tacit knowledge in professional work, Eraut (2000) problematises the concept, challenging the common suggestion that tacit knowledge is merely 'that which we know but cannot tell'. Eraut speaks of a continuum from explicit to tacit knowledge. Tacit knowledge can be made explicit; explicit knowledge can, over time, become tacit.

Sternberg *et al.* (1999, p. 33) describe three key features of tacit knowledge. To begin with, they relate it to the conditions under which it is acquired: generally, on one's own and through personal experience. Secondly, tacit knowledge is viewed as procedural in structure, associated with particular uses in particular situations. Thirdly, because it is generally acquired through one's own experiences, tacit knowledge has practical value to the individual. Eraut's paper on non-formal learning and tacit knowledge in professional work (2000) includes a modified version of a model introduced by Sternberg *et al.* (1999) which illustrates how teacher performance is influenced; how the profession is 'learnt'.
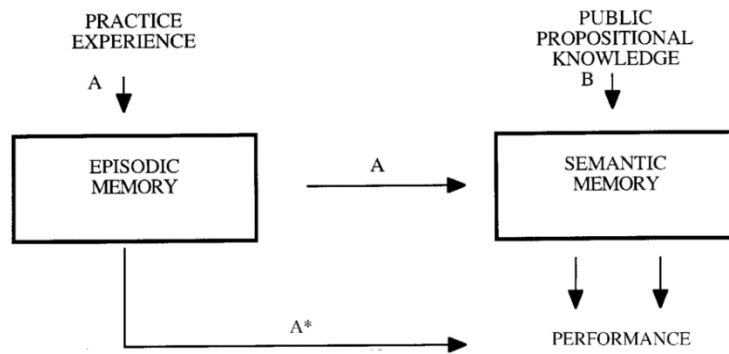
Fig. 4: Knowledge-acquisition pathways (Source: Eraut, 2000, p. 117)

In the model, paths A and A* represent non-formal learning. This is the learning that takes place as a result of situations that require new behaviour or knowledge. It can be either experiential (path A), which means that "personally experienced events are stored in episodic memory and, over time, used to construct generalised knowledge structures in semantic memory" (Kolb, 1984, p. 8), or it can be implicit (path A*), which means new knowledge is "acquired in the absence of awareness or intention to learn, and thus has a hidden or tacit quality" (Sternberg *et al.*, 1999, p. 32). It could be argued that Path A is mostly inductive (through reflection new practices lead to new theories), Path A* is mostly implicit (new practices lead to new practices without much reflection) and Path B deductive (through reflection, new theories lead to new practices).

Sternberg *et al.* place the acquisition of new knowledge very much in the personal domain of the learner (Path A and A*): it is mostly personal, particular and individual, and highly context driven. If indeed teacher knowledge is mostly tacit in nature, and evolves from contextual interactions, then context is key. The next section therefore examines the contextual domains in which teachers operate.

2.5 Contextual learning

In a critical discussion of 'the practice turn in contemporary educational research', Arnseth (2008, p. 289) argues that the two most influential theories on understanding teacher professional learning of the past few decades are Lave and

Wenger's (1991) situated learning theory and Engeström's (1987) activity theory. What these theories have in common, is that – rather than approaching learning from a cognitive perspective – they define learning as the product of the learner's interaction with his or her contexts. Thus, understanding context is key when it comes to understanding teacher learning. Engeström, Engeström and Kärkkäinen (1995, p. 319) also make a case for looking at professional learning from a contextual perspective of:

> These multiple contexts demand and afford different, complementary but also conflicting cognitive tools, rules, and patterns of social interaction. The criteria of expert knowledge and skill are different in the various contexts. Experts face the challenge of negotiating and combining ingredients from different contexts to achieve hybrid solutions.

This section explores teachers' professional context and the role it plays in their professional learning, by analysing these contextual domains as situations that inform or demand new competences.

2.5.1 Confrontations

Engeström and Kerosuo (2007, p. 339) state that learning is "a longitudinal process in which participants of an activity system take specific learning actions to analyse the inner contradictions of their activity, then to design and implement a new model for their activity that radically expands its object, opening up new possibilities for action and development." According to Engeström and Sannino (2010) contradictions are the engine of expansive learning in an activity system. In that sense, they can be viewed as the motives for learning. Akkerman and Bakker (2011a, p. 132) draw on Engeström's (e.g. 1987) work when they discuss how encountering discontinuities and confrontations causes professionals to question "the distinction between what is part of me versus what is not (yet) part of me." In another paper, they argue that boundaries force people to reconsider their assumptions, as they challenge what is known and familiar (Akkerman & Bakker, 2011b). In this view, confrontations are not seen as mere obstacles, but as opportunities for developing new affordances (Kelchtermans, 2012), affordances being "both conditions and interventions in school that, intentionally

and unintentionally, support teacher learning" (Admiraal *et al.*, 2016, p. 282). Confrontations can – in this sense – be seen as conditional for learning (Eraut, 2004; Lankveld & Volman, 2009; Rohaan, Beijaard & Vink, 2012). Through interactions and negotiations with contextual forces, teachers' capacities can expand.

2.5.2 Teacher knowledge and beliefs as the result of an interactive process

These capacities are defined by Bolam *et al.* (2005, p. 22) as "a quality of people or organizations that allows them routinely to learn from the world around them and apply their learning to new and sometimes novel situations so that they continue on a path toward their goals." Teacher capacity is a complex concept: it can refer to different professional roles, each requiring different actions. Teachers are expected to be subject matter experts, pedagogical experts, and didactical experts (Hollingsworth, 1989; Beijaard, Verloop & Vermunt, 2000; Van Driel, 2006; Vries, Van de Grift & Jansen, 2014). These different roles require different types of knowledge. Moreover, according to Kelchtermans (2009, p. 264), teacher knowledge and beliefs are intertwined: "the subjective educational theory reflects the teacher's personal answer to the questions: 'how should I deal with this particular situation?' (= what to do?) and 'why should I do it that way?' (= why do I think that action is appropriate now?)." In this sense capacity (doing) and identity (being) are intertwined. The literature is not conclusive in what constitutes teacher identity (e.g. Akkerman & Meijer, 2011). Beijaard *et al.* (2000) argue that "professional identity is an ongoing process of interpretation and re-interpretation of experiences" (p.122). Flores and Day (2006, p. 220) define identity as "an ongoing and dynamic process which entails the making sense and (re)interpretation of one's own values and experiences." Rohaan, Beijaard, and Vink (2012) describe professional identity as how teachers define themselves, as the result of the interaction between personal beliefs and the expectations of others, within their working contexts. Canrinus (2011, p. 7) argues that "the interaction between person and context, and thus a teacher's sense of professional identity as a result of this interaction, manifests itself in a teacher's

job satisfaction, occupational commitment, self-efficacy and motivation". What these different definitions have in common is the idea that

> Identity is not a fixed attribute of a person, but a relational phenomenon. Identity development occurs in an intersubjective field and can be best characterised as an ongoing process, a process of interpreting oneself as a certain kind of person and being recognised as such in a given context (Beijaard, Verloop & Vermunt, 2000, p. 108).

In this sense, learning is what happens when contextual experiences cause confrontations with one's existing capacities: the product of such confrontations then constitutes professional learning (Eraut, 2000; Kelchtermans, 2009). According to Gorodetsky and Barak (2009), this form of professional learning can therefore be promoted by actively mobilising forces that constructively contradict current processes, tacit routines and consensus: because out of the interactions and negotiations with these forces, new professional knowledge is constructed and reconstructed (Kelly, 2006; Tsui & Law, 2007; Canrinus, 2011).

As for the nature of the interactions, Flores and Day (2006) call it the exchange between perspectives, beliefs and practices, that brings about the development of the teacher's self. Tsui and Law (2007) go a step further: not only is a disbalance in the activity system the cause for learning; this learning consequently causes new contradictions within that system. Again, in this sense, professional learning could be promoted by actively mobilising forces that contradict current routines. In a literature review of 182 studies on boundary crossing and boundary objects, Bakker and Akkerman (2011) suggest a concrete way to do that, when they make a case for reflection, that is: learning to look differently at one's personal practice by adopting the perspective of a colleague, a process they refer to as *othering*.

To conclude, professional learning is the opposite of self-confirmation and self-referentiality. If indeed learning is what happens when contextual experiences cause confrontations with existing capacities, then understanding the role of the context is the key to understanding professional learning.

2.6 Context

In the sections above I have explored the importance of context in understanding teachers' professional learning. Although different contexts and contextual aspects have been discussed, a further conceptualisation of the notion of 'context' itself is needed. The concept of context means different things in different settings. Edwards and Miller (2007, p. 265) state that "a context may be considered a bounded container within which the learning takes place, or a more fluid and relational set of practices." According to Guskey (2000, p. 74) "context characteristics refer to the 'who,' 'when,' 'where,' and 'why' of professional development. They involve the organization, system, or culture in which professional development takes place and where the new understandings will be implemented." Beijaard, Meijer and Verloop (2004) propose to distinguish between the in-classroom place and the out-of-classroom place. Day *et al.* (2006) identify three dimensions of teacher context: a personal dimension, a professional dimension and a situational dimension. Evans *et al*, (2010, p. 246) extend the definition when they argue that context includes 'schools of thought', and teacher habitat. Macbeath (2019, p. 89) includes in context the ecology of the classroom, quoting Mitchell and Sackney (2011): "events, experiences, activities, structures, networks, knowledge, people, histories, interests, recourses, artefacts, understanding, and commitments, all of which exert a mediating influence on teaching and learning processes".

It is difficult to summarise these definitions of context, as it is a multi-dimensional concept. Part of it is the situational domain: inside the classroom where first-hand experiences take place. Then there is a social domain: outside of the classroom, but inside the school. It includes networks and colleagues. Finally there is the domain outside of the school, but within the discipline: the domain of theoretical knowledge, and schools of thought.

In Chapter 2.5, I argued that context is key in understanding professional learning. As a consequence, understanding context – highlighting parts thereof or even manipulating it – could be key to stimulating professional learning. Several studies have characterised three main contextual domains, with varying

emphases but common acknowledgement of the broad context categories of theory, experience/practice and social interaction. For instance, Kärner, Lesničar, Maurits, Nutt and Van de Sande (2015) have drawn up what they call a "common conceptual frame of reference", which presents three contextual domains that can provide reference points for informing teacher action. They argue that this action is informed by *theory* (e.g. the outcomes of academic research); by *practice* inquiry (e.g. the teacher who researches his or her own practice); and by the teacher's *social* context (e.g. a professional learning community). Govaerts, Bisscheroux and Merkx (2004) also promote teacher learning that combines learning through theory, experience and peer support, when reporting on a successful professional learning project.

These three components are in line with a further model designed by Lombardo and Eichinger (2006) in a much-quoted work on the development of leadership competences. Lombardo and Eichinger suggest that "the odds are that development will be about 70% from on-the-job experiences and working on tasks and problems, about 20% from feedback or working around good and bad examples of the need, and 10% from courses and reading" (Lombardo & Eichinger, 2006, p. 4). Although these percentages have been criticised, as real evidence is lacking (see e.g. Clardy, 2018), the 70-20-10 principle is often applied to make a case for the importance of informal learning (e.g. Ruijters, 2016). If these sets of ideas are combined, three contextual sources of learning can be identified: a practical, personal experience domain; a social one; and a theoretical one:

Table 1: An overview of teacher context domains (derived from the literature)

Own practice, personal experience	Social, community	Theoretical, academic
- the teacher's immediate working environment - the in-classroom place - events, experiences, activities - on-the-job experiences and working on tasks and problems	- the out-of-classroom (but inside school) place - (local) social expectations of what constitutes a good teacher - networks - colleagues - feedback or working around good and bad examples	- policy expectations of what constitutes a good teacher - 'schools of thought' - knowledge - courses and reading - literature

To recap, the research question is what role context plays as a source for teacher professional learning. In the next sections each of these three context domains is explored, as is each of their potential as a source for learning.

2.6.1 Three contextual domains: the role of personal experience in teacher learning

The first contextual domain that can be identified is the practice one – the domain in which the teacher has first-hand experiences: (s)he instructs, guides, tests pupils, etc. The teacher acts and re-acts, tries new things and consciously or unconsciously collects feedback, thus developing practical wisdom (Lunenberg & Korthagen, 2009). Research suggests that most teacher learning takes place in this domain (Eraut, 2000; 2004; Eekelen, 2005; Hoekstra, 2007). It can be argued that in this domain the urgency, the relevance to learn is the highest, particularly when there is much (perceived) room for improvement. The more experience one has, the less there is left to learn (Thoonen, Sleegers, Oort, Peetsma & Geijsel, 2011).

According to Lankveld and Volman (2009), teachers mainly learn by doing, that is from their own personal experience. Sleegers and Ledoux (2006) argue that the biggest drive to change practice is practice itself, especially if there is a dissonance between previous experience and current demands of the situation (MacBeath, 2019; Eekelen *et al.*, 2006). Here learning can be defined as adaptation to new situations: "teachers 'change' in response to something; they adapt their practices to changed conditions" (Clarke & Hollingsworth, 2002, p. 948). Especially for beginning teachers this is the case (Kelchtermans & Ballet, 2002), so when there is relatively much to learn, and confrontations are likely to occur frequently. According to Britzman (1991) it is especially here that *Practice makes practice.*

Based on a survey of 1789 teachers in the US, Smylie (1989) reports that direct practice is seen as the most effective of different sources of learning to teach, regardless of school sector. According to Staton and Hurst (1992, p. 130), "interaction with students appears to be the most frequent source of dilemmas, and thereby one of the strongest catalysts for change." According to Johansson and Kroksmark (2004), these dilemmas are not so much reflected upon, but rather approached from an 'intuition-in-action' perspective, as the "intuitive phase is characterised by the immediate experience of the phenomena without the examining subject being controlled by theories or previously set rules, models or perceptions. This can be called going-directly-to-the-thing-itself without intermediaries to let it-show-itself" (p. 361). This conclusion is also drawn by De Vries *et al.* (2013), who looked at CPD in relation to teacher beliefs about learning and teaching. Drawing on Schön, they distinguish between 'reflection-on-action', which is seen as "a deliberate process, developed and purposely used to reconsider existing knowledge, beliefs, possibilities, ideas, and actions." On the other hand, there is 'reflection-in-action', which they define as "an almost subconscious process that experts develop and refine through their learning with experience" (p. 80).

Drawing from the work of Lave and Wenger (e.g. 1991), Kelly (2006, p. 507) also makes a case to move away from (traditional) cognitive approaches to professional learning when he states that "teacher expertise is closely linked to

the circumstances to which it pertains: not to precise situations, but to the particular working practices."

Self-regulation and learner responsibility for development is a further feature of how the practice domain contributes to teacher learning. Eekelen, Boshuizen and Vermunt (2005) examined the professional learning experiences of fifteen experienced Dutch college teachers and found that these did not really self-regulate their learning, but they mostly did self-regulate their teaching practice (with learning as a result), for example when trying to solve problems. Billett (2014b, p. 676) also places professional learning firmly in the circumstances of the workplace when he states that "learning through practice is learner-initiated, directed and enacted by the learners themselves, rather than being premised on didactic or taught processes such as those characterising how learning is promoted in educational institutions." Billett found that 'learning through everyday work, individually' was ranked the most preferred environment for Human Resource Development (HRD). However, such engagement with one's own learning does not need to be explicit, according to workplace learning theory, and may be largely based on the development of enhanced intuitive knowledge of practice. With regard to non-formal learning, Eraut (2000) distinguishes between implicit learning and 'reactive on-the-spot learning'. Implicit learning means that knowledge is acquired unconsciously and without explicit awareness of what was learned. In the case of reactive learning, the learner is aware to some degree, but would need time for reflection in order to make explicit what this new knowledge constitutes. Either way the outcome of such learning is new skills, or 'practical wisdom': "the sensitivity for and awareness of the essentials of a particular practice situation that shape our perception of this situation, and help us find possible courses of action" (Lunenberg & Korthagen, 2009, p. 227). Harteis and Billett (2013, p. 146) call it 'intuitive expertise': "the capability to act or decide appropriately without deliberately and consciously balancing alternatives, and without following a certain rule or routine, and, possibly, without awareness. It is commonly held to permit rapid reactions that result in effective outcomes."

Further arguments suggest the powerful impacts of learning from practice. According to Bergen and Vermunt (2005) and Van Driel (2006), this form of learning from practice will particularly be effective if the teacher experiences positive effects of new behaviours, especially with respect to pupil learning results. This behaviouristic perspective is embraced by Wiliam (2014), who suggests that student achievement should be used as an incentive to promote teacher learning. Leeman and Wardekker (2010) argue that teachers should be encouraged to learn more about their pupils through practice research: knowing more about the effects (i.e. dependent variables) of your actions as a teacher (i.e. independent variables) will result in more opportunity to learn. Or, in the words of Guskey (2002, p. 383):

> The crucial point is that it is not the professional development *per se*, but the experience of successful implementation that changes teachers' attitudes and beliefs. They believe it works because they have seen it work, and that experience shapes their attitudes and beliefs.

This seems crucial – it is necessary for the teacher to 'believe' in order to learn and if belief is necessary to achieve change in deep-seated ideas, then the immediacy of practice provides a powerful domain for teacher learning.

However, whilst first-hand experiences provide powerful opportunities to learn new things, there are limitations to (only) using practice as a source for learning. Buitink (2009, p. 118) quotes Stones, calling this type of learning "the acquisition of a 'mediocre pedagogy' reflecting traditional teaching culture." Coenders (2010) too claims that the learning potential of the workplace should not be overrated. In his view, it is necessary to complement first-hand experiences with social interactions and input from outside the school context.

Flores and Day (2006) argue that over the years teachers tend to become more prone to routine and less creative and willing to take risks, and as a consequence the learning potential within the practice domain decreases. According to Bolt *et al.* (2006) veteran teachers have decided on a number of standard solutions which have 'frozen' their capacity for change. This could explain the fall in teachers' learning curves after ten to fifteen years, as described by Van de Grift

(2007; 2010). The potential of this practice based learning-by-doing is limited (Wiliam, 2014): teacher practice is limited and even more so is the perception of that practice. Summarising Fessler and Christensen's and Verloop's research, Van Driel (2006) places stagnation around the age of forty to forty-five, arguing that this is typically the moment when teachers begin to experience that their pupils are of a different generation. There is a paradox here: the generation gap is both the cause of stagnation (because veteran teachers feel they have experienced everything that can be experienced) and the reason for change (if they feel pupils are different than they used to be and old behaviours are not adequate anymore). Teacher status quo becomes particularly problematic if pupils change. And so, the limits of the teachers' personal experience as time goes by might imply the limits to their learning from experience.

2.6.2 Three contextual domains: the role of the social domain in teacher learning

The second domain that emerges from the literature is the social one. Smylie (1989), who analysed the data from a large scale US survey of teachers' views on the effectiveness of different sources of learning to teach, rates social learning second (practice learning came first). Organised social learning comes in different forms, varying in effectiveness (Brouwer, 2011; Earley & Porrit, 2009; Pickering, Daly & Pachler, 2007; Vermunt, 2006). Macbeath (2019) describes and promotes a number of these. Obvious forms include mentoring, coaching and critical friendship, and sharing and discussing students' work. More complex is peer observation, in which teachers attend each other's lessons and actively seek and give feedback. A slightly more complex form is the lesson study approach, which means teachers meet each other to discuss learning goals and subsequently design lessons together, and then observe and evaluate how what they designed works in practice (Tsui & Law, 2007). A variation is 'the learning wall', which means teachers create a physical place to visually share problems and solutions, and report results of the points they have addressed.

Macbeath (2019) argues that what these strategies and social activities have in common is what he calls the "de-privatising of practice" (p. 94), a concept

originally introduced by Louis, Marks and Kruse (1996). This is a key concept: if the earlier discussed isolation, self-referentiality and self-confirmation are the problem, then engaging with others and thus opening up to external points of reference would be the obvious solution. Moreover, de-privatisation implies that teachers share their own ideas – which they then need to make explicit first. Verbalising implicit ideas or tacit knowledge is the first step to communicating with members of the professional community.

A form of social learning that has been widely researched is Communities of Practice, a concept developed by Wenger (1998) and defined by Wenger *et al.* (2002, p. 4) as: "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis." This broad definition overlaps with Professional Learning Communities: "An effective professional learning community has the capacity to promote and sustain the learning of all professionals in the school community with the collective purpose of enhancing pupil learning" (Bolam *et al.,* 2005, p. iii). The most important difference between the two is that PLCs are more explicitly aimed at learning. CoPs tend to be more focused on collectively seeking answers to shared problems and in that sense they are learning communities as well, albeit more re-active. Much of the research on CPD focuses on learning communities in either of the two forms (e.g. Verbiest, 2004; Bolam *et al.*, 2005; Lankveld & Volman, 2009) and these appear to be relatively effective (Veen *et al.*, 2010; Maandag, Helms-Lorenz, Lugthart, Verkade & Veen, 2017). Coenders (2015) refers to Lave and Wenger (2006) when arguing that community learning should not be seen as an instrument for, but rather as a perspective on learning. Geijsel, *et al.* (2009, p. 409) refer to the work of Bandura according to whom "human learning and functioning are explained in terms of a triadic reciprocality: individual behavior, cognitions, and environmental conditions operate as interacting determinants of one another." In this instance, the environmental conditions include social interaction. It is where what Bandura (1977, 1997) calls vicarious learning takes place. Drawing from this theory, it could be argued that much of what was discussed about learning in the practice domain, could be expanded to a group of learners: learning through exchange and

by observing (the effects of) other people's learning experiences. This learning by proxy requires the presence of role models: if one wants to learn from other people's experiences, one should be able to identify and interact with them. Wenger (1998) goes a step further: according to him, the social is not the instrument for learning, nor is it the perspective or context. He argues that "practice is always social" (p. 47), and that "engagement in social practice is the fundamental process by which we learn and so become who we are" (p. 0). Learning thus becomes the process of moving toward full participation in the socio-cultural practices of a community (Kelly, 2006; Potters & Poelmans, 2008; Enthoven & De Bruin, 2010). Ten Dam and Blom (2006) claim that learning relates to identity formation: it is not limited to acquiring knowledge and skills, it includes becoming a member of a community of practice. Drawing on Lave and Wenger, Kelly (2006, p. 513) argues that becoming an expert means adopting different stances towards one's tasks and that these stances are the product of "negotiating the meanings of our experience of membership in social communities."

In the previous sections, I argued that isolation is a major obstacle to teacher learninng. Social learning offers a sphere in which teachers allow themselves to be drawn from their individual domain in order to share their practices in a social community (Admiraal *et al.*, 2016). De Vries *et al.* (2013) discuss a number of additional mechanisms that explain why collaborative activities are effective. One of these is that sharing stressful experiences with others can reduce anxiety and increase confidence. Furthermore, it provides a context for getting feedback, new ideas, and being faced with challenges (Thoonen *et al.*, 2011), as well as the opportunity for getting moral support (Meirink *et al.*, 2010).

The mechanisms discussed so far can be understood from the concepts developed in terms of SLT (Social Learning Theory). Bandura (1977, p. vii) argues that "human thought, affect, and behaviour can be markedly influenced by observation, as well as by direct experience". In this view, the presence of role models influences teacher behaviour (cf. Bandura, 1977, 1997). Additionally, it may affect the very will to learn. In his *Mimesis Theory*, philosopher René Girard (2008) explains that while people may think they see the world from an objective

and autonomous point of view, the way they address and perceive that world is very much influenced by the people around them: people have a natural tendency to imitate other people's desires, as well as their behaviour. The idea of motives being socially oriented corresponds with what Bourdieu (1990) calls the establishment of *habitus*, the dispositions that people develop in a certain social environment. This socially acquired habitus subsequently determines how they observe the world. It detemines how they appreciate and choose their positions and actions. Habitus in that sense is the result of the process of socialisation, of social structures and experiences. Mockler and Sachs (2006) use Bourdieu's ideas to analyse professional learning: "on the more specific level of professional practice, habitus can be seen to manifest in routines, shared understandings, and attitudes to work and professional learning, for example."

Girard's theory can help to understand this concept of habitus and as such goes a step further than Bandura's concept of vicarious emotional learning. Girard suggests that there is more than only 'freeriding' on somebody else's learning experiences, from observing the consequences experienced by models. Girard claims that desire itself is mimetic: we do not want what we want, we want what other people want.
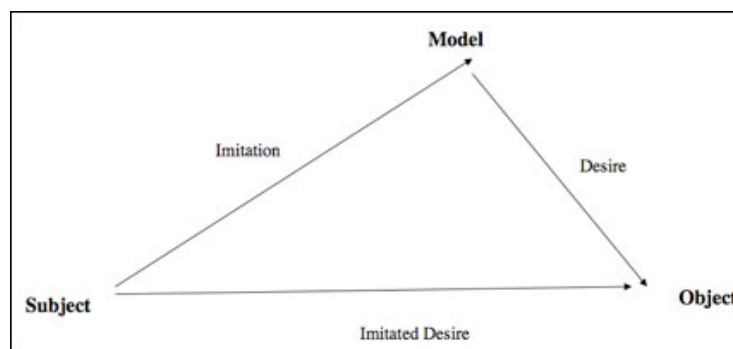
Fig. 5: Girard's mimetic triangle

Girard's mimetic triangle (fig. 5) illustrates how people tend not to desire objects, but rather imitate other people's desires for those objects. Thus, Girard addresses not so much the question of what we want, but how and why we want it. Although Girard's model was inspired by literature and religious texts, there is a wider relevance to his concept to mimetic desire. If, following Girard's basic model, we

take the subject to be the teacher, and the object that what is to be learnt, what is needed is a model, a mediator, someone for the teacher to identify with. A role model, a proxy, someone who represents what can be acquired. In a paper on mimesis and professional learning Billett (2014, p. 478) argues that

> opportunities for individuals to engage in situationally authentic circumstances such as workplaces, and the capacity to work alongside, with, or in reasonably close proximity to those who are more experienced and whom they can observe and use as models to monitor their own performance relatively would seem to be essential.

Van Yperen, Brenninkmeijer and Buunk (2006) experimented with secondary school teachers (n=262) and found that overall, exposure to a 'superior colleague' generated more positive effects than did exposure to an inferior other. In order for such models to be available, learning communities should not be too homogeneous – there should be a variation of talents and expertise. Another way way of creating the opportunity of being exposed to complementary expertise is when teachers become teacher researchers. If they co-operate with members from the research community, they become part of a different professional social domain. As a consequence, they place themselves in another mimetic triangle.

The notion of mimetic desire can be connected to the concept of *isomorphism*. DiMaggio and Powell (1983) argue that when people feel they are under pressure and when they have to deal with feelings of uncertainty, they tend to look at one another and become more similar, through mimetic and normative processes. Festinger (in Hart & Blanton, 2007) hypothesises that "there exists, in the human organism, a drive to evaluate his [*sic*] opinions and his abilities,"(p. 29) and "the existence of a discrepancy in a group with respect to opinions or abilities will lead to action on the part of members of that group to reduce the discrepancy" (p. 34). Staton and Hunt (1992, p. 109) define this process of socialisation as

> [...] the complex process by which 'people selectively acquire the values and attitudes, the interests, skills and knowledge—in short the culture—current in groups to which they are, or seek to become, a member', begins formally with the

onset of teacher education and continues throughout the career as teachers adjust, adapt, and change in their perspectives, roles, and environments.

The implications of this view for promoting professional learning are that teachers should be invited to engage in communities where these social 'zones of proximal development' (drawing on Vygotsky, 1978) are present. Proximal here refers to the idea that socialisation processes should be directed upward. The individual should be stimulated to developing more expertise or a higher level of professionalism, rather than being discouraged through the groups norms.

In his thesis on professional development in schools, Van Driel (2006) concludes that whilst the social domain offers powerful opportunities for learning, more often than not these are not seized. According to the Dutch inspectorate (Inspectie van het Onderwijs, 2013) this is mainly due to teachers' heavy workload and lack of time. Snoek and Volman (2014) studied a number of schools that do not actively organise the opportunity to meet colleagues to discuss issues or to visit classes. Here teachers had limited opportunities to act beyond their own classes.

To conclude: teacher professional learning is stimulated when the social domain is one in which teachers are invited to have their ideas and practices challenged by dynamically interacting with their colleagues.

2.6.3 Three contextual domains: the role of theory in teacher learning

In the previous section it was argued that working in isolation obstructs teacher professionalism, as it allows teachers to become 'self-referential': a state in which teachers only use their own frame of reference (based on personal experiences) and, as a consequence, act in a fairly static manner. I then discussed how the social domain is one way of engaging with external reference points. Another such opportunity can be found in teachers' engagement with the theoretical domain. According to Akkerman and Bakker (2011, p. 2) confrontations with external points of reference "compel people to reconsider their assumptions and look beyond what is known and familiar. In this way rigidity and routine can be avoided," and thus opening up to theory is another way to overcome isolation.

Orchard and Winch (2015, p. 16) define theory as "systematically organised knowledge, whether it is conceptual, empirical or normative, which can be used in teaching to inform professional judgment or action." Van Driel (2006) argues that such new input can feed the profession and avoid the risk of fossilisation. This new theoretical input can be approached in different ways. De Vries *et al.* (2013, p. 80) distinguish between "reading (e.g., professional literature, newly published textbooks, educational sites on the Internet) and schooling (e.g., courses, workshops, conferences, training, consultation in or outside the school) as activities teachers undertake to update their knowledge and skills after their initial education." For this to happen, however, it is argued that the teacher should not so much develop an opinion on the theory, but rather do the opposite: allow the theory to express an opinion on the teacher's practice (Koffeman, 2015). In that way reciprocity between the reader and the text is established, and thus theory can become the external point of reference which feeds the teacher's ideas and practices.

Theory seems the obvious place to consult external points of reference; to acquire new knowledge. According to Buitink (2009), a firm connection to the professional knowledge base is imperative: not only does it provide the teacher with insights that help prepare for and understand existing practices, it can also work as a catalyst to understand new practices, as theories (or rather: schemata (cf. Bolam *al.*, 2005) help make sense of the world: "theory fulfils our need for order in and verification of phenomena in our experience. It involves logical structuring, such as the formulation of definitions and logically derived propositions" (Lunenberg & Korthagen, 2009, p. 227). Using the example of the earth being round and orbiting round the sun, Wenger *et al.* (2002) argue that whilst some theory might be self-discovered, many concepts are too complex for that: theory helps to go beyond the obvious. Wenger *et al.* propose to distinguish between *knowing* on the one hand, which can exist through individual experience. On the other hand, there is "scientific knowledge (...) the prerogative of scientific communities, which interact to define what facts matter and what theories are valid" (Wenger *et al.*, 2002, p. 10). Hargreaves (2000, p. 170) strongly advocates the benefits of being connected to theory, arguing that theory provides "forms of

educational understanding, and ways of accessing and filtering educational research, rather than falsely deifying and uncritically applying a body of incontrovertible scientific 'fact' on effective teaching, learning, management and change strategies." Moreover, he states that "[e]ngaging with such a knowledge base is what lifts teachers out of the pre-professional prejudice that only practice makes perfect."

It could be argued that through theory the individual teacher can benefit from the experiences and findings of professionals from all over the world. Published education research makes these experiences and findings available, and increasingly accessible through modern technologies. A divide, however, separates the world of educational research from teaching practice (cf. Broekkamp & Hout-Wolters, 2006; 2007). Of course, educational research serves other purposes than teaching as a practical endeavour, but according to Broekkamp and Hout-Wolters (2006) teachers hardly consult even practice oriented publications such as handbooks and popular professional journals. Oosterheert and Vermunt (2001) argue that the theory–practice gap is particuarly salient in teacher education. Eekelen (2005) reports that consulting literature is the least frequently reported learning activity by teachers.

If the opportunity to learn from the experiences of others is amply available, one wonders why so few teachers profit from this opportunity, and how they could be stimulated to engage more with theoretical literature. Broekkamp and Hout-Wolters (2006; 2007), who published an extensive review on the gap between educational research and practice, discuss four types of solution for this problem. The first one is to apply the Research Development Diffusion (RDD) Model, which assigns a central role to mediators, who select, combine, and adapt research results in order to make them more relevant for practitioners. The second is the Evidence-Based Practice (EBP) model, which suggests that research should be focused on finding empirical evidence for effective methods (i.e. 'what works'; EER, similar to the sources discussed in Chapter 1.1), thus making them more relevant for teachers. What these two solutions have in common, is that they seek to make existing research accessible to practitioners. The practitioners are not really engaged in the design of the research, nor in the articulation of the research

questions. Existing theory is translated into the practical domain, in a form of one-way communication.

Broekkamp and Hout-Wolters (2006) discuss two other, more promising solutions, as they are more reciprocal in nature. The model of Boundary-Crossing Practices (BCP model) describes the value of combining tasks from different professional domains, for instance when teachers work in different contexts or work together with professionals from other contexts – ones in which people are more accustomed to consult theory. An British example of this can be found in the Oxford Education Deanery, "an expansion of an initial teacher education partnership to include wider school-university collaboration in professional development, and in research" (Fancourt, Edwards, & Menter, 2015). In the Netherlands, more and more schools are becoming 'training schools', which means that institutes of education work together with schools in order to optimise teacher training programmes and carry out practitioner research (Snoek & Moens, 2011; Rijlaarsdam, Janssen, Romein, Kappé, & Koffeman, 2012; Admiraal, Smit & Zwart, 2013). Such programmes can be seen as successful examples of the BCP-model. Teachers, students and researchers work together and benefit from each others' perspectives (Lunenberg & Korthagen, 2009). The fourth solution discussed by Broekkamp and Hout-Wolters (2006) is the model of Knowledge Communities (KC model), which assumes that "links between research and practice are established in professional networks that have the aim of making the participants – a group of people sharing an interest or passion – profit from each other's expertise and to generate new knowledge" (Broekkamp & Hout-Wolters, 2007, p. 210). Leeman and Wardekker (2010) and Sleegers and Ledoux (2006) advocate such networks, in which according to Kelly (2006, p. 509) expertise becomes "the constant and iterative engagement in constructing and reconstructing professional knowledge using various perspectives including teacher research with the aim of conceptualising and addressing problems." These knowledge communities thus have two functions: not only do they offer a context in which theory is available and accessible, but they also provide a context in which it is the norm to engage with theory.

2.7 Catalyst forces for contextual learning: reflection

Being involved in (or being aware of) a contextual domain does not automatically lead to learning. The interaction with context is multifaceted. It is affected by both personal factors, such as motivation and awareness (Eekelen, 2005) and by situational factors, such as organised exposure to context factors (Thoonen *et al.*, 2011). In addition, catalyst forces can be identified: mechanisms that help to accelerate the learning potential in that domain. It could be argued that – generally speaking – personal factors stimulate learning and help to perpetuate its effects. Eekelen *et al.* (2006), Eraut (2007) and Vermeulen (2016) suggest that metacognition is a powerful stimulus. Fraser *et al.* (2007) looked at teacher context and the professional learning opportunities these accommodate from two sets of dimensions: formal–informal and planned–incidental. In figure 6 these dimensions are visualised:
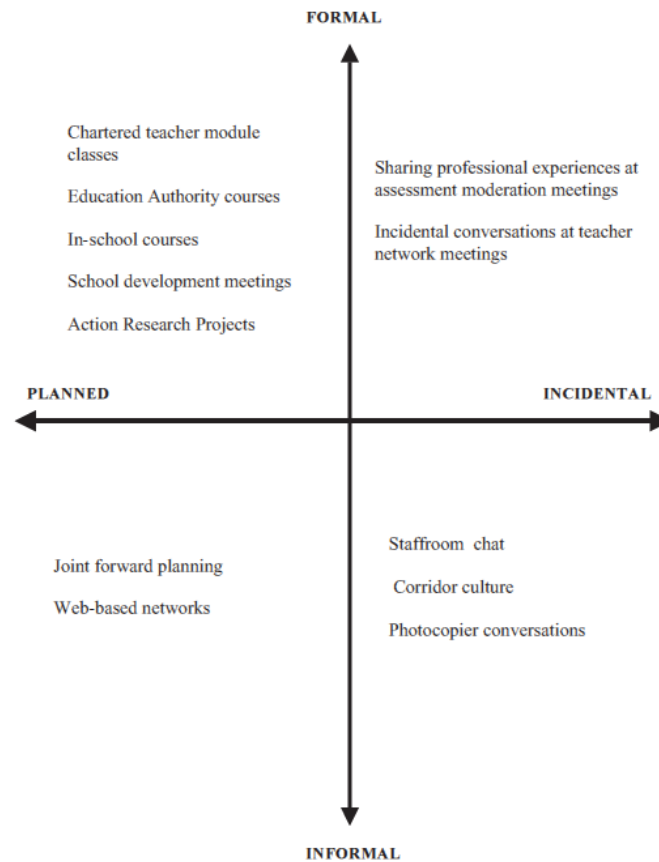
Fig. 6: Formal vs informal learning; planned vs incidental learning (Source: Fraser et al., 2007)

The suggestion might be that the more formal/planned learning activities take place, the more effective they are, but this idea is challenged by many (e.g. Van Driel, 2006). Reflection is another important catalysing force (Endedijk, 2010; Enthoven & Bruijn, 2010). According to Eneroth (2008), reflection is particularly important in informal, unplanned learning. Kelchtermans (2009, p. 264) makes a strong case for reflection, as it forces teachers to make the implicit explicit, which is essential if they want to "develop the validity of their professional know-how, refine or extend it." In other words, reflection can help the incidental, informal learning experiences that lead to tacit knowledge, become explicit and specific. In that sense, reflection is what helps to develop the discussed interactions and confrontation with and within professional context into sustainable learning experiences.

It could be argued that it is reflection that helps sustain what is learnt in the personal practice domain, the social domain and in the theoretical domain, when it forces the teacher to (literally) make sense of what was encountered or read. An often used quote attributed to Dewey[8] is: 'We do not learn from experience; we learn from reflection on experience.' The notion of teacher reflection as a catalyst for teacher learning has been accepted widely and promoted in teaching practice (Marcos, Sanchez & Tillema, 2011). In a recent meta-study on teacher professional development, Thurlings and Den Brok (2017) conclude that opportunity for reflection is conditional. In a paper on the reflective practice in teacher learning, Hébert (2015, p. 363) traces its ideological lineage to the work of John Dewey (1933), quoting from his *How we think*:

> It enables us to direct our activities with foresight and to plan according to ends-in-view, or purposes of which we are aware. It enables us to act in deliberate and intentional fashion to attain future objects or to come into command of what is now distant and lacking.

Valli (1990) also uses Dewey's ideas to promote the learning potential reflection has to offer: "it emancipates us from merely impulsive and merely routine activity

---

[8] Although very popular, this quotation actually does not appear anywhere in Dewey's published works. Dewey does make the case to "reflect upon an experience instead of just having it" (in Lagueux, 2014)

[...] It converts action that is merely appetitive, blind, and impulsive into intelligent action." (p. 17). In a study on teachers' learning in an informal learning environment Hoekstra, Brekelmans, Beijaard and Korthagen (2009, p. 672) stress the importance of reflection, as "a meaning-oriented mental level of activities [that] can be related to a change in conceptions as well as behavior."

Judging from these claims, it is no wonder that the concept of reflection is omnipresent in teacher education. According to Hébert (2015), the term is overused in teacher education programmes; to the point that it has almost lost its meaning. Different studies apply different definitions of reflection. Bengtsson (2003, p. 296), for instance, describes it as something that "occurs in action (1), but at the same time is separated from action and is of another kind, viz. a cognitive activity (2) and yet itself is an action, but of another kind than teaching action, viz. a kind of self-research (3)." Danielowich (2012, p. 102) defines reflection as a

> ... deliberative, active thought process, where teachers slow down their decision-making processes, identify conflicts between their intentions (what they are trying to do) and actions (what they actually do), and draw on both local and outside knowledge to foster change in their practices.

He continues to stress the role of feedback, which "is shaped in part by the gaps they perceive between their own desired goals and actual practices" (p. 104).

The kind of reflection that is relevant to this research project is what Schön (1983) refers to as *Reflection-on-action,* the retrospective thinking teachers do after their work; when they consider what took place, and recall what they were thinking, feeling and doing (Valli, 1990; Hickson, 2011). Drawing on Schön, Hébert (2015, p. 366) discusses the gap that exists between acting and reflecting in Schön's (1983) reflection-in-action, arguing that:

> [...] similar to Dewey, Schön's model also proceeds according to a causal chain, initiated by a moment of uncertainty. The process is sequential in that reflection-in-action only begins as cognitive awareness is brought to the action at hand, as practitioners turn thought back on action and on the knowing which is implicit

in action, 'noticing', 'situations', 'studying' habits or thinking about 'patterns of action'.

According to Wetzel, De Arment and Reed (2015, p. 546), adaptive expertise can be promoted through "reflection about teaching experiences enabling teacher candidates to critically examine their practice, think about themselves as learners and problem-solvers, and justify their problem-solving processes and decisionmaking." Zwart *et al.* (2014) promote what they call *core reflection*, which is aimed at an awareness of core qualities and ideals, and support acting on these qualities and ideals as well as overcoming obstacles. Concluding a review of more than 100 articles on reflection, Marcos *et al.* (2011, p. 23), state that "the majority of studies view reflection as a process of raising awareness but fail to identify the practical content of the process or the knowledge gained for improving teaching practice," promoting a more thorough approach, grounded in evidence-based or research validated information on what works in reflective practice. They go on to summarise that reflection is seen as a cyclical and recursive process that at least includes "(1) problem-solving, which (2) coincides with awareness-raising, in order to (3) construct professional knowledge" (p. 22). To initiate a reflection process that meets these requirements is not easy. According to Valli (1990) teachers might be inclined to self-regulate their teaching practice (with learning as a result), but self-regulating their learning requires external input. This external influence could be accommodated if reflection includes a dialogue with others, within the social domain.

This is a notion that will be further explored in the following section, but let us summarise what has been argued so far. In the previous section, I explored the nature of teacher contexts and I distinguished between a personal experience domain, a social one, and a theoretical one. I established that these domains can become sources for learning if they provide or enable confrontations and interaction that help to challenge status quo. I argued that it is individual reflection that sustains what is learnt in the personal practice domain, when it forces the teacher to make sense of what was encountered. In this section, I will explore the potential of reflection in the social domain. Accoring to Valli (1990, p. 86) "If left unsocialized, individual reflection can close in on itself, producing

detached, idiosyncratic teachers," which would allow the possibility of becoming or staying self-referential. Danielowich (2012) also stresses the importance of reflection that takes place in dialogue, shared with other teachers as it may "encourage them to make the conflicting, dissonant, and uncertain choices filtered out by their illusions visible and available for critique" (p. 103) and "use their ideas about others' work as lenses through which we can examine individual learning" (p. 104). Meirink (2011) also promotes teacher cooperation – teachers should be put in a position where they are stimulated to exchange their experiences as specifically as possible, thus opening the floor for debate. Hickson (2011, p. 831) argues that for reflection to be critical, it needs to include the social aspects of reflection as "critical reflection occurs when the individual is able to understand and challenge the validity of their assumptions."

Hoffman-Kipp, Artiles and López-Torres (2003, p. 251) also argue that teacher reflection and learning emerge in social practice. They see reflection as both a metacognitive mechanism and a social practice and place it within Engeström's CHAT [Cultural Historical Activity Theory] framework (see figure 7). They explain that the object of teaching activities cannot but be pursued in interaction with colleagues: "reflection itself is not contained wholly in the mind of the individual but is "distributed" through sign systems and artefacts that are embedded in the social activity of the school community." (p. 250)   .
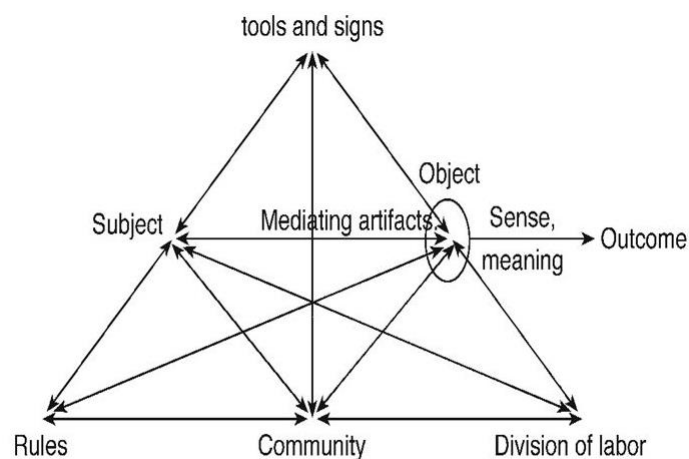
Fig. 7: Activity Theory: objects are mediated and influenced by community (Source: Engeström, 1987, p. 87)

Korthagen (2017) also stresses the role of the social, arguing that promoting teacher learning involves teacher thinking, feeling and wanting, dimensions that are always influenced by the social domain.

Being part of a social domain, however, does not guarantee reflection in dialogue. Ohlsson (2013, p. 297) argues that "teachers' teams tend to emphasise psychological safety and cohesion on the team instead of promoting critical arguing and challenging ideas," claiming that for social learning to be successful, there needs to be a high level of interdependency. Team cohesion is conditional for collective reflections and open dialogue. If these conditions can be met, reflection in dialogue provides the canvas for learning from and in the social domain. At the same time, reflection in dialogue should lead to the identification of differences in ideas and practices, which means that there needs to be room for confrontation as well. Alternatively, according to Aldridge, Fraser, Bell and Dorman (2012), reflection can be promoted by having teachers collect data to engage with. They argue that self-questionnaires are particularly suitable to generate this kind of information: these self-generated data can initiate what Hébert (2015) calls "a moment of uncertainty" and stimulate cognitive awareness. To this end, the self-administered questionnaire should help the respondent to assess the actual and preferred learning environment. This way they can identify which aspects of the learning environment should be adapted. In the methodology chapter, this potential of using self-questionnaires as a catalytic strategy to stimulate cognitive awareness will be further explored.

2.8 Conclusion: the three-domain context framework

The literature suggests that teacher quality can and should improve through professional learning activities that take place in collaborative settings which offer room for reflection, both individually and in dialogue. Effective learning activities (should) help teachers to harness the potentials offered within their professional domains – within their practice experience, their social interactions and their engagement with theory. Furthermore, this reflection can help teachers

to overcome isolation and the accompanying problem of 'self-referentiality'. Additional points of reference can be understood as being part of the different contextual domains that teachers operate in: teacher practice (i.e. personal experience) can be seen as a source for learning, as can be the social domain and the domain of theory. In the table below I have summarised these three domains in a framework (Table 2). The framework is based on nearness: moving from left to right, the distance between the teacher and the source for learning increases: the first domain is about first-hand experience, about learning from either direct observation (i.e. experiencing the effect of one's personal actions) or indirect observation (through feedback from others). The second domain is about second-hand experiences: it comprises learning through others' experiences, either directly (when the effects of the other's actions are observed) or indirectly (when these effects are communicated by the other). The third domain constitutes third-hand experiences: teachers can learn from what 'distant others' like teachers educators or researchers communicate about other people's learning experiences. This is the domain of theory: publications, courses, workshops, etc.

Table 2: Sources for learning - framework

Sources for learning in:	1. Personal practice domain	2. Social domain	3. Theoretical domain
Learning starts with:	Personal experiences (trial and error; 'learning by doing'); (response to) feedback	Examples, exchange (vicarious learning and mimesis) Identification with near others; participation; collaboration	Consulting theory/ literature; study, conceptualising (information processing)
Learning is mainly:	Reactive; implicit Inductive (practice becomes theory)	Observative Socially constructed	Deductive (theory becomes practice)
Learn from:	Self; feedback	Near others; role models; socialisation	Distant others; external points of reference; theoretical input
Types of knowledge:	'Practical wisdom'; intuitive expertise	Shared knowledge	Theoretical knowledge; schemata
Catalysing forces:	New, challenging practices (stimuli); positive and negative experiences; feedback of behaviours; reflection	Collaborative structures, like Professional Learning Communities or Communities of Practice	Presence of mediating forces; relevant ('what works') theories; cooperation with academics

The model is built on the premise that learning emerges from confrontation: teachers mostly learn when they experience that their existing capacities are insufficient, or when they are otherwise challenged to change their practices or their ideas. These challenges should preferably be situated in the teacher's zone of proximal development. Ideally, confrontations are perceived as *desirable difficulties*, a term first coined by Bjork (1994) with regard to organising effective learning activities. It means that if challenges are too small, they will not generate the urgency to prompt new behaviours; if they too big, they might lead to defensive reactions which might – eventually – result in conservatism.

Table 2 summarises the three domains in which these confrontations can take place, and it captures and compares their characteristics. This framework forms the conceptual basis for the three studies that are used to explore the role of context in teacher learning in this research. A methodology was designed to both provoke teachers' reflection on their learning and to provide an analytical model by which to understand the role of different domains in that learning. This will be explored in three studies, presented in Chapters 4, 5 and 6. Here the three domain context model will serve as a framework to inform the methodology and to explore and analyse the sources for learning of the specific groups of teachers that formed thee respondents and co-researchers in this project.

3. Methodology

3.1 Introduction: a qualitative exploratory study including elements of Participatory Action Research (PAR)

This chapter explains the methodology that underpins the research project. The research question – *What role does context play as a source for teacher professional learning?* – is addressed in a qualitative exploratory study that includes elements of Participatory Action Research (PAR). I briefly introduce the three consecutive studies that together form the research project. Then I discuss the methodological approach: first the exploratory character of the project, followed by its participatory design. Then the three studies are outlined, explaining how they form the developmental approach to exploring the research question (the studies themselves are examined in detail in Chapters 4-9). Then follows a section on the analytical approach, and finally, I discuss the ethical issues that were brought about by the project.

The project was a qualitative exploratory study which allowed me to embrace a range of approaches to examine the research question. It included elements of participatory action research (PAR) as I sought to explore the role of context with the participants. It meant genuinely collaborating with my students in order to deepen our collective understanding of the role of context in their learning. This meant cooperating with them in a way that involved intervening and examining what happened in order to see if there was a changed perspective – so it had an action research element. It was *exploratory* as I sought to understand the complex phenomenon of teacher professional learning through a cumulative series of linked investigations. It was primarily *qualitative* as most (though not all) data were of a qualitative nature, since I sought to understand teachers' experiences and perceptions of how contexts related to their professional learning. It had elements of *action* research in that it was about what Lewin (in Peters & Robinson, 1984, p. 116) calls "the discovery of the meanings actors gave to the events while they were acting." The research was *participatory* in that the role of the researcher and researched interchanged and the participants actively constructed data and contributed to their interpretation.

The research project consisted of three studies. In Study 1 master's students' reflective work was analysed to identify which context factors serve as a source for teacher professional learning. The second study built on these results. Here these identified factors were used to develop a reflective tool to prompt and capture teachers' engagement with context factors. Study 3 explains how this reflection tool was deployed; how the data were generated by the tool and how they were analysed.

The methodological underpinnings and the nature of the three studies will be explored in the sections below. The ways in which the data were analysed in each of the three studies is discussed in the presentation of the studies themselves, so in Chapters 4-9. This maintains the coherence of each study as a discrete stage in the exploration of the research question.

3.2 Characteristics of the exploratory approach

The central characteristic of the exploratory methodology was that I sought depth of study achieved through a cumulative approach, building understanding in stages. Each study is designed around the analysis of data from the previous one and is deeply informed by what has been understood and what needs to be explored more fully. The three studies investigated the specific whilst trying to represent a holistic view, by combining theoretical and empirical insights, and by designing multiple activities within the studies, each offering a further perspective on the research question. A contemporary phenomenon – the way teacher learning is informed by contextual factors – was investigated within real-life contexts, among teachers who were undertaking a master's programme that involved them in a range of activities inviting them to actively reflect on their professional learning, both individually and collectively.

I developed ways to generate in-depth accounts of events, relationships, experiences and processes that occurred as part of teachers' professional learning, in three distinct stages that formed 'studies'. These were linked by the design of an intervention around a reflection tool that acted as a catalyst for

teachers to consider their experiences of learning in differing contextual domains. I followed Crowe *et al.*'s (2011) approach and drew on real life situations in all three studies by inviting teachers to contribute examples of their learning, preserving the happenings within the domain in which they had occurred. Individual and collective reflection took place in the respondents' natural professional domains: their schools and as part of their engagement in their master's programme. These authentic settings were important in contributing to the validity of the data.

The underlying assumptions included the notion that if a phenomenon is inextricably linked to its context, it needs to be studied within that context. The studies were developed based on known attributes that were identified in the literature review (the three-domain context framework), that can expose 'distinctive features of the phenomenon' (cf. Zainal, 2007). Alaranta (2006) makes a case for combining 'theory-testing' (i.e. deductive reasoning) as well as 'theory-building' (i.e. inductive reasoning), and both had their place in these studies. Theory-*testing* was particularly present in the first study. In this study I looked at reflective work of master's students through the lens of the three-domain context framework, as developed in Chapter 2, thus *trying* the framework, to see if and how it helped to explain how context works as a source for learning. In the second study this tested theory was then developed when it was used to construct a reflection tool. In the third study this tool was used to invoke and record teacher reflection and from the sense-making of these reflections new theory emerged, when new assumptions were based on that sense-making. This will be explained further in the following sections.

3.3 Characteristics of the PAR approach

The role of context in professional learning is dependent on the learner's perspective. Baxter and Jack (2008) promote a constructivist approach when seeking to better understand participants' actions. Such studies allow close collaboration between the researcher and the participant. They help the

participants to tell their stories and "[t]hrough these stories the participants are able to describe their views of reality and this enables the researcher to better understand the participants' actions" (Baxter & Jack, 2008, p. 545) – which is fitting, considering the exploratory nature of the research question. The participants' stories, views and realities were captured when the respondents reflected on their learning, when they shared their understanding of how it is informed by different contexts. Understanding the role context plays in the professional learning processes of teachers requires listening to the experiences of those teachers. Drawing from the work of Glaser and Strauss, Atkins and Wallace (2012, p. 12) connect studies like these to the concept of grounded theory, explaining that it too "starts with the collection of data and goes on to develop a theory or theoretical framework based on an analysis of that data," implying that "the resulting theory is constructed from, or grounded in, the data which the researcher has gathered." Although this study is not a grounded theory project, I did draw on these ideas when developing the exploratory approach, as in the words of Glaser and Straus (1967, p. 40) themselves: "general relations are often discovered *in vivo*; that is, the field worker literally sees them occur", and this required proximity of me as a researcher to the participants' activities, and proximity of the master's students as co-researchers to their respondents.

The research project consisted of three consecutive studies, each one influencing the next, and this suggests a chronological, cumulative approach. At the same time, each next study also offered a new perspective on the previous one(s). Atkins and Wallace (2012, p. 3) promote studies that constitute an "'iterative' process in that it involves links between non-consecutive stages for the purposes of reflection and clarification" and advocate rigour, both in terms of inquiry and in the analysis of the data. This implies that the research question needs to be carefully framed and its parameters cautiously defined, to get what Atkins and Wallace (2012, p. 4) refer to as construct validity: "in thinking carefully about the way [the] question is expressed and aiming for clarity and precision in their terminology and phrasing, the researcher will be able to avoid ambiguity over how their terms of reference are to be construed and what constitutes 'evidence'". In this case, construct validity was achieved by using the research question as a

common thread through all three studies, each one allowing another perspective on that one question.

Understanding of the research question accummulated through the studies (cf. Atkins & Wallace, 2012). Moreover, this understanding was a collaborative process: the master's students not only helped shape the development of the three studies, but also contributed in the sense-making process (cf. Baxter & Jack, 2008).

3.4 Introduction to the three studies

The master's programme in which the participants were enrolled is pursued by experienced teachers and – to a lesser extent – school leaders from primary, secondary and tertiary education, and many of the students' ambitions coincided with mine as a researcher: they include wanting to gain understanding of how to stimulate professional learning; both their own, and that of their colleagues. This put me as a researcher in a unique position. It allowed me access to a group of articulate respondents who provided rich and informed insights into professional learning in their own right (the students are all experienced teachers themselves), but who could also serve as participants, and as co-researchers, by approaching and involving their teacher colleagues.

In the first study, the concept of context as developed in the literature review is further explored. As part of their coursework, the master's students composed texts in which they reflected on their professional learning. I examined these reflective documents, using the *sources for learning – framework* (see Table 2), to identify specific context factors as perceived by the students.
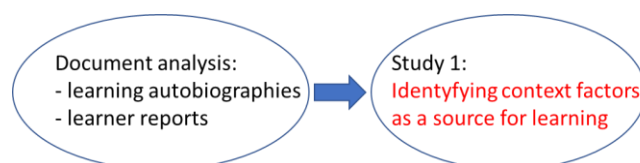
Fig. 8: Study 1: Identifying context factors as a source for learning

This exploration and subsequent inventory of context factors formed the starting point for Study 2, in which a reflective tool was developed. This was done in close collaboration with master's students and other teachers. To this end, they were organised in focus groups and a think tank. The results from the first study informed the questions in the reflection tool. A teacher think tank was consulted to construct an interpretation framework. Finally, focus groups helped identify rules for the deployment of the tool. They did so by developing design rules, each of which could be seen as a hypothesis, a relation between a goal and a means. The tool was developed to help teachers reflect on their professional learning, and on the role context plays in this. This reflection tool was instrumental in two ways: it would work as an instrument to collect data, and it formed an intervention as it stimulated teachers to individually and collectively reflect on how their context serves as a source for learning. It would allow them to verbalise how they had learnt so far, and to discuss how they would like to learn in the future. It would prompt them to formulate intentions for optimising the way their ideas and practices are informed by context. In short: the tool would put professional learning on the teachers' agendas and provoke in-depth conversations about how it was influenced by their contexts.
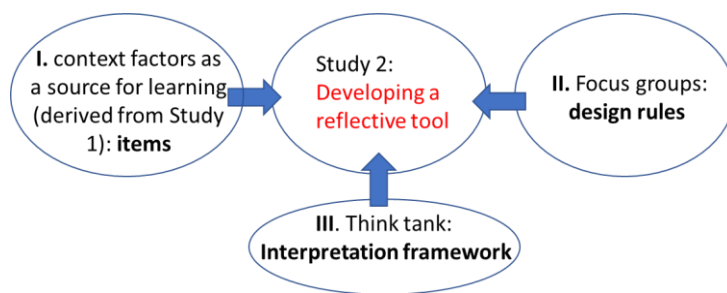
Fig. 9: Study 2: Developing a reflective tool

Study 3 explores the application of that reflection tool and examines the results of applying it in schools. This study is in three stages. Following a PAR-approach, thirteen master's students were prepared to have a number of workplace colleagues engage with the tool. The tool generated different kinds of results. In Stage 1 teachers' individual scores and written reflections in response to questions or 'items' were recorded. Then in Stage 2, the teachers' collective spoken reflections were facilitated and here the recordings of these

conversations formed the data. Then, in Stage 3, the students/ co-researchers who had introduced the tool to their workplace colleagues and implemented its deployment, discussed their own experiences and deliberations in a meta-reflection. These recordings formed the last dataset.
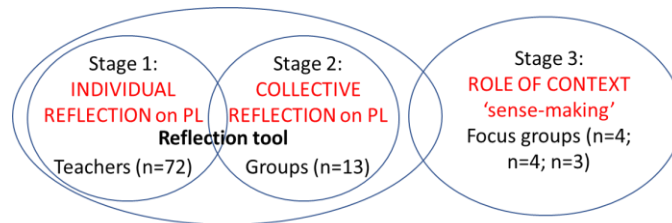
Fig. 10: Study 3: Teachers reflecting on context as a source for Professional Learning (PL)

In studies 2 and 3, the master's students were both respondents – as in their capacity of teachers they all had their own first-hand experience with professional learning – and they were participating researchers, because in their capacity of aspiring teacher leaders, they shared my ambition to understand the role of context as a source for professional learning. And so, to develop this shared ambition, the research was not just conducted on teachers, but with them as well. It was done by embedding elements of Participatory Action Research (PAR) in the project.

3.5 Analytical approach

The qualitative analyses undertaken in all the three studies can be classified as abductive, a method first described by Peirce in 1934. Locke, Golden-Biddle and Feldman (2008, p. 907) quote Peirce when making a case for using data in this way to generate ideas: "Deduction proves that something must be; induction shows that something actually is operative; abduction merely suggests that something may be" and that is fitting in relation to the research question. Exploratory research is well-supported by an abductive approach, as they further explain that through abduction we can "engender and entertain hunches, explanatory propositions, ideas, and theoretical elements" (p. 908). These are

informed by the researcher's position (Newman & Mowbray, 2012). According to Tavory and Timmermans (2012, p. 173), "The disposition to perceive the world and its surprises – including the very reflection on one's positions in this world – is predicated on the researcher's biography as well as on an affinity and familiarity with broader theoretical fields."

Consequently, in abduction, or abductive reasoning, the researcher's pre-existing implicit and explicit knowledge is not set aside, but it is deployed in order to make sense of the data (Mirza, Akhtar-Danesh, Noesgaard, Martin & Staples, 2014) as potential meanings evolve throughout the stages. This is fitting for this research project, considering my position as a researcher – being close to the data and to the respondents. According to Tavory and Timmermans (2012, p. 180)

> Abductive analysis emphasises that, rather than setting all preconceived theoretical ideas aside during the research project, researchers should enter the field with the deepest and broadest theoretical base possible and develop their theoretical repertoires throughout the research process.

In my case, this meant comparing and contrasting what I had found in the literature – with at its core the three-domain context framework – to what I found in the data, and developing my understanding through the activities. It also meant that understanding the role of context in professional learning accumulated through the studies, each new insight derived from one activity influencing the way the subsequent activities were developed and interpreted.

Tavory and Timmermans (2012) position abductive reasoning between induction and deduction: "Induction starts with a collection of given cases and proceeds by examining their implied results to develop an inference that some universal rule is operative" (p. 169); "deduction begins with a rule and proceeds through a case to arrive at an observed result, which either demonstrates the rule or falsifies it" (p. 170). This implies that whilst studying the qualitative data, I looked for a situational fit between the observed facts and general rules; I oscillated between what I knew from theory and my own experience, and what I found in the data.

Limitations of the approach include the following. Firstly, a complex reality cannot always be confined to researcher-imposed boundaries: teacher professional learning is more extensive than the boundaries of this research project. The fact that the key participants are not only teachers, but also articulate masters' students is an advantage in terms of richness of the data, but it might raise questions in terms of representativeness. Moreover, the credibility of generalisations can be jeopardised by the observer effect, especially when also considering the participatory elements of the project. Bassey (2001, p. 20) suggests that rather than generalising, it is better to make *fuzzy* predictions, as these "with best-estimates-of-trustworthiness may provide a powerful tool for researchers to communicate with potential users of research and also to develop a cumulative approach to the creation of educational theory." It means that when discussing the data in terms of the research question these things must be considered. It must be done with relativity and in perspective with the context in which the data were collected.

3.6 Ethics

The research project brought about a number of ethical issues related to the participatory approach.

First of all, the core respondents were students and therefore they might have felt pressured to partake – if not they could have felt it would be negative for their relationship with me, their tutor. To minimise this, not only did I use 'reassuring words', but also explained that not all students needed to partake for the research to take place: it would not be problematic if they (as an individual) decided not to, and I allowed them to opt out without consequences for the project.

Second, students that participated in the first study might have felt uncomfortable about their reflective texts being used as research material: there might be passages there that are personal or otherwise not meant for publication (the journals were written with me or my colleague tutors as a reader in mind). I

explained that the documents themselves would not be published or quoted from, but they would be used to draw up an inventory of *typical* instances of used learning sources. That meant that outliers or very particular or personal (and thus tracable) instances would not be part of that inventory – I was interested in common denominators. Moreover, these would be paraphrased rather than quoted, meaning that no connection could be made between the items in the subsequent reflective tool that was developed and individual students. Of course no student names would appear in the thesis. Finally, the respondents saw the result of the inventory and could comment on it and/or withdraw from the research, in which case their contributions would be deleted.

In the second study, students were asked to help develop the reflection tool , and – as part of that process – apply it themselves. They might have felt uncomfortable with the results, or with the idea that these results would in any way become public or with any sense of coercion to do this, due to the power relations between me as the tutor and them as students. Again, I clarified that the research was not about individual students or particular results, but rather about patterns. Here too, the applicants were informed every step of the way and could decide to opt out at any point, in which case their input would be deleted with no consequences for them as master's students.

In the third study, students were invited to use the reflection tool to reflect on the use of context factors as a source for learning with their colleagues. That meant that there was a double issue: the students might encounter discomfort, as well as the colleagues who would be approached by them. With regard to the students: what applied to the previous phases applied here, too (guaranteed anonymity, full information, possibility to opt out). The students' colleagues in question might have felt pressurised or uncomfortable. To avoid this, there was full information and transparency, and the option not to partake or to later opt out. As for the results, these were anonymised and would in no way be connected to individual respondents. The students were free to choose which colleagues to approach and they had a training session with me as part of their course, about how to manage such an approach and exercise judgements about to do this. Furthermore they would be able to contact me at any stage for support. They

were told to inform their colleagues that they may contact me directly for further information/clarification. The student participants could withdraw at any stage and could change or reduce the number of colleagues they approached. It was made clear that this was a learning opportunity from which they could gain wider benefits and there would be no penalties if they chose not to proceed or encountered barriers which prevented them from trying out the instrument with colleagues.

Finally, I made clear that I was not so much interested in individual outcomes generated by the instrument, but rather in the process of applying the instrument and its effect on reflecting on professional learning. The respondents, both the students and their workplace colleagues who agreed to participate in the study, gave explicit permission and they signed a consent form (see Appendix 3) that was validated by a UCL ethics committee, as was the procedure for the data analysis (see Appendix 2).

3.7 Conclusions

When designing the methodology to explore the role of context in teacher professional learning, I realised that I would need to study teachers *in vivo* (cf. Glaser & Straus, 1967). In order to generate data that would help to understand the dynamics of learning through confrontation, it would need to include interventions to provoke such confronations, that also could be studied *in vivo*. I was not in a position to enter the schools myself, and instead I decided to explore the research question with my master's students, who did have access. The students are all experienced teachers and would be able to generate relevant data in their own right. Moreover, they had access to their colleagues and they had indicated that they were willing and able to act as co-researchers. This meant adopting participatory action research (PAR) as an umbrella approach for the project. In every stage of the project, reciprocity between me as a researcher and my students/co-researchers was sought: when articulating the research question, when developing the reflection tool, when carrying out

the actual research, when analysing the data and when exploring the research question (cf. Denzin & Lincoln, 2005).

4. Study 1: Identifying context factors as a source for learning

This study forms the first phase of the project. To be able to examine the role of context in teacher professional learning, first the concept of context needed to be further explored in terms of teachers' experiences and perspectives. I needed to identify the dimensions and sub-dimensions that shape each of the three context domains, and that is the object of this study. The research question that underpins this first study is *Which contextual sources for teacher learning can be identified, and what role do they play in teacher professional learning?* This question was explored by an analysis of two sets of documents produced by master's students. I looked for evidence for the role of different contexts in teacher learning autobiographies and learner reports, produced by a diverse group of experienced teachers (n=18), as part of their course work in the master's programme. The findings suggest that three contexts can be identified in line with the literature: a personal practice domain, a social domain, and a theoretical domain, and that confrontations in each of these domains can take place planned as well as unplanned. The analysis led to an inventory of context factors that formed the basis for the second study, in which a reflection tool is developed.

4.1 Introduction

I am a tutor on a master's programme for experienced teachers and the questions around how contexts contribute to teacher learning first began to form during my teaching of these students. Most of the students have more than ten years of experience: they are examples of the veteran teachers whose professional learning was discussed in the literature review. According to the literature their learning would be problematic, and thus worth exploring. Before starting the master's programme, new students are asked to produce a 'learner autobiography', in which they reflect on their professional learning and, more particularly, on what prompted that learning. When reading these texts and

hearing their stories in the intake interviews, I was struck by the element of coincidence in their accounts of their professional learning: *learning is what happens while you're busy making other plans*, it seemed. I was struck by the prominent role of context in these autobiographies. It made me think about teachers' sources for learning, and about the levels of consciousness with which these sources are utilised. This intrigued me. The literature indicated that – although teacher professional learning is widely researched – *sources for learning* and the influence of context, of contingency and of the unplanned nature of professional learning, is a field that deserves more exploration. I began to more systematically explore the students' reflective work: not only the autobiographies they write before beginning their studies, but also the reflective work they do at a later stage. I used the three-domain context framework introduced in the conclusions of the literature review as a lens to analyse these texts, to study the role of context as a source for learning. The analysis of the data shaped my first understandings of the role of contexts in teachers' professional learning, but also raised new questions that needed further exploration. I decided to design a reflection tool that would enable me to do that. This was eventually used in Study 3 with a subsequent group of students. The development of this tool, that was based on the analysis of the reflective work, will be explained in Study 2.

4.2 Analysing learner autobiographies and 'learner reports'

The overall aim of the project was to better understand the role that context plays as a source for teacher professional learning. The literature suggests that teacher learning is complex: it comprises formal, organised learning activities such as workshops and courses. However, it can also be understood as the result of informal and unorganised events. If through these experiences existing ideas and practices are challenged, then as a result new ideas and practices can emerge (Lankveld & Volman, 2009; Eraut, 2004; Akkerman & Bakker, 2011a; 2011b). Professional learning thus highly depends on teachers' contexts, on the kind of confrontations these contexts accommodate, and on the ways these

confrontations are perceived. From the literature it was argued that such contextual teacher learning can take both planned and unplanned forms (e.g. Eekelen *et al.*, 2006; Kelchtermans, 2009), and, finally, that context can be understood in terms of three domains, as summarised in Table 2 in Chapter 2 and repeated here:

Table 3: Sources for learning - framework

Sources for learning in:	1. Personal practice domain	2. Social domain	3. Theoretical domain
Learning starts with:	Personal experiences (trial and error; 'learning by doing'); (response to) feedback	Examples, exchange (vicarious learning and mimesis) Identification with near others; participation; collaboration	Consulting theory/ literature; study, conceptualising (information processing)
Learning is mainly:	Reactive; implicit Inductive (practice becomes theory)	Observative Socially constructed	Deductive (theory becomes practice)
Learn from:	Self; feedback	Near others; role models; socialisation	Distant others; external points of reference; theoretical input
Types of knowledge:	'Practical wisdom'; intuitive expertise	Shared knowledge	Theoretical knowledge; schemata
Catalysing forces:	New, challenging practices (stimuli); positive and negative experiences; feedback of behaviours; reflection	Collaborative structures, like Professional Learning Communities or Communities of Practice	Presence of mediating forces; relevant ('what works') theories; cooperation with academics

To further understand what role these three domains play in teacher learning, how they are perceived and in what ways they are or could be deployed as a

source for learning, I used this framework to analyse students' reflective work. Prior to starting their programme, our students write a *learner autobiography*. Then, after the first semester, they write a *learner report* on what they have learnt so far. According to McCulloch (2004, p. 101) such personal documents can "shed a great deal of light on personal and private attitudes, aspirations and ambitions," which indeed they did. There are two main differences between the learner autobiographies and the learner reports: the moment they were recorded and the nature of the assignment that prompted them, and from these differences different perspectives originate. As for the moment they were recorded: the biographies were composed before the students began their studies, and they were not influenced by the very specific learning environment that is a master's programme. The learner reports were composed at the end of the first semester and as a result, the learning that is reported was clearly informed by the master's programme. One cohort of students (n≈20) were asked for permission for me to use these two sets of journals to make an inventory of typical (self-reported) sources for learning. Eighteen of them gave permission (the two that did not were leaving the programme). Most of these teachers (thirteen) worked in senior secondary vocational education. Two taught in secondary schools, and three in higher education. Ten were female; eight were male. The uneven distribution of the education sectors means that I should be careful not to make generalisations based on the data.

The first dataset consisted of what Hughes and Goodwin (2014) refer to as *topical autobiographies* in which an individual selects a particular theme around which a story is constructed. It provides the insider's point of view. The students were asked to write a 1000-word learner autobiography, explaining how they had reached the point where they were at in their careers, particularly reflecting on what they thought to be essential aspects of their profession, and on how these were 'learnt': through what activities, encounters and at what moments these had occurred, in short what they perceived as their most important sources for learning. These documents served two purposes: they helped students to organise their thoughts on their learning so far and to verbalise these in such a way that they could be discussed with their peers. At the same time the texts

offered the tutors the opportunity to get to know the student professionally. Rosenthal (in Seale, Gobo, Gubrium, & Silverman, 2007) makes a case for using such biographies as a source of information if one is interested in knowing the respondents' subjective perspective; if it is relevant to find "in what biographically constituted context they place their experiences" (p. 49). Hughes and Goodwin (2014) add the observation that when analysing these experiences, it needs to be taken in consideration whether the author is attempting to distort or deceive. Students might want to present themselves in a way that is socially desirable.

The second dataset consisted of learner reports (LR). The concept of LR was first introduced in the Netherlands by De Groot (1974) as an instrument to classify learning outcomes. LRs allow not only to report on the acquisition of knowledge and skills, but also on experiences and ideas that were developed. Van Kesteren (1993), who studied the application of LRs, calls this the acquisition of mental programmes, "the readiness to use various skills at one's own discretion" (p.65). The use of LR is not uncommon in the Dutch context (e.g. Buitink, 2009; Dam & Blom, 2006). In LR assignments, respondents are asked to report on self-perceived learning outcomes on two axes. The first axis is about *rules* versus *exceptions*, rules being defined as 'things that are', and that were discovered by the learner. Exceptions are defined as things that appeared different from what was perceived earlier. The second axis is about *world* versus *self*. World refers to objective knowledge; self to subjective knowledge. Out of the combination of the two axes four quadrants appear (see Table 4), and LR respondents are asked to answer four (types of) questions that each refer to a quadrant. In Table 5 short examples are given for each of these quadrants:

Table 4: Examples of Learner Report results

	LEARNING ABOUT RULES	LEARNING ABOUT EXCEPTIONS
WORLD	*I learnt about the importance of formative evaluation.*	*I used to think giving pupils compliments is a good idea, but now I have found this might lead to them developing a fixed mindset.*
SELF	*I discovered I find it difficult to ask questions: I have a tendency to give advice.*	*I discovered my inclination to refrain from giving peer feedback is unwarranted – my fellow students were very happy with it!*

The LR approach forces the respondents to reflect on confrontations and challenges, and to verbalise insights that might otherwise have remained tacit. These confrontations are contextual – they happen out of interactions with the context. This makes the LRs particularly relevant when trying to understand the role of context as a source for learning.

At the end of their first semester of the master's programme, and after an introduction into the LR methodology, the students were asked to write an LR on what they had learnt so far, spending at least one paragraph on each of the four quadrants, in a text of 1000 to 1500 words. The full assignment is included in Appendix 1: *Learner Report Task/Instructions to students*, as is further information on the LR approach. The students received feedback/ feedforward and would – at the end of their studies – be asked to look back on these reports, when reflecting on the overall learning outcomes of the programme.

Both sets of documents were coursework, unmarked, and aimed at stimulating reflection. The eighteen respondents gave permission for using their learner autobiographies and learner reports to be drawn on as data for the subsequent development of the reflection tool.

4.2.1. Analysis of the data

The biographies and learner reports were anonymised and uploaded into NVivo. Using the programme's 'node' function, I first highlighted all references to learning. To determine whether an occurence qualified as a learning episode (an episode being a piece of text that referred to something that was learnt through an event or an encounter), I looked at its effect: did it cause practices or insights to change according to the teacher's perspective? The episodes sometimes appeared explicit (the word *learn* was used, or a synonym); at other times implicit (a general reference to an occurence that changed practice). In Table 5 some typical examples are recorded. The <u>source</u> for learning is underlined; the **effect** bold.

Table 5: Examples of references to (sources for) learning in learner autobiographies and learner reports

Implicit or general learning references	Explicit learning references
<u>Working with this group</u> formed a real challenge	<u>Facing challenges</u> meant I've often had to <u>leave my comfort zone</u>, and **I learnt a lot** from that
In the course of my career <u>various meetings</u> **caused changes** – I recall <u>pupils as well as colleagues and heads</u> that caused me to **think about the next step in my career**	In 2014-15 I <u>did two modules in Special Educational Needs</u> that **deepened my understanding**
<u>Every situation</u> is what you make of it. Sometimes <u>a door closes</u> and then **a window opens**	<u>I coached students who were doing a project</u> and because of that **I learnt a lot about doing research** myself

The first dataset (learner autobiographies) yielded a total of 60 references to learning sources; the second set (learner reports) a total of 182. I then coded these highlighted sections again, this time applying (and thus at the same time trying) the three-domain context framework identified in the literature review:

learning through personal experience; learning through social encounters; and learning through theory. I was interested to find out whether these three predefined categories would work: whether all the learning episodes would fit within these domains, thus 'testing the theory'. Sometimes episodes were counted more than once – if the instance referred to more than one source (e.g. *I followed a number of courses* [=theory], *that included lesson observations with my colleagues* [=social]. *I learnt a lot from that*). Eleven fragments could not be attributed to any of the three categories, for instance if they were too general (e.g. *I learnt a lot, especially that there is so much more to learn*) and/or did not include a clear source (e.g. *in the past half year I noticed how effective cooperative learning methods can be*). These are not included in Table 6.

Table 6: Numbers of self reported sources for learning

	Personal experience	Social	Theory	TOTAL
SET 1: learner autobiographies (n=18), prior to study	42	8	10	**60**
SET 2: learner reports (n=18), after one semester	24	32	126	**182**

Then, in a third step, I coded and clustered subcategories by looking for common denominators within the three context categories. For all three domains the distinction between planned and unplanned learning could be made. In the domain of *personal experience*, I found episodes that had been informed by encounters with pupils – who had provided the teacher with feedback directly (by what they said or did in response to the teachers' actions) or indirectly (for instance by how they scored on their learning outcomes). Another category in this domain was situational: being in a certain situation had caused the learning to take place. Sometimes these situations were described in a general sense, at other times they were specified, for instance if the teacher reported a new professional role that had brought about new learning experiences. In the social domain, a distinction could be made between episodes that had a reciprocal

character, in which case the learning had been prompted by interaction, and 'one way' learning, which meant that the learning happened through observing or listening to others. In the third domain, theory, I found an interesting distinction between learning *new things* from theory, and reading theory that confirmed what was already present as tacit knowledge. This was particularly the case in the learner reports. Much of the theory covered in the master's programme appeared to have made respondents better understand what they had already known intuitively. The further sub-categories can be found in Table 7 below, as can examples of each of these.

These examples were combined and paraphrased and then – when I saw the students again as part of their course – reported back to the respondents. I handed them out on paper, asking them to verify if these instances were representative of their experiences. This resulted in very few adaptations, all on the language used (some of the instances could be interpreted in different ways, it appeared, or they needed a little clarification).

In the next section, the analyses will be discussed for each of the three domains: first, the reviewed literature is summarised as a framework to look at the data; then the data are presented and discussed.

4.2.2 The role of practice in teacher learning

From the literature I concluded that, according to teachers' perceptions, experience generated in teachers' practical domain is the most impactful source for teachers' professional learning and the improvement and innovation of practices. In the data I found that these experiences can be related to confrontations[9] and interactions with pupils, or feedback and input from pupils, with specific situations that were experienced as unsatisfactory (and thus required new actions or prompted new knowledge), or with more general experiences. These experiences can both be planned or unplanned, and their

---

[9] Please note that the term "confrontations" here has a wider meaning than having conflicts. It includes all kinds of discontinuities, contradictions, challenges.

learning impact on teachers can both be explicit and conscious, or implicit and unconscious.

The documents yielded a total of sixty-six references to learning from personal experience. Forty-two of these were found in the learner autobiographies, making it the most referenced source in this dataset (42 out of a total of 60), which reflects the findings in the reviewed literature (e.g. Smylie, 1989). The learner reports included a total of twenty-four (out of 182) references to learning from personal experiences. Three subdivisions could be identified: learning from pupil-oriented experiences (e.g. *the pupils let me know they thought it useful to first critically look at other pupils' letters, as it helped them get ideas for their own work*); from specific situations (e.g. *designing and then working with this lesson material forced me to focus on the difficulties of working with mixed ability groups*); and from more general situations or routines (e.g. *my capacity as a remedial teacher has taught me to look at the individual pupil: what does this child need?*). For each of these, unplanned as well as planned examples were found. In Table 7 the examples in italics are indicative of the document contents which have been paraphrased in a way that enables them to be compared.

Table 7: Learner autobiographies and learner reports: sources for learning from experience

	Sources for learning - from personal experience (as derived from learner autobiographies & reports (n=18; n=18), and supported by the literature findings)			
	Confrontation with	**Examples, operationalisations**	**Unplanned**	**Planned**
PERSONAL EXPERIENCE	Pupils	Interaction, feedback, input	*I use feedback I get from my pupils (things I hear and see) to adapt my teaching*	*I systematically collect pupil feedback to adapt my teaching*
			I look at test results to adapt my teaching	*I analyse test results to adapt my teaching*
	Specific situation	Crisis management; specific experiences; survival; 'being thrown in the deep'; making mistakes; being caught off balance	*I learn from my mistakes, from trial and error*	*I deliberately carry out experiments to create new experiences*
		New function or role; new opportunity; new project; new course book	*I learn from surprising events*	*I actively look for new things because that generates new experiences*
	General situation	What happens while you're busy (I discovered that I...)	*I find I learn new things all the time, but can't really say what events are the cause thereof*	*I reflect on my experiences and adapt my teaching.*
		Doing things more often; pracising; things getting easier over time	*I learn from doing things repeatedly*	*I actively seek to perfect my procedures*
			My intuition is my guideline	*I systematically reflect on my practice*

4.2.3 The role of the social domain in teacher learning

In the literature review, I discussed how social interaction acts a source for teacher professional learning, as it creates the opportunity to learn from the experiences of others. In this way, social exchange can help to overcome isolation and to de-privatise personal frames of reference (see also Louis, Mark & Kruse, 1996; Macbeath, 2019). Social interaction as a source for teacher learning can take different forms. It can originate from the passive inspiration that is offered by the observation of role models, or the one-way interaction where learning is inspired by the input from coaching, advice and feedback. It can also be more reciprocal and interactive. These are forms of social learning that are brought about by discussions, communities of practice, professional learning communities and lesson study approaches for example. As was the case with learning from personal experience, social learning can take place in either planned or unplanned ways.

The autobiographies and learner reports show that, despite the importance of social interaction argued in research on teacher learning, specific examples of social learning in schools appear rare. In the learner autobiographies that reflect the key learning activities during the teaching careers of the respondents, social interaction as a source for learning was least present (8 out of a total of 60 references). Moreover, the references that were made were not very specific (e.g. *During the course of my career, different meetings were the cause for changes made [...] colleagues and heads made me think about the next step in my career*) and sometimes they were based on interactions outside of the direct work context (e.g*. I owe my current position to the stories of my father-in-law, who was head master in a school for children with learning difficulties. His stories made me realise how important it is to...*). It is possible of course that teachers did have further social interactions related to their learning, but they were not recognised, or not understood as being significant by the teachers themselves.

By contrast, the learner reports showed that social learning was the second biggest reported source (theory learning was the biggest). Thirty-two out of a total of 182 learning episodes referred to social learning, most probably because

the programme uses the concept of *Community of Learners* as a model to organise student interaction, a notion that will be discussed later in the text. Three forms of social learning could be identified: learning from observing (e.g. *I observed a number of my colleagues' lessons. I learnt much from that*), learning from getting input (e.g. *Especially the colleagues from Language and Pedagogy gave me valuable advice*), and learning from interaction (e.g. *I find it important to regularly compare and contrast my ideas with my colleagues' as it forces me to underpin my choices and assumptions*). Again, in Table 8, the examples under 'Unplanned' and 'Planned' are paraphrased combinations of typical instances to allow comparison and be used for the development of the tool – which will be explained in the next chapter.

Table 8: Learner autobiographies and learner reports: sources for learning from social interaction

	Sources for learning - from social interaction (as derived from learner autobiographies & reports (n=18; n=18), and supported by the literature findings)			
	Confrontation with	**Examples, operationalisations**	**Unplanned**	**Planned**
SOCIAL	Examples, role models	"I wish I could do that"	*I learn from seeing what my colleagues do*	*I observe my colleagues to learn from them*
	Colleagues[10] - one way	Advice given by colleagues	*I learn from (unasked) advice given by colleagues*	*I ask my colleagues for advice to learn from*
		Feedback and/ or appreciation from colleagues	*I learn from (unasked) feedback given by colleagues*	*I ask my colleagues (or school leader) for feedback to learn from*
	Colleagues -two way	Discussions with colleagues, exchanging ideas	*I learn from unplanned interactions with my colleagues*	*I plan interactions with my colleagues and learn from those.*
		Interaction that forced to make knowledge explicit (to find words for what was felt intuitively)	*I find that interaction with my colleagues (incl trainee teachers) forces me to make my ideas on education explicit*	*I put myself in a position that forces me to make my ideas on education explicit*
		Undirected (cooperation leads to…)	*I share and discuss pupil work with my colleagues 'in the corridors'*	*I share and discuss pupil work with my colleagues in planned moments*

---

[10] Please note that where it says "colleagues", these could be co-workers inside or outside their school (e.g. fellow students at the master's programme).

4.2.4 The role of theory in teacher learning

The literature suggested that exposure to theory is a third source for teachers' professional learning and for the improvement and innovation of practices. Learning activities in the theory domain play an important role in exposing teachers to new input, and in forcing teachers to rethink their routines (Snoek *et al.*, 2018). Theory can function as an external point of reference to reflect on and evaluate one's own practice. Theory can also provide teachers with new concepts and new language to look at daily practice with new eyes. However, in the literature review it was argued that they might find it difficult to relate theory to their daily classroom practice. That limits its efficacy as a source for teacher professional learning. This limited role of theory in teacher learning was echoed in the learner autobiographies. Only ten references to theory as a source for professional learning were found in the eighteen learners' autobiographies (out of a total of 60 references to learning sources). Most of these references were of a general nature (e.g. *I was offered to participate in a Management Development programme, which meant I could specialise in how humans interact in organizations*). The role of theory as a source for professional learning shifted considerably in their learner reports. In these learner reports, 126 references to theory were found. This shift in the importance of the theoretical domain as a source for learning can be understood as the respondents recently joined the master's programme with a strong emphasis on theory.

The theory references could be divided into courses that had been followed (e.g. *when it became policy to conduct intake interviews, I signed up for a course on how to do this*) and texts that had been read (e.g. *Dweck's theory on mindsets proved very useful – it helps me recognise my own and my pupils' mindsets, and it also helps me when I coach my pupils*). It appeared that these two (courses and texts) could be further divided into sub-categories. As for courses that were followed, some of these had been required (and in that sense 'happened' to the teachers); others were chosen by design. As for the reading activities, a development could be identified, from reading theory that confirmed what was already obvious from personal experience (e.g. *being able to better qualify my pupils' behaviour helps me to put things in perspective*), through reading about concepts that added

something to existing knowledge (e.g. *what triggered me was [learning about] the effect of punishment. It helped me understand even better that punishment does not automatically lead to good behaviour*), to new insights and new kinds of knowledge (e.g*. [reading] Thomas Ziehe gave me new insights on street culture and school culture. I used to think it was a good idea to always adjust to my pupils' frames of reference, but now I am aware of the risks that that involves*). For almost each of these references to learning from interacting with theory, examples were found of both unplanned and planned episodes. They were planned when the respondents had actively sought interaction with new knowledge or ideas; unplanned when the respondents felt their existing ideas were challenged by what they encountered coincidentally. These confrontations and interactions did not lead to new practices, or at least not directly, but to new knowledge, new understanding.

The results are recorded in Table 9. The examples in italics are again paraphrased combinations of examples that were found in order to allow comparison and as preparation for the construction of the tool.

Table 9: Learner autobiographies and learner reports: sources for learning from theory

	Sources for learning - from theory (as derived from learner autobiographies & reports (n=18; n=18), and supported by the literature findings)			
	Confrontation through	Categories	Unplanned	Planned
THEORY	Courses followed	A new role/ function required a specific course	*I learn from courses that I have to follow*	
		A course followed out of personal/ professional interest		*I choose courses because I want to learn specific things*
	Read or heard something that could be linked to a situation experienced in professional practice	Confirmation (I already knew it)	*Sometimes I read something that confirms what I already knew instinctively*	*I look for literature to confirm what I think is true from my experiences*
		Complementary (Now I understand it in better way)	*Sometimes I read something that helps me better understand how things work*	*I look for literature to better understand how things work*
		New insights (I didn't know that); found new words (concepts)	*Sometimes I read something that gives me new insights*	*I look for literature to get new insights*
		I discovered that there are certain things I don't know or can't do (yet)/ there is a lot more than I thought/ there are alternative perspectives	*Sometimes I read something that makes me curious for more*	*I look for literature to get more curious*

4.3 Conclusions

In the literature review I discussed that the long-term effects of conventional organised teacher professional learning appear limited and proposed a broader

stance, in which teacher contexts are considered as a source for learning as well. Based on the literature, I explored these contexts and, in this study, compared the findings with reflections from experienced teachers that were about to participate in an in-service master's programme, and with reflections they made after a year's study. In both the literature and the responses from the teachers I could identify three domains that provide sources for teacher professional learning: the personal practice domain, the social domain and the theoretical domain. The literature suggests that for many teachers the personal experience domain is the most important source for professional learning. These findings were confirmed by the data: more than two thirds of the reported learning episodes (42 out of 60) in the learning autobiographies could be placed within this domain; and only about one sixth of references concerned theoretical learning (10 out of 60), leaving even less for social learning (8 out of 60). An explanation could be that the context in many schools does not support these two domains very actively and explicitly. In Chapter 2, I discussed that in many Dutch schools, teaching is organised as an isolated activity where one teacher has the responsibility for a class of pupils, making the profession a lonely one (Sarason, 1996; Vermeulen, 2009; Snoek, 2017). To mobilise the social domain as a source for teacher professional learning, structures and cultures would need to be created that facilitate and stimulate teachers to meet and collaborate. The theory domain cannot be taken for granted as a fruitful context for professional learning either, possibly because teachers – in contrast to e.g. medical professionals – are hardly challenged or rewarded to study the latest insights from research. Here too, to strengthen the theoretical domain as a context for teacher professional learning, it is necessary to create structures and cultures that facilitate and stimulate teachers to actively use the collective knowledge on teaching and learning that is available through research, to reflect on and evaluate their own practices. The studied learner reports – that were composed after a semester of part time study by the masters' students – illustrate the potential of such structures. This suggests that the contribution of the three domains to teacher professional learning can be optimized through a careful design of the learning environment. It requires an explicit understanding and awareness by the teachers themselves (both as professionals that are responsible for their own

learning and as teacher leaders that support colleagues), but also of school heads, Human Resource Development staff members and the school board.

As for the nature of these sources for learning: in the data for each of the three contexts specific activities were identified, both planned and unplanned. In Chapter 3, I explained the exploratory and cumulative approach of this research project; how each next study would build on the previous one. In the follow-up study I explored if and how these identified activities and the kinds of sources for learning that they represent, might be actively mobilised. That would help find complementary ways to organise professional learning, by optimizing the workplace as a learning environment, both in terms of unplanned, implicit and unconscious processes, as well as in terms of planned, explicit and conscious learning.

The research question that underpins this thesis is what role context plays as a source for teacher professional learning. In the literature review I discussed how teacher context can be divided into the domains of personal experience, the domain of the social, and the domain of theory. In this first study I explored these three domains in more detail, and I studied their potential as a source for learning, thus adding to the accumulation and deepening of my understanding of the research question (cf. Tavory & Timmermans, 2012). This first study offers an overview of sources for learning in each of the three domains. These sources (Tables 7-9) could act as a frame of reference for teachers, school heads and Human Resource Development staff, that could help them in their reflection on the way in which they mobilize the three contexts for teacher learning. The extent to which such a framework is indeed helpful will be the focus of the following studies: to see if and how the framework might serve as a way not just to identify existing or potential sources for learning, but also to mobilise these sources to help promote professional learning in specific areas.

To conclude, the analysis of learner autobiographies and learner reports helped to validate, or rather *test* the three-domain context framework. The framework can indeed be used to frame the variety of sources for learning that were found in the teachers' reflective writing. It thus allowed me to order and organise these

sources for learning which in turn helps to develop understanding of the role that context plays in professional learning. The data provided a clearer picture of the kinds of activities and events within the three domains that lead to learning.

This analysis also informed the methodological approach I developed for this research project. I used these findings to develop an instrument – a reflection tool – related to the three-domain framework to attempt to generate teachers' reflections on the role of contexts for professional learning. Tables 7 to 9 effectively form the first version of the questionnaire part of this tool: questionnaire items in the reflective tool were constructed for each of the three domains. The reflection tool is developed in the next study.

5. Study 2: Developing a reflective tool to record teachers' perceptions of the role of context as a source for learning

The literature review resulted in a framework that informed the conceptual parameters of this research project, the three-domain context framework (see Table 3). In Study 1, this framework was then operationalised. Drawing from teacher learning autobiographies and learner reports, I identified 'context factors,' typical examples for each of the three context domains (see Tables 7-9). The methodological challenge that followed was to find a means to have teachers reflect on these context factors in such a way that their deliberations would become visible. To understand the role of context in teacher professional learning, I needed to listen to teachers when they reflected on that context and its influence on their learning. This required a method that would prompt teachers to reflect on this perceived role of context as a source for their learning. This reflection needed to be organised in such a way that the respondents' deliberations would become visible, so that they could be captured to be studied. In Study 2 that challenge is addressed. It consists of the reflective tool development that helps to set the stage for the subsequent study. It presents the data that were analysed as part of the development process. Whilst these data informed the tool development, at the same time they contributed to deepening understanding of the research question, and both of these are explored in this study.

5.1 Methodology

The overall approach of the project, but especially in studies 2 and 3, was one of co-construction, in which participants contributed to shaping the activities that were to be studied. In that sense, they were both subjects and co-researchers – a core characteristic of Participatory Action Research (PAR) (Chevalier & Buckles, 2019). Moreover, the activities built on one another, allowing for both coherence and development of the study. Ontologically speaking, the notion that the 'reality' that was studied consists of realities that are created by groups, puts the

methodology firmly in the field of constructivism (Bhattacharjee, 2015). In terms of epistomology, that means that these realities would need to be interpreted, and serve to discover the underlying meaning of events and activities (Reason & Bradbury, 2008). According to Argyris and Schön (1989, p. 612-613):

> Action research takes its cues – its questions, puzzles, and problems – from the perceptions of practitioners within particular, local practice contexts […] it builds descriptions and theories within the practice context itself, and tests them there through intervention experiments – that is, through experiments that bear the double burden of testing hypotheses and effecting some (putatively) desirable change in the situation.

In terms of methodology, it meant adopting participatory action research (PAR) as an umbrella approach for the development of the studies. PAR helps produce data that can include both cognitive and emotional information (Denzin & Lincoln, 2005). That is fitting, because professional learning is not only a cognitive exercise, but one that is highly influenced by emotional factors, as was discussed in Chapter 1.2.1 ('A profession under pressure'). Lawson, Caringi, Pyles, Jurkowski and Bozlak (2015) state about PAR: "People other than formally trained researchers have good ideas to offer about the research question(s), the actual design, the interpretation and the findings, and how the findings can and should be used" (p.xv). Kemmis, McTaggart and Nixon (2014, p. 18) define PAR as "a spiral of self-reflective cycles". Consequently, choosing a PAR approach meant that some of the activities within the studies were developed, both for and with teachers.

An important area of attention here was that in this type of inquiry, researchers must be aware of their own position and "reflect on and critically engage with their own participation within the ethnographic frame" (Tedlock, 2005, p. 467), a point that needed to be addressed when analysing the data. It required a high level of self-awareness on my part and in my analyses my deliberations would need to be traceable. To address this point, I adopted a narrative approach, first of all when analysing the respondents' stories and their sense-making, taking into account the context in which the narrative was constructed (cf. Aldridge, 2015). In addition, I would need to reflect on my own position when making sense of the

data, as a form of 'reflection-in-action' (cf. Hébert, 2015). This analytical approach will further be discussed in the relevant sections.

5.2 Developing a reflection tool

The literature review helps to understand the learning potential of context as a source for learning and clarifies by what mechanisms it is underpinned. The analyses in the first study of 'naturally occurring data' (cf. Potter, 2002) – teachers' autobiographical accounts and reflections – illustrate this learning potential: in that sense these findings are operationalisations of the context model. They offer us a glimpse of what concrete instances of contextual learning look like in the lives of teachers. To get a deeper understanding of the role of context as a source for learning, I wished to deliberately elicit teachers' perceptions outside of the pre-existing task on a master's programme. To more deeply explore the insider perspective on these three domains, I used the analyses in the first study to develop an activity in which a larger group of teachers would reflect on their sources for learning. This reflection activity would have to do two things: it would make teachers reflect on the sources for learning they tap into, and in that sense be an intervention, an *in vivo* catalyst, meant to stimulate teacher professional learning. At the same time the teachers would have to record their reflections, and thus generate data. These data would benefit the teachers as a means to direct their reflection, and at the same time enable exploration of the research question. The combination of these two design features (a professional learning tool and an instrument to generate data) reflect the potentials of participatory action research (PAR) to enable deep engagement with complex phenomena, and extend the understanding of both researchers and participants so that the interpretations that emerge are the result of combined sense-making.

Aldridge *et al.* (2012) suggest that reflection can be promoted by having teachers collect data to reflect on. They advocate using self-questionnaires, as these can be used to prompt self-generated data through what Hébert (2015) calls 'a moment

of uncertainty' that can emerge. Ellis (2008) promotes using 'mirror data': "representations of current practices and discourses) [...] used with participants to expose, explore and work on tensions and contradictions at the systemic level" (p. 55). In my case, to achieve this, the questionnaire should provoke and allow the respondent to assess the actual and potential learning power of their context and help identify which aspects of this context might be further explored as a new source for learning. It meant that the study was developing an agentive agenda – aiming to bring about deeper self-realisation among teachers (cf. Gaventa & Cornwall, 2008; Parkinson, 2008). It would allow them to scrutinise their experiences and share these collaboratively, which is a potential driver for teacher learning (Ohlsson, 2013). I therefore designed a tool that would help teachers to reflect on their current use of learning sources, as well as prompt them to express their ambitions in expanding their sources for learning, thus challenging status quo (cf. Postholm, 2008). The reflections provoked by this activity would form my data. The tool consisted of three parts (see Table 10), each underpinned by design principles, which will be discussed in the next sections. Before turning there, it is important to clarify that whilst the way I present things here may suggest a tightly pre-organised plan, in reality it was an iterative project, which is typical for this kind of research: it is an aspect of PAR (cf. Wise, Brown, Oliver, & Poblete, 2018).

Table 10: The three components of the tool

I.	An introductory text to explain what was required of participants
II.	A questionnaire based on the three domains for learning as explored in Study 1, including a section that would help the respondents make sense of the results
III.	An interpretation framework: a text that would help respondents consider follow up activities

The tool would be deployed by the master's students (and their work-place colleagues) who had not been involved in the tool construction, and I realised that

from the intended respondents'[11] perspective, being asked to apply the tool might be interpreted as an invasive action. In the literature review I extensively discussed teachers' potential reluctance to open up to feedback or external points of reference (e.g. Inspectie van het Onderwijs, 2013; Edmondson, 1999; Kelchtermans & Ballet, 2002; Staton & Hunt, 1992), and this raised a challenge: if I wanted the tool to generate rich and valid data, then the intervention should be 'owned' by the participants. Therefore, the first condition was to produce a tool that would not be experienced as invasive, but as self-imposed, as a welcome endeavour. It would have to help the respondents to broaden their perspective on current and new sources for learning and give direction to the mobilization of complementing sources – not an easy feat. The paradox was that on the one hand, it needed to bring about ways to confront teacher isolation, that is: to de-privatise practices; to have teachers reflect on complementing or contrasting points of view. That implies an intervention from an outsider's perspective; brought about by an external change, from what Akkerman and Bakker would refer to as another activity system. At the same time, if the intervention part was to have any chance of success, it needed to be embraced from the inside, which brings us to the second condition. The project should result in what Anderson and Herr (1995, p. 16) call *outcome validity*: "the extent to which actions occur which lead to a resolution of the problem that led to the study". If this outcome validity could be secured, it would have a dual benefit - to help deepen teachers' capacities to reflect on and articulate their professional learning, and to enrich the quality of the data.

These two challenges were addressed by organising a form of respondent involvement from the start and on different involvement levels (see also Denison, Hooijberg, & Quinn, 1995; Kessels, 2012). If the reflection exercise was to be viewed as a response to a real, authentic question, then that question should not be imposed from the outside but articulated from within. The respondents should identify with the issues put forward and trust the tool to be beneficial. The items and examples used in the tool should be informed by actual and existing learning

---

[11] Please note that where I use the terms *respondents* or *teachers* in this paragraph, I mean the students' workplace colleagues. The students themselves are referred to as co-researchers (or students).

source examples, not just in terms of the concepts and ideas, but also in terms of language. The language would be informed by actual teacher discourse and for this I used the analyses and tables presented in Study 1: the items were based on previous students' reflective work. The students' influence was not limited to just the construction of the instrument. It also involved piloting it and deciding how to present it to colleagues and organise follow-up activities, when sharing the outcomes in a group dialogue. Different kinds of activities were planned to inform the construction of the tool:

I. Master's student focus groups assisted in shaping the tool-as-an-intervention: its introduction and presentation.

II. Learner autobiographies and learner reports were used to construct the items (Tables 7-9 in Study 1) and master's student focus groups were consulted to fine tune these items and present them in an effective way.

III. A teacher think tank was consulted to construct an interpretation framework, a text that would help respondents make sense of their results and to direct follow up activities

In Table 11 below, as a summary, the components are listed with the activities that helped shape them. For clarity, this is also the order in which the developed components will be presented in the following sections. Please note that this is not the *chronological* order of the development stages, but the *logical* order – the sequence in which respondents would see the components.

Table 11: How the three reflective tool components were informed by data

Reflective tool component	Informed by
I. The introduction to the reflective tool	Student focus groups
II. The question items and the way they are presented	Student focus groups in addition to students' learner autobiographies and learner reports presented in Study 1
III. The interpretation framework	A teacher think tank

5.2.1 Reflective tool component I

Designing the introduction to the tool

The cohort of students (n=13) that started their studies in 2016 assisted in identifying design rules for the way the tool would be introduced and applied, to support teachers to reflect on the role of context in their professional learning. The group – that consisted of eight primary school leaders, three primary school teachers and two secondary school teachers – formed three focus groups. Macnaghten and Myers (in Seale *et al.*, 2004) argue that such focus groups can be used "to generate talk that will extend the range of our thinking about an issue and to do that they recruit groups that are defined in relation to the particular conceptual framework of the study" (p. 68). Williams and Katz (2001, p. 7) conclude that not only the researcher can benefit from the use of focus groups, but the participants themselves as well, and in that sense, they mirror the PAR principle:

> [...] focus groups can be an empowering process for both researchers and participants. Focus groups may also generate rich data that can facilitate decision-making and provide useful information for the development, evaluation, and modification of curriculum, learning tools, and programs – information that might not be accessible from other research methods.

The master's students formed three groups (n=3; n=4; n=6), each of which included at least one teacher (the majority of these students were school leaders), so there were different perspectives in each group. The reason for the different group sizes was that these were all 'regular' groups – students worked in the same group all year. Not all students were present this particular day, which meant some groups were smaller than usual. Please note that the majority (eleven out of thirteen) of these students work in primary education, which might have influenced their discussions, as did the fact that most of these respondents were school leaders. This was not by design, but the result of chance – this was this year's student population.

The students were asked to critically discuss if and how the tool could be used to prompt teachers to reflect on context factors (as listed in the tool) and the way it might stimulate intended professional learning. This way they tried the tool and identified 'design rules[12]' for the way it would be presented and applied. The focus for this discussion was: what would *you* need to introduce the tool, and what would *you* need to discuss its outcomes with your colleague, in the light of its aim to stimulate reflection on context as a source for learning? The group discussions, that lasted on average twenty minutes, were (audio) recorded, and later transcribed and analysed.

The outcome of these reflective discussions was that the final version of the reflective tool should include a text to introduce the questions, and a further one to help the respondents to make sense of the outcomes – and thus stimulate reflection (component III). In addition, there would need to be guidance for the teacher participant who introduced the tool to colleagues, including advice as to how it could be presented to the respondents, and how to organise a group reflection on the outcomes afterwards.

From the analysis of the transcripts it appeared the students' deliberations could be divided into five categories which shaped the 'design rules':

---

[12] *Design rules* are a common concept in Dutch teacher education. A design rule is like a hypothesis, describing the relation between a goal and a means (Bimmel, Canton, Fasoglio, & Rijlaarsdam, 2008).

1. The context in which the tool could be used;
2. The conditions under which this should be done;
3. The written Introduction with which the tool would be presented (component I);
4. The interpretation framework (component III) which should help respondents give direction to their reflections on their individual results;
5. The reflection dialogue (the final part of the intervention) – advice that would help shape the collective reflection following the engagement with the tool.

For the sake of completeness, all (summarised) student suggestions are included in Appendix 5. Some of these are more or less pragmatic suggestions, such as *include a careful explanation; avoid vagueness;* and *stress that it is all about awareness*. Other recommendations are more critical: the students stressed the importance of a careful introduction with attention to sensitivities and providing a safe and supportive environment. Another major point was ownership: the respondents should 'own' the tool and its outcomes. This is a point that was amply discussed in the literature. Flores and Day (2006) problematise teacher vulnerability: "professional uncertainty, confusion, inadequacy, anxiety, mortification and doubt among teachers" (p. 221) stand in the way of professional learning, which requires daring to be vulnerable. The dilemma here is that for reflection there needs to be some form of confrontation, but that confrontation should be not threatening in any way. The students appreciated this and advised to stress that the reflective tool highlights one's own ambition – it does not tell respondents what they should do but helps them to direct their own ambitions and intentions to learn. Every respondent should use it to define his/ her own learning points.

These recommendations were also carried forward to Study 3 and used to refine the tool's written introduction, the presentation to respondents of their questionnaire results and its interpretation framework. Below the outcome with respect to the tool's introduction is presented: the introductory text as developed with the respondents, as it appeared in the final version of the tool (which can be

found in the appendices). Please note that these are translations – the original reflective tool is in Dutch.

Table 12: Tool component I - An introductory text to explain what was required of participants

What sources do you use for your professional learning?

In front of you is a reflection tool, meant to help you think about your professional learning. On the next page you will find 34 statements that can help you become aware of which sources for learning you use: what leads (or has led) to new knowledge, new behaviour, or new ideas for you? The statements are divided into the following three categories:

* Your own experiences as a source of learning;

* Learning from and with your colleagues;

* Learning from theory.

Each of the statements is presented as part of a pair: first there is a statement on an *unplanned* action, followed by a related *planned* action or activity. Please note that there are no wrong answers. Planned is not better (or worse) than unplanned! The idea is that you become more aware of your sources for learning.

To help you assess whether your present and desired situation differ from one another, we also ask you to indicate for each of the statements how you experience it right now, and how you would like it to be in the near future. Again: there are no wrong answers here; the idea is that you yourself assess what you are happy with, and what you would like to see different.

After each of the three blocks of questions, you will find the averages of your scores. Once you have finished, please turn to the next page to find a graph of your scores. On the last page, you can find a text that can help you further interpret your scores. Again: there are no wrong outcomes: you yourself determine where you stand, and where you would like to be. The instrument assists you in mapping the two and helps you become more aware of possible sources for learning. On the last page we ask you to write down:

   o what you consider to be the most important result(s) of having applied the instrument (so for instance the insight it has given you)

   o what follow-up actions you might formulate for yourself.

  It takes about 15 minutes to answer the questions.

5.2.2 Reflective tool component II

Designing the presentation of the questionnaire items

To refine the questionnaire items and consider how to organise them within the tool, a draft (paper) version of these was provided to the same cohort of students described in the previous section. The students applied the questionnaire part of the tool to themselves to see if the items 'worked' for them: to test if the items were clear enough and to experience whether the tool indeed provoked reflection. They wrote down any comments that they believed would help improve either the relevance of the individual items or the words that were used to introduce them, for maximum clarity. The students' feedback was used to refine the items. The suggestions did not involve changing the content of the items, only the language. As a result of their feedback, a small number of words were adapted to increase the clarity of the items.

A month later the students were asked to fill in the adapted *digital* version of the tool. This version was presented as an excel spreadsheet that – for each respondent – automatically generated a basic analysis of the results: cluster averages and a graph thereof (see Appendix 7). The students' experiences with the tool were discussed in two stages: first in a group dialogue, led by myself, followed by discussions in three smaller groups. Both the whole group discussion and the three follow-up discussions were (audio) recorded, transcribed and analysed. Each of the follow-up group discussions lasted about twenty minutes.

The first (whole group) dialogue, that lasted about thirty-five minutes, began with a discussion of pragmatic issues. It included a suggestion to erase two items that were not clear enough (they could be interpreted in two ways). The group suggested to tell respondents that filling it in would take about ten to fifteen

minutes, even if it had taken themselves a bit longer on average. Thus, the respondents would not to be demotivated. One of the students suggested the word "diamond" for the graph produced through Excel as it looks like one and has positive connotations. There was a more substantial discussion on one of the mechanisms that underpinned the tool. There was consensus that on the one hand it should be stressed that "there are no wrong answers" – to prevent respondents from giving socially desirable answers, especially in the second column where the respondents express their ambitions (see Appendix 7 for the tool in its final form). The idea put forward was that respondents might be inclined to present themselves as being more ambitious than they actually were. It needed to be made clear that each respondent should be honest about their ambitions. And yet, in order to prompt reflection, the tool should at the same time provoke a certain amount of tension. This could be caused by having respondents articulate what Akkerman and Bakker (2011a, p. 132) refer to as "the distinction between what is part of me versus what is not (yet) part of me." In the words of one of the participants: *how high do we put the bar?*, which prompted the follow-up question: *who is the we here?* This question was not really answered – instead the students nodded.

These were crucial contributions to the design of the tool. A number of options were discussed: some suggested that a score benchmark could be added so the respondents could compare their scores (for instance based on the scores of the master's students, who are possibly more ambitious than average teachers), or perhaps a benchmark that would allow respondents to compare their results to those of their colleagues, in which case a technical solution would have to be found to make this possible. Eventually the group decided that it would be best if each respondent decided on his or her own benchmark (as articulated in the second column of the tool; the one in which the respondents state how they would like things to be – see Appendix 7 for the tool in its final form), and would then choose which results to share and compare with colleagues, the colleagues' ideas thus forming a second benchmark. This comparison would take place after the individual application, in a special session, and it would be done orally. About the label of the second column, the group advised not to use the word "ideal" or

"desired", as this might foster unrealistically high ambitions or socially desired responses. It was argued it would be best to call it "how I would like it to be" (versus "how it is"). In addition, the students advised to include in the instruction that the scope of this "how I would like it to be" should be the *near* future, rather than some undetermined point in the far future.

In Table 13 the questionnaire is presented. Each item gives an example of a form of professional learning activity, and each of these items is based on the findings of Study 1. The items ask the participant to consider their personal engagement with it, e.g. 'I learn by consciously trying new things in my lessons'. The items are presented in the three categories (learning through personal experience; through the social; through theory). To maximise the chance of reflection, the items are presented in pairs: every unplanned item (e.g. *I learn much from accidental talks with my colleagues*) is followed by a comparable planned version (e.g. *I meet with my colleagues with the specific aim to learn from them*). Moreover, respondents are asked to rate (on a 1-5 scale) how they perceive things to be currently and how they would like them to be in the near future.

Please note that the questionnaire below represents the final version – an earlier version was tried in a test run with the students who were involved in the tool construction.

Table 13: Reflective tool Component II - The questionnaire items

Please score each of the items with a number between 1 and 5 (1 means never or very seldom; 5 means very often or always). There are 34 questions

PART 1 is about using your own experiences as a source for learning

1. I adapt my teaching based on spontaneous pupil feedback (the things I hear or see them do).
2. I systematically collect pupil feedback to learn from

3. I look at pupil test results to learn from.
4. I carefully analyse pupil test results to learn from.

5. I learn from my mistakes and things that happen to me whilst teaching.
6. I learn by consciously trying new things in my lessons.

7. I learn by repeating the things that work – my "automatic pilot" gets better and better.
8. I consciously try to improve my routines.

9. My intuition is my guide.
10. I systematically reflect on my teaching.

Own experience UNPLANNED AVERAGE
Own experience PLANNED AVERAGE

PART 2 is about learning from and with others.

11. I learn from what I see and hear what my colleagues do in their classrooms.

12. I observe my colleagues with the specific aim of learning from them.

13. I learn from uninvited advice by colleagues (or headmaster).

14. I ask my colleagues (or headmaster) for advice to learn from.

15. I learn from uninvited feedback by colleagues (or headmaster).

16. I ask my colleagues (or headmaster) for feedback to learn from.

17. I learn much from accidental talks with my colleagues.

18. I meet with my colleagues with the specific aim to learn from them.

19. I informally discuss pupil work with my colleagues.

20. I discuss pupil work with my colleagues during meetings.

21. I am a passive member of a network (for instance a professional learning community or community of practice)

22. I am an active member of a network (for instance a professional learning community or community of practice)

Social learning UNPLANNED AVERAGE

Social learning PLANNED AVERAGE

PART 3 is about learning from theory

23. I learn from courses (workshops, training) organised by the school.
24. I learn from courses I choose myself.

25. I happens that I hear or read things that confirm what already knew instinctively.
26. I actively look for literature to test if my findings are correct.

27. It happens that I accidentally read something which gives me new insights.
28. I keep up with literature to get new insights.

29. It happens that I accidentally read something that makes me curious for more.
30. I keep up with literature to stimulate my curiosity.

31. If I visit a conference (or another network meeting), I learn from talks with other visitors.
32. If I visit a conference (or another network meeting), I learn from the presenters and workshops.

33. when I read in the newspapers about the political and social discussions on education, I learn from that.
34. I'm focussed on the political and social discussions on education.

Learning from theory UNPLANNED AVERAGE

Learning from theory PLANNED AVERAGE

The instrument, which has the format of a spreadsheet that consists of five different worksheets or pages (see Appendix 7), immediately calculates and shows the average scores for each of the clusters, again, to stimulate further reflection by revealing to the teacher the outcome of their responses. It does so in two ways. First of all, on the excel worksheet itself, so the one on which the respondent notes the scores (as shown in the second worksheet in Appendix 7). Second, it presents the averaged results in a separate worksheet. For more clarity,

in this sheet not only a table is generated, but also a graph, to visualise the results. The graph has the shape of two diamonds (an Excel radar chart): one that represents the 'how it is' situation; one the 'how I would like it to be' situation. This worksheet includes a short explanation, as well as a number of questions that invite the respondent to reflect on the outcomes. In figure 11 an example of a results page is presented. Please note that the values shown here are included as examples of a possible outcome. In this example the difference between *Learning from theory planned* 'how it is' (2.7) and 'how I would like it to be' (4.2) stands out with a difference of 1.5. Please note that as the tool was meant for Dutch teachers, a Dutch version of Excel was used. As a result the numbers in this and subsequent figures are presented using commas rather than points.

The statements were divided into three categories. The first set was about *your own experiences* as a source for learning, the second one about *social learning* and the third one about *learning through theory*. The statements were presented as pairs: first there was a statement on an *unplanned* action, followed by a related *planned* action or activity. And so there are 3 times 2 categories. Below you find them in a table, and in a graph.

TABLE

	how it is	how I would like it to be	difference
learn from your own experience UNPLANNED	3,2	3,6	0,4
learn from your own experience PLANNED	3,0	3,8	0,8
Learning from and with your colleagues UNPLANNED	3,5	3,0	-0,5
Learning from and with your colleagues PLANNED	2,5	3,3	0,8
Learning from theory UNPLANNED	3,5	3,7	0,2
Learning from theory PLANNED	2,7	4,2	1,5

A question to reflect on: *what do these results tell you?* On the next page you some more information is given on how to interpret your scores and a number of possible follow-up activities

Explanation of the graph: you see two diamond shaped figures. The green one represents how you perceive things now; the oker one how you would like to see them. The outside diamond is the maximum score. Where are the biggest differences: green/ oker? Unplanned/ planned? And: what do you make of that?

Fig. 11: Visual presentation of individual respondent results (generated in a separate worksheet)

5.2.3 Reflective tool component III

The interpretation framework

In Chapter 2.5.1, I discussed the importance of respondents identifying "the distinction between what is part of me versus what is not (yet) part of me" (Akkerman & Bakker, 2011a, p. 132). To achieve this, I wanted the tool to cause reflection that included expressing learning intentions. To address this point, I added a worksheet with an *interpretation framework*: a text that would prompt

respondents to reflect on their results, and also on possible follow up activities. I followed the principle described in the previous section – the words in the tool should be informed by actual teacher discourse. There was an opportunity for me to rehearse such discourse: during the course of the project, I was asked to present my work as an introduction to a study day for teachers, organised in a secondary school in Amsterdam. During that day, teacher teams would discuss how they were going to organise their own professional learning, and my seminar (which was about the three domain context model) formed the introduction to those discussions. This was an opportunity to explore the ideas for the intended follow up activities – the ones aimed at identifying the distinction between *what is part of me versus what is not (yet) part of me* – which would be offered in the interpretation framework. In accordance with the iterative methodology, these teachers' views helped to shape my developing understanding of the role of contexts. The group of teachers acted effectively as a large focus group, a *think tank*. According to Räisänen, Josephsson and Luvö (2015, p. 543) if such groups are "centred around a group discussion focused on some kind of collective activity" [then] "participants generate the data through their interactions and conversations." In the conclusion of their review on focus groups, Williams and Katz (2001) promote using such groups "for the development, evaluation, and modification of curriculum, learning tools, and programs". The teacher think tank would help to deepen my understanding and inform the construction of the tool's interpretation framework.

The group consisted of about sixty teachers. After an introduction to professional learning based on the key concepts explored in the literature review, I presented the three-domain context framework. I asked the teachers to individually reflect on each domain, and to then discuss their deliberations with two neighbours, in groups of (about) three, turning the group into an idea-generating think tank. The assignment was to give concrete examples of learning activities in that specific domain, either from their own experience, or by using their imagination based on professional insights. Each of these groups were asked to write down their responses. A limited number of groups were asked to share and explain their responses to the rest of the attendants. All groups were asked to hand in their

written responses, with the promise that I would collate all notes and send everyone a copy of that, which I did later that week. This copy was a summary – there were no quotes that could be traced to the individual respondents.

These collected ideas formed an additional perspective to the thinking that informed the tool development, because of the larger number of participants and their different backgrounds – these respondents were not following a master's programme. Moreover, these teachers had been asked to not only tap into their personal experience, but also to include their professional imagination when reporting possible contextual sources for learning. And so – in that sense – this activity offered a complementary perspective: whilst the learner autobiographies and learner reports were strictly *retro*spective with teachers recounting actual learning sources from their own past, this activity was also *pro*spective in that teachers were asked to propose future learning activities that might occur, given their experience and knowledge.

The potential role of practice in teacher learning

In the presentation given to the 'think tank' teachers, the following distinction was made: on the one hand there is learning through *new practices* that lead to new learning experiences. On the other hand, learning can be prompted by organising and collecting new or other feedback *on existing practices*. As a result, the responses in this first category (see Table 14) could be divided into these two groups. As for organising new practices, the respondents advised colleagues to experiment: to try out new things, thus organising the emergence of new experiences, that – they suggested – would subsequently lead to learning opportunities. The dominant message was: if teachers learn primarily from their own experience, then they must make sure they regularly have new experiences. Another distinction in the results was between new practices in-school and outside of the school. Except for one example (related to bilingual programmes), the proposed in-school activities were mainly aimed at creating awareness, brought about by small interventions: adapting elements of daily practices, breaking the 'automatic pilot' routines, forcing the teacher to consider or reconsider what (s)he is doing. An interesting suggestion was to use external

models to evaluate (or confront) internal routines: reflection techniques, research instruments or taxonomies. Other suggestions here appear fairly conservative (e.g. to experiment with other types of lessons; with other forms of teaching/learning; with alternative group settings) – these are things that all teachers will have experimented with at some point. The external, out-of-school suggestions are more substantial, and they would potentially bring about really new perspectives, but might be difficult to achieve. Not many teachers will be in a position to try organising internship in other schools, for instance. The suggestions for generating new forms of feedback on existing practices are not difficult to achieve and could be effective as a catalyst for professional learning (e.g. Danielowich, 2012). In the table below the collected examples are recorded:

Table 14: Ideas for additional <u>personal experience</u> learning activities - "think tank" exercise

	New practices/ new feedback on existing practices	Internal/ external	Examples
Personal experience	**Organise new practices**, new experiences for yourself and reflect on the experiences generated by these experiments.	**Internally**, so within your own school	Use other course books. Variation: change the lesson plans/ programme.
			Experiment with other types of lessons; teaching/learning formats; group settings; learning aims (e.g. giving pupils more responsibilities; have pupils work together more; introduce scaffolding lessons). Variation: experiment with doing different things in two parallel groups to highlight the difference between the experiences.
			Organise projects and excursions.
			Present good practices/ teach to colleagues (the change in audience will generate your new experience).
			Change your own teaching context (e.g. if your school runs special programmes like CLIL [bilingual programme] join in, teach practical lessons, other year group). Variation: reorganise the composition of the groups, thus changing your audience (which will generate new experiments).
		Externally, so outside of your school:	Organise an internship in another school. Variation: teach classes in another school.
			Organise a sabbatical or work elsewhere for a while (e.g. in the private sector).

	Organise additional feedback for yourself:	Ask you pupils for feedback on specific points.
		Video record your lessons and analyse the recordings.
		Change the perspective: look at yourself in another way, for instance by using a reflection technique or through the use of research tools.
		Analyse the test you use for your pupils systematically, for instance by using Bloom's taxonomy.

The potential role of the social domain in teacher learning

The second category was the social domain. The suggestions for changing future practice from the think tank participants here divided into four subcategories. First, they gave examples of observing each other's lessons. An interesting option was to vary between observing same subject colleagues and colleagues who teach a different subject. The latter may provide very different types of feedback: for example, a PE teacher giving feedback to a maths teacher or vice versa. It would constitute what Bakker and Akkerman (2011. p. 142) refer to as othering: "defining one practice in light of another, delineating how it differs from the other practice." The second category (in the table below labelled as 'teaching') is about what in the literature is referred to as the de-privatising of practice (e.g. Louis, Mark & Kruse, 1996). The suggested activities here are supporting collaborative development of teaching that would promote verbalising ideas for teaching activities that may otherwise remain tacit, and opening them for discussion. The activities in the third category (exchanging) seek that effect in a more direct way – exchanging ideas is the very aim of the activity. The fourth category (inspiration) relates to what was found in the literature about the mimetic nature of teacher motivation and aspiration (see Chapter 2.6.2). The last two suggestions here are in line with what Billett (2014) and Van Yperen *et al.* (2006) suggest: to put yourself in proximity of a role model.

Table 15: Ideas for additional <u>social</u> learning activities - "think tank" exercise

	Categories	Examples
Social experiences/ interactions:	Lesson obseration:	Observe a colleague's lessons (either someone who teaches the same subject or one who doesn't – generates a different experience) and discuss your findings (or be observed). Mentor a trainee teacher.
	Teaching/ teacher collaboration:	Prepare lessons together (but teach the lessons yourself). Teach lessons prepared by someone else. Teach together with a colleague. Organise "job shadowing". Organise project-based learning (with others).
	Exchanging:	Learning networks (either within you school or with other schools). Organise brainstorm sessions. Organise intervision, supervision, peer-to-peer coaching. Consult colleagues, for instance on the course books they use, how they correct tests, etc.
	Inspiration:	Let your colleagues teach you. Engage with enthusiastic colleagues to be inspired. Actively look for role models.

The potential role of theory in teacher learning

The third and last category was the theoretical domain. In addition to expected suggestions such as using professional literature as external input, there were many references to online information like MOOCS and YouTube clips, or – to a lesser extent –participation in online discussions. In the literature review (see

Chapter 2.6.3), four models were discussed: the Development Diffusion (RDD) model; the Evidence-Based Practice (EBP) model; the model of Boundary-Crossing Practices (BCP model); and the model of Knowledge Communities (KC model). As discussed by Broekkamp and Hout-Wolters (2007), they can each help to organise theoretical input. What these four models have in common, is that they define the use of theoretical insights as something that does not take place as an individual, isolated endeavour, but in a broader context and as part of a systematic approach. The suggestions of the teachers in the think tank do not really match these approaches: the teachers appear to define using input from the outside mainly as an individual venture: something you do if and when you need it, and on your own. This narrow definition of how literature might be engaged with might explain why many teachers do not report literature to be a prime source for learning (Oosterheert & Vermunt, 2001; Eekelen, 2005). The suggested 'exchanges at the theory level' in the table below were proposed by only a few of the teachers. The findings in the theory domain thus reflect the results of the learner autobiographies, where literature was hardly mentioned as a source for learning. It was only in the learner reports (composed after a semester into the master's programme) that theory became a more frequently reported source for learning, suggesting that for theory to have a more systematic influence on professional learning, interventions are needed: interventions such as activities that are pursued in the context of a master's study.

Table 16: Ideas for additional <u>theoretical</u> learning activities - "think tank" exercise

	Input: individual or through exchanges	Examples	
New theoretical encounters	Input from outside:	Refresher courses, training, conferences, professional meetings. Use YouTube for online courses (e.g. MOOCs) or other sources (e.g. BBC documentaries). Enrich your teaching materials by using current, topical issues (so: look for those actively).	
		Use literature:	Keep up with professional literature. Conduct literature studies if you have a specific question. Benchmark your practice on key issues ("What does theory think of my practice?").
	Exchanges at the theory level:	Organise/ engage in discussions on important themes. Organise your own collegial library system by lending and borrowing books and other publications ("Here's something you really should read; shall we talk about it next week?"). Engage in relevant internet forum discussions.	

Designing the tool's interpretation framework

After completing the inventory, I designed the tool's concluding interpretation framework. The three tables (14-16) served as a resource for the construction of the interpretation framework. This framework was designed to help respondents to formulate ideas for follow-up activities: after filling in the questionnaire and looking at the results, they are invited to direct their ambition by formulating intentions. The examples recorded in the framework (informed by the think tank) are meant as prompts or inspiration to be provided for the respondents. The

reason for this was not only a desire to help the teachers in directing their own professional learning by mirroring results and possible consequences of these results. It helped to deepen the reflection of future users by adding a perspective: *here is what you could do; what do you think?* Not only did this add to the depth of the individual respondent's reflection, but this stimulation of deeper thought also supported the accumulation of my understanding with respect to the research question, in line with the exploratory character of the study (cf. Chapter 3.4)

Presenting the tool in the format of an Excel spreadsheet allowed the respondents to immediately see the accumulated results of individual item scores, and that would stimulate reflection. Moreover, the format allowed me to personalise the data that the respondents would see. The interpretation framework is included in Appendix 4. For the respondents it was presented in the shape of a spreadsheet page, in which the average scores appeared automatically. Columns entitled *What does your score mean?* and *Possible follow-up activities, should you wish to increase your score*, would invite respondents to direct their attention to their specific outcomes, their 'distinctions' between the different dimensions. Please note that the table in the appendix represents the final version of the interpretation framework.

5.3 Conclusion

With the completion of this last activity the reflective tool development within the study was completed: it led to the construction of a written introduction to the tool aimed at future respondents; to the construction of 34 items in a form that would give respondents instant insight in pairs of scores (*unplanned* vs *planned*; *how it is* vs *how I'd like it to be*) and divided into the three categories (*using your own experiences as a source for learning; learning from and with others; learning from theory*). It also produced cluster averages of each of these three categories and divided into *unplanned* vs *planned*; *how it is* versus *how I'd like it to be,* that would be presented in a table as well as in a graph, and finally, it

provided respondents with an interpretation framework that would help to direct reflection on future actions.

The group of participating students was now ready to work with their school colleagues to deploy the instrument in their own school environments: to each have their colleagues individually reflect on their professional learning by using the tool, to then organise a collective reflection on the outcomes with their colleagues. Finally, they would return to the university to collectively reflect on the insights from the data that were generated by employing the tool within their school, thus addressing the research goal: understanding the role of context as a source for teacher learning.

6. Study 3: Teachers reflecting on context as a source for learning.

6.1 Introduction

In this section the last of the three studies is presented. With the reflective tool developed and tried, it was time to have it deployed and study the data that it generated. As was the case with the first two studies, Study 3 was constructed around the experiences and activities of one specific group: thirteen students who started their master's programme in 2017: one primary school teacher, four secondary, six secondary vocational and two teachers working in higher vocational education. They were both respondents – as in their capacity of teachers they all had their own first-hand experiences of professional learning – and they were participating researchers. In their capacity of aspiring teacher leaders, they shared with me the ambition to understand the role of context as a source for professional learning.

It meant seeking reciprocity between the respondents and me as a researcher and including the students' experiences in the sense-making process. The idea was that the studies would be both the process of learning and the product of that learning. And so, to develop this shared ambition, the research was not conducted 'on' the teachers, but with them. It was done by embedding elements of Participatory Action Research (PAR) in the project. After a thorough preparation that included an ethics procedure, in the spring of 2018, the thirteen master's students each approached approximately five of their workplace colleagues in order to deploy the reflective tool with them in their schools. These colleagues (n=72) scored the items in the tool and reflected on the outcomes, first individually, and then collectively, in a session prepared and guided by the student in question. The item scores formed the first data set. Then, in the second stage, individual and collective reflections of the master's students formed the subsequent data sets. Finally, in the third stage, the students had a 'sense-making' session. The students' deliberations, organised and collected through focus groups, formed the last data set.

6.2 Preparing Study 3

Study 3 involved a group of thirteen master's students and their workplace colleagues (n=72). It required considerable understanding of the tool and its purposes: the students needed to be prepared to guide conversations with their colleagues. Understanding the concepts behind the exercise formed part of the students' study programme. This programme included lectures and assignments on teacher development and professional learning, and on concepts like activity theory and professional learning communities. It was important that the students, in their role as co-researchers, understood the complexities of the focus on professional learning, not only to help them anticipate their role as actors, but also to help them make sense of the experiences that their actions would bring about. This was important to guarantee the quality of the group discussions they would lead; it was important for their own *individual* understanding (their learning), and it would positively affect the depth and quality of their contribution to the project: the *collective* understanding, that would be explored in the final phase of the project, in the focus groups. In this way we achieved the "spirals of self-reflective cycles", typical for PAR (Kemmis, McTaggart & Nixon, 2014).

The deployment instructions presented both the students and me with a dilemma. On the one hand, instructions that were defined 'narrowly' would benefit the research reliability and would make it easier to compare the outcomes of the thirteen groups of teachers. On the other hand, the individual learning aim would benefit from relatively general instructions that allowed some freedom: instructions that could be interpreted differently by the students to fit their individual learning ambitions, their context and level of content knowledge (cf. Swants, 2008 on mutual development of knowledge). This would help to establish what William and Katz (2001) mention as one of the advantages of this type of research: empowering the respondents. In line with the principles of PAR (cf. Chevalier & Buckles, 2019), rather than making the choice myself, I decided to share this dilemma with the students, and we agreed that rather than instructing them in *what* to do exactly, we would focus on the *why* of the project. I therefore asked them to use their own judgement when introducing and

deploying the tool. The written deployment instruction[13] included this line: *approach about five colleagues with whom you regularly collaborate and organise a session for which you yourself provide an introduction. Decide on an approach that fits your situation. Use many or few words, determine whether you want to include an introduction on professional learning and reflection or not.* This degree of freedom benefitted the authenticity of the data and thus their 'exploratory potential'. On the other hand, it did mean taking a (calculated) risk, as it allowed for some variation in the contributions, which showed in the results. This point will be discussed later when analysing the results. Because students had been so actively involved in the development of the tool (as explained in Chapter 5.2), they felt they 'owned' it, and they were eager to get started. This empowering process (cf. William & Katz, 2001) mattered. It both deepened their learning (and therefore my learning as their tutor), and it meant the chance of meaningful reflections (and thus rich data) was optimised.

---

[13] Please note that the exercise was coursework, but coursework that was not marked. The master's programme has many such assignments, in which the students are encouraged to translate theories and concepts to their own practice.

Table 17: An overview of the stages within Study 3

Stage		Who	Data
1a	*The 13 master's students deploy the tool with a group of about five school colleagues each in their school workplaces.*	Teachers (n=72) in primary, secondary, intermediate vocational and higher education	Quantitative – individual scores from 72 school teachers as responses to questionnaire items (1a)
1b			Qualitative – 72 teachers written reflections on their scores (1b)
2	*Collective teacher reflection*	Teachers (n=72, organised in 13 groups)	Qualitative: each of the 13 master's students then organised a collective reflection on the outcomes with groups of these workplace colleagues
3	*Focus groups*	Master's students (n=11, organised in 3 groups)	Qualitative: the master's students themselves collectively reflected on what they had learnt through this activity in terms of the research question. They did so in three small focus groups

6.3 Stage 1: Teacher reflection - individual

In the first stage the thirteen master's students asked their school colleagues to each engage with the tool and provide indivual responses, as described in the previous sections. The thirteen students first identified a small group of workplace colleague teachers of their choice, each within their own school context, and asked them to participate, and to sign the consent form (see

Appendix 3). Based on literature on effective group sizes for collaborative learning (e.g. Ebbens & Ettekoven, 2015), we had agreed they would approach about five colleagues. Five would be enough to generate different ideas within each of the groups, whilst at the same time the groups would be small enough for every group member to be heard. As a result, most groups were between four and six, except for two: one student organised a group of seven; another a group of seventeen. This latter student is the team leader of this group and she wanted the whole team to benefit from the exercise. Seventeen proved not to be an ideal number, which will be discussed in the analysis of Stage 3 in Chapter 8. However, the choice was the student's – it was more important that she chose a group that was meaningful to her than the suggested number of five. And so seventeen was the logical choice for the student, which reflected her desire to participate according to her perceived need in an authentic, *in vivo* setting. This raised questions about the challenges of developing PAR that meets the needs of all the participants and of the difficulty of establishing fully shared understanding of the research goals and purposes of research activity. This turned out to be an important part of exploring – and gaining understanding of what can enable teachers to engage with reflecting on contexts for learning.

Thus, each of the thirteen students organised a session in which they first introduced the tool to their respective group of colleagues, after which the respondents filled in the questionnaire part of the tool. The students were near the end of their second semester and – as part of their other assignments – had engaged their colleagues in earlier instances. In that sense, the sessions were not unique to the colleagues: they knew about their colleague's master's programme. Some students chose to extensively introduce the activity and used course materials for this, such as powerpoint presentations and articles. Others only briefly introduced what was to happen and why. As was the case with the choice for the number of participants, the students were allowed what Bolam *et al.* (2005) refer to as 'discretionary autonomy', as it was crucial that they owned the exercise.

In this context, the teacher respondents replied to a total of the 34 questionnaire items that are included in Table 13. These 34 items were divided into the three

categories derived from the literature review (learning through personal experience; social learning, and learning through theory). The items in each of these categories were presented in pairs: first an unplanned activity, followed by a related planned one (as discussed in Chapter 2.4 *Non-formal learning*, and drawing from ideas by Eraut (2000) and Eekelen *et al.* (2006)). For instance: the unplanned item: *I learn much from <u>accidental</u> talks with my colleagues* was followed by the planned item: *I meet with my colleagues <u>with the specific aim</u> to learn from them.* It means that a total of six clusters appeared: three context categories; two types of engagement per category (planned and unplanned). Moreover, the respondents were asked to score each item twice: once for present state (*how it* is) and once for ambition (*how I would like it to be*).

Engaging with the tool thus yielded self-generated data by initiating what Hébert (2015) calls 'a moment of uncertainty' and stimulate cognitive awareness among the participants, creating opportunity for reflection (cf. Thurlings & Den Brok, 2017) through the emergence of mirror data (cf. Ellis, 2008). As outlined in Chapter 5.2.2, the reflective instrument was designed in the format of an Excel spreadsheet, to instantly generate the average scores for the individual respondent to see, providing an overview of their perceived differences between the three clusters, and between planned and unplanned activities, and between present state and ambition. The spreadsheet generated the averages for all of these categories both in numbers and in a graph. It included a text to help the respondent to interpret the outcomes. The students then asked the respondents to individually reflect on the outcomes and put that in writing on the last page of the tool. Thus the tool ended with the request to reflect on the outcomes by answering two questions: '*What do you see as the most important result of having used this tool?*' and '*What follow-up actions would you like to plan? If none, please indicate the reason for this.*'. The aim of this activity was to promote what John Dewey (1933) refers to as one of the purposes of reflection:

> It enables us to direct our activities with foresight and to plan according to ends-in-view, or purposes of which we are aware. It enables us to act in deliberate and intentional fashion to attain future objects or to come into command of what is now distant and lacking. (in Hébert, 2015, p. 363)

I had asked the students to stress the importance of this activity, because it would urge the respondents to reflect on the tool outcomes and study the interpretation framework, and at the same time generate qualitative data to complement the quantitative data. I copy-pasted these recorded insights and intentions from the spreadsheets to form a collection of short texts authored by the teachers for thematic analysis. This is further discussed in Chapter 7.2.

6.4 Stage 2: Teacher reflection - collective

The second activity was carried out with the same respondents and in the same location: the master's students with their workplace colleagues, and in their schools. The difference this time was that they were organised in groups. Each of the thirteen master's students organised a session with their group of colleagues in which the individual outcomes were discussed in a dialogue on professional learning and the role that context plays or could play. The thirteen discussions, that on average lasted twenty minutes, were recorded; the transcripts formed the data. This second stage typically started with respondents comparing and contrasting their individual outcomes, such as high scores, low scores, surprises, possible consequences. Then a more general discussion followed in which the teachers, led by the students, sought to give meaning to these tool outcomes. In most groups these activities took place in one session. Some students however chose to ask their colleagues to fill in the questionnaire before the collective session. This was mostly for pragmatic reasons: the amount of time that was available for the collective part, depending on the teachers' agendas.

The collective sessions lasted between 10 and 36 minutes, averaging a little over 20 minutes, and they were organised in the respondents' schools, either as part of an already planned meeting, or as a complementary one. In either case, it was important that the participants would experience the meeting as authentic and meaningful for two reasons. It would thus help generate *in vivo* data (cf. Glazer & Straus, 1967; Peters & Robinson, 1984), and it would underpin the *action* part of PAR: it was not only a research activity to record things as they are, but also an

intervention, meant to move to how things could be (cf. Anderson & Herr, 1995). In Table 25 an overview of these sessions is provided. Chapter 8 includes a critical analysis of the group discussions themselves.

6.5 Stage 3: Focus groups

The third and last stage again involved the master's students, but now without their workplace colleagues. It was organised at the university during a course day, a few weeks later. In a meta-reflection in three focus groups, they answered the question: how can the role of context as a source for learning be understood? This third stage is where entering 'spirals of self-reflective cycles' (Kemmis, McTaggart & Nixon, 2014) was accommodated. This collective sense-making was crucial in the PAR approach: here the developed understanding was accumulated (cf. Ohlsson, 2013) as the respondents constructed their shared narrative (cf. Roth & Bradbury, 2008).

After I had presented a summary of the data generated through Stages 1 and 2 to the group (without any interpretation), the students (n=11[14]) formed three groups in which they discussed how – from their respective understanding of the data and their individual experiences in Stages 1 and 2 – the role of context as a source for learning might be understood. The three discussions were recorded; the transcripts formed the last set of data.

The reason for using focus groups here was based on Williams and Katz's (2001, n.p.) claim that they can be "an empowering process for both researchers and participants", which is fitting considering the master's programme's aim of stimulating teacher leadership, and matches the PAR nature of the project. To maximise this effect, I chose to have the participants lead these focus groups themselves, allowing them to have a high degree of agency (cf. Chevalier & Buckles,

---

[14] One student had left the programme; another one could not be present

2019). I tried to minimise influencing their discussions – I was only available for questions that might arise about the procedure.

To summarise, Table 18 below presents the various activities within Study 3 and explains the shape of the data, as well as the way they were analysed.

Table 18: Study 3: data generation and analysis in each of the three stages

The stages (and the data generated by these)	The data analysis
Stage 1: Using a reflection tool, teachers (n=72) scored in 34 items how they learn from their own experience, from the social, and from theory, distinguishing between *planned* and *unplanned* learning, and *between how it is*, and *how they would like it to be*. The data consists of 72 excel spreadsheets	The quantitative data were analysed to explore the role of context as a source for learning: - What (reported) impact do context factors have on professional learning? (both as present and intended) - What items have the highest scores? What pairs of items (planned/ unplanned; present/ ambition) show the biggest differences? What does that tell us about the role of context?
In addition, each of the 72 teachers individually wrote a short reflection on the results generated by the tool. They answered the questions: what insights does the exercise deliver, and what intentions for follow-up activities (if any)? The data consists of 69 short texts	These qualitative data were analysed, underpinned by the following questions: - What is the nature of the insights; - What is the nature of the intentions? What does that tell us about the role of context?

Stage 2: Thirteen groups of teachers each had a reflective dialogue in groups of about five in their workplace. They discussed their individual and collective results of the reflection tool. Each of the group discussions was led by the master's student who was also their colleague. The data consists of thirteen recordings that were transcribed	The transcripts of the thirteen recorded discussions were analysed to explore the role of context as a source for learning, underpinned by these questions: - What (reported) impact do context factors have on professional learning? (both present and intended) - What is the nature of the insights; - What is the nature of the intentions?
Stage 3 Eleven of the master's students who led the dialogues met at the university and discussed their findings. In in three focus groups, they answered the question: how can the role of context as a source for learning be understood? The data consists of three recordings that were transcribed	The transcripts of the recorded discussions were analysed to explore the role of context as a source for learning.

Analysis of each of these datasets provided a different perspective on the research question. This analysis and these perspectives on the role of context in professional learning will be discussed in the next chapter.

7. Results of Study 3, Stage 1: Data generated by the reflection tool

This chapter presents and analyses the results of the first stage of Study 3. In Chapter 7.1 I will first present and discuss quantitative results – the scores of the questionnaires. Then, in Chapter 7.2 I present the qualitative questionnaire responses: the written individual insights and intentions.

7.1 Quantitative questionnaire results

This section of the research project has a different character from the others. It has drawn on the potential of including a mixed methods approach (e.g. Axinn & Pearce, 2006) to add a further dimension to conducting an exploratory study. It is important to highlight that, although I report numerical data here, the underlying question is not a quantitative one: I was not so much interested in the quantitative outcomes as such (numbers, scale or scope of the participants' responses), but in understanding *the role* that context plays as a source for learning, which is a qualitative question. The descriptive statistics below must therefore be viewed as part of the development of the study: these data formed another step in an accumulation of understanding (cf. Aldridge *et al.*, 2012). The instrument did not generate data with the purpose of quantifying how things really are (or could be), but with the intention of invoking reflection (mirror data) for the individual respondent (cf. Hébert, 2015). As a consequence, when analysing the scores, I do so against the background of this purpose. It means, for instance, that scores are not so much viewed in an absolute sense, but rather relative to other scores. As an example, I am particularly interested in outliers and big differences in teachers' scores between their perceptions of the *present* 'how it is' and *ambition* 'how I would like it to be', and *unplanned* and *planned* professional learning events or opportunities. Big differences could indicate the potential 'reflective power' of the tool: they can invoke what Hébert (2015) calls 'a moment of uncertainty' and thus stimulate cognitive awareness for the respondent. In the literature review I discussed Akkerman and Bakker's (2011a) notion that professional learning can be understood as the result of an array of

experiences through which existing ideas and practices are challenged. Big self reported differences between *present* and *ambition* can evoke such a challenge. They function as mirror data (cf. Ellis, 2008), triggering reflection on what Akkerman and Bakker (2011a, p. 132) refer to as "the distinction between what is part of me versus what is not (yet) part of me", and thus promote professional learning. At the same time, differences are interesting in terms of the research question. When exploring the role of context in professional learning not only the scores on *present* are relevant, but also the differences between the three domains, and between *present* and *ambition,* and between *unplanned* and *planned* learning, as these can help to further explore the complexities of professional learning, for instance when paradoxes can be identified, or surprising findings.

This focus on respondents' perceived discrepancy between how things are and how they wish things to be is similar to what happens in a needs analysis: "a review of the learning and development requirements [that] sets out the core competencies or skill level needed, evaluates the present level of competences and then identifies the areas to be developed." (definition European Commission/ EACEA/ Eurydice, 2015, p. 122). The difference here was that these 'needs' were self-imposed. Following the advice of a student focus group (see Chapter 5.2 in Study 2), each respondent determined his or her ambition, against which the current situation could be measured. As a measure to quantify these 'needs', I calculated effect sizes by dividing the differences between paired scores by the (average) standard deviation of the pair (see Table 19), a procedure not uncommon in needs analyses (see e.g. Altschuld & Witkin, 1999). The standard deviation thus becomes a measure for differences between paired items. When qualifying these differences, I looked at Hattie's 'barometer'. Hattie (2009) argues that effect sizes from around 0.4 should be considered 'medium'; effect sizes higher than 0.8 can be considered high. These calculated effect sizes proved to be useful as a way to quantify the differences: they revealed the tool's reflective potential and helped in finding focus in the data. At the same time, these effect sizes and what can be made of them must be weighed against the qualitative nature of the project. It means they are merely quantitative indications of what must subsequently be analysed qualitatively.

In the tables below, first all items are noted, and divided into the three clusters (learning through personal experience; through the social; through theory), in the order of the tool items. They are followed by the average scores per item and standard deviations. In the last column the difference between present '*how it is*' and ambition '*how I would like it to be*' is noted. At the bottom of each table the overall averages are recorded. A reliability analysis was carried out for each of the clusters, and the Cronbach Alphas are reported under each of the three tables to provide a measure of internal consistency, that is, to show how closely related the set of items are as a group. These values are low (between 0.3 and 0.7), suggesting that the cluster items have relatively little internal consistency. In other words, not all the items in a cluster seem to measure the same thing. A reason could be that the items were designed not so much to record 'the truth' but rather to evoke reflection, in which case variation is a good thing. In the literature review it was established that 'confrontation' has high learning potential(e.g. Akkerman & Bakker, 2011a), which is prompted by difference. The bigger the reported differences, the more reflection is invoked potentially, and subsequently the higher the chance rich data is generated. It does mean, however, that not too much could be concluded from the cluster averages in terms of generalisations. The first cluster (learning through personal experiences) shows the lowest consistency, particularly with regard to ambition (*unplanned*: 0.35; *planned*: 0.31). The other clusters are slightly more consistent with Cronbach alphas around 0.5 and 0.6, but still too low to draw conclusions from the cluster averages. Again, in terms of the tool's aim of reflection that is not problematic, because the item scores are indicating more than the cluster averages, anyway. In terms of general outcomes – what do the outcomes tell about how teachers learn in terms of the different clusters – it would problematic. Because of relatively low cluster reliability, the discussion of the results will be mainly on item level, which will provide insights into differences between item pairs rather than on teacher learning in general.

7.1.1 Analysis of scores: personal practice as a source for learning

The literature review suggested that personal practice as a source for learning would score highly, especially in *unplanned present* (e.g. Eraut, 2000; 2004;

Eekelen, 2005; Hoekstra, 2007; Lankveld & Volman, 2009; Sleegers & Ledoux, 2006), and that – as a consequence – *planned* experiental learning would score highly for the *ambition* items. These expectations were met with average scores for the 72 participating school teachers of 3.7 and 4.0 (on a 5-point scale) respectively (see Table 19). The scores on the first three items for *unplanned ambition* were even higher than the scores on *unplanned present*. '*I adapt my teaching based on spontaneous pupil feedback (the things I hear or see them do)*' scored 3.7 on *present*, which is already a high score. It scored 4.1 on *ambition*, almost half a point higher. '*I look at pupil test results to learn from*' scored 3.5 on *present*, and 4.1 on *ambition*. The biggest difference was found on the item '*I learn from my mistakes and things that happen to me whilst teaching*'. It scored 4.2 on *present* – the highest score of all *present* items; it scored 4.7 on *ambition*, the highest score of all items in the questionnaire. Although indications of this were not found in the literature, I had expected the latter to be lower: based on Studies 1 and 2, I thought that teachers would want to score lower on *unplanned* (*ambition*) learning here, in favour of *planned* (*ambition*) learning. These scores suggests that the respondents are satified with sponteanous learning, with what already is their biggest self-reported source for learning. Not only do they score high on *present*; their *ambition* is to score even higher. They seem to be saying they would like chance to be their biggest source for learning. The 4.7 score is close to the maximum (the scale is 5-point). This unintentional learning is the kind of learning that Eraut (2000) defines as implicit: knowledge that is acquired unconsciously and without explicit knowledge about what was learned. According to Harteis and Billett (2013, p. 146) it leads to 'intuitive expertise': "the capability to act or decide appropriately without deliberately and consciously balancing alternatives, and without following a certain rule or routine, and, possibly, without awareness." The implications could be considerable: if these results were representative for the profession it would help to explain why teacher professional learning is considered problematic (e.g. Inspectie van het Onderwijs, 2013, 2017). This is a point that will be discussed in the final chapter of this study.

These results confirm what was found in Study 1, the indications found in the learner autobiographies that the master's students composed before starting their programme. I observed there the large influence of chance as a driver for professional learning (see Chapter 4.2) – in fact it was this observation that informed the initial rationale for developing the studies in the first place. What these findings here add to the earlier ones is not so much the high score on *present*, but the even higher one on *ambition* for these items. If it is a teacher's highest *ambition* to learn from mistakes and things that happen whilst teaching, *and* not to plan too much for such mistakes or events to happen, then that could be viewed as problematic. That is: if such unplanned learning opportunities would not regularly present themselves. The literature suggests that such lack of opportunity is unlikely to strike any time soon (see Chapter 1.2.1 *A profession under pressure*). Growing pressures are likely to continue to provide opportunity and motive for professional learning through personal experience (e.g. Eraut, 2004; Lankveld & Volman, 2009; Rohaan, Beijaard & Vink, 2012).

However, there is a paradox here. According to Plato,

> [A] man cannot search either for what he knows or for what he does not know[.] He cannot search for what he knows--since he knows it, there is no need to search – nor for what he does not know, for he does not know what to look for" (in Cooper, 1997, p. 880).

If one's personal perception of things as they present themselves is the main source of learning, then that restricts that learning: it limits the sources for learning to the things that present themselves. Interestingly, Plato claims that Meno's Paradox, as this is called, can be resolved through recollection, a process not much different from what in modern literature is referred to as core reflection (e.g. Zwart *et al.* (2014). Buitink (2009, p. 118) refers to this kind of implicit, unintentional learning as the acquisition of a 'mediocre pedagogy' when

> Underlying principles often remain unaddressed and, if they are addressed, are not always theoretically underpinned. […] In the implicit learning process, teachers and student teachers learn how to teach without being conscious of it, let alone of how they mastered the skill.

There is an alternative explanation for the high score on '*I learn from my mistakes and things that happen to me whilst teaching – ambition*' here. It could in part be that the scores are so high here because of how the pairs of items are presented. In spite of the reassuring words in the introduction ("*there are no wrong answers here; the idea is that you yourself assess what you are happy with, and what you would like to see different*") it could be that respondents felt invited to be ambitious and score high here. The focus groups in Study 2 suggested that ambition is generally perceived as something that is expected. The respondents knew they would discuss the results afterwards. On the other hand, items 7 (*automatic pilot* vs *consciously improving routines*) and 9 (*intuition* vs *systematic reflection*) score very similarly in *present* and *ambition*, which undermines this explanation. This is a point that will be elaborated on in the students' meta reflections and in Chapter 7.

By far the biggest difference in responses between *planned present* and *unplanned present* items can be found in items 1 '*I adapt my teaching based on spontaneous pupil feedback*' and 2 '*I systematically collect pupil feedback to learn from*'. Systematically collecting student feedback (item 2) is scored lowest (2.7) in this first cluster. It is, in fact, the third lowest score of all the items, in all of the clusters. The *ambition* to collect student feedback is very strong, however, with an average score of 3.9. The difference between *ambition* and *present* regarding the item on student feedback is in the tool's top three of high scores. In terms of the research question – understanding the role of context as a source for professional learning – this is important. The suggestion here is that the biggest learning potential lies in more systematically looking at student feedback, a suggestion that is widely supported by the literature (e.g. Hattie, 2003). In the literature review I discussed Leeman and Wardekker's (2010) argument that teachers should be encouraged to learn more about their pupils through practice research. Knowing more about the effects (i.e. dependent variables such as pupil learning outcomes) of their actions as a teacher (i.e. independent variables such as specific teacher behaviour) will result in more opportunity to learn. The data here support that argument. Systematically collecting feedback, systematically analysing student results, and systematic reflection on one's teaching practice –

the items that showed the biggest difference between *present* and *ambition* –
require actions or interventions that might expand the teachers' personal
practice domain: teachers who are caught in routines are unlikely to change these
routines and acquire the skills to do so on their own (i.e. the 'Meno' argument).
Although the domain of individual personal practice is the source for learning
here, the teacher qualities that enable such learning may not be developed in that
domain, not individually, not automatically. They require outside interventions,
or at least favourable conditions. And yet: if the intention is there, and if it is so
powerful, what is keeping teachers from demanding or creating these conditions
themselves? This point will be addressed further in the next chapter.

Table 19: Presentation of the item averages Cluster 1 (n=72; 5-point-scale)

PART 1 is about using your own experiences as a source for learning	present	(SD)	ambition	(SD)	diff. present-ambition
1. I adapt my teaching based on spontaneous pupil feedback (the things I hear or see them do).	3,68	0,77	4,13	0,74	**0,46**
2. I *systematically* collect pupil feedback to learn from	2,68	1,03	3,93	0,73	**1,25**
difference unplanned - planned	**-1,00**		**-0,21**		
3. I look at pupil test results to learn from.	3,49	1,09	4,12	0,94	**0,63**
4. I *carefully analyse* pupil test results to learn from.	2,88	1,16	4,03	1,05	**1,15**
difference unplanned - planned	**-0,60**		**-0,09**		
5. I learn from my mistakes and things that happen to me whilst teaching.	4,22	0,72	4,68	0,54	**0,46**
6. I learn by *consciously trying new things* in my lessons.	3,40	0,82	4,34	0,69	**0,94**
difference unplanned - planned	**-0,82**		**-0,34**		
7. I learn by repeating the things that work – my "automatic pilot" gets better and better.	3,56	0,87	3,53	0,95	**-0,03**
8. I *consciously try to improve* my routines.	3,21	1,02	3,75	0,97	**0,54**
difference unplanned - planned	**-0,35**		**0,22**		
9. My intuition is my guide.	3,75	0,84	3,69	0,97	**-0,06**
10. I *systematically reflect* on my teaching.	3,00	1,03	4,07	0,67	**1,07**
difference unplanned - planned	**-0,75**		**0,38**		
Own exerience UNPLANNED AVERAGE	**3,74**	0,52	**4,03**	0,46	**0,29**
Own exerience PLANNED AVERAGE	**3,03**	0,62	**4,02**	0,47	**0,99**

Cluster Learning from experience UNPLANNED Cronbach's Alphas:

present = 0.53; ambition = 0.35

Cluster Learning from experience PLANNED Cronbach's Alphas:

present = 0.51; ambition = 0.31

7.1.2 Analysis of scores: the social as a source for learning

In this cluster, the first thing that stands out are the relatively low scores in the *present* items*.* Compared to the average scores in the other two clusters, these are low, both *unplanned* and *planned*. With an average score of 2.8 *social planned* is the lowest scoring cluster of items in the whole questionnaire. There are small differences between scores on the *unplanned* and *planned* items, with two exceptions: 11 & 12 (*seeing/ hearing colleagues* vs *observing them*) show a medium to big difference between the unplanned and planned version (0.8). The pair of items 17 & 18 (*accidental* versus *intentional talks with colleagues*) shows a big difference (1.0). The biggest differences in this cluster can be found between *present* and *ambition* scores on all of the *planned* items: they are all around or above the standard deviation. As far as *ambition* is concerned, of all the average cluster scores, this one is high at 3.9, suggesting that the respondents' ambition is particularly high for planned social learning. The low scores for the Social as a (*present*) source for learning reflect what was found in the literature (e.g. OECD, 2019; Van Driel, 2006), which suggested that it does not occur much. Reported reasons include workload and lack of time (Inspectie van het Onderwijs, 2013). These scores also reflect what was found in the analysis of learner autobiographies (see Chapter 4.2). There too, social learning was the least referenced source for learning: 8 out of a total of 60 references. Moreover, many of the references there were social encounters outside of the school context (e.g. family members) or very generally formulated (e.g. *During the course of my career, different meetings were the cause for changes made*). Interestingly, in the Learner Reports, composed after a semester into the master's programme, 32 out of a total of 182 learning episodes referred to social learning, suggesting that with some effort (pursuing all the activities that go with following the master programme) social learning can become a serious source for learning. Paradoxically, precisely because of following the programme, these students have an even bigger workload and less time, suggesting the reported reasons found in the literature (Inspectie van het Onderwijs, 2013) are not the full story. This is a point that will return in the meta-analyses in Chapter 9.2.

The overall scores in this cluster suggest that social learning is perceived as having much potential – the cluster scores much higher on *ambition* (*ambition unplanned*: 3.7; *ambition planned:* 3.9) than on *present* (although slightly lower than the other clusters). The fact that these differences are bigger than those in the other two clusters suggests there is a potential that remains currently unfulfilled. The score for item 12 '*I observe my colleagues with the specific aim of learning from them*' has the lowest score (2.3) of all items in the questionnaire. This might be because observing lessons is often difficult to organise – more difficult than the activities described in most of the other items. Moreover, it is an intervention that requires team effort – it is relatively difficult to organise for the individual teacher (OECD, 2014). In times of teacher shortages school leaders might not prioritise the facilitation of such peer observations. And so it is not surprising that – according to the Dutch Inspectorate – many teachers do not get any feedback this way; many of them do not seem to seek it either (Inspectie van het Onderwijs, 2013). The reported reason for this is time pressure and logistical barriers. These are practical considerations that may mask a deeper and more problematic point. Edmondson (1999, p. 352) suggests the following fundamental reason:

> asking for help, admitting errors, and seeking feedback exemplify the kinds of behaviors that pose a threat to face, and thus people in organizations are often reluctant to disclose their errors or are unwilling to ask for help, even when doing so would provide benefits for the team or organization.

This would especially seem the case in times where the education discourse is ruled by performance and accountability (Ball, 2003).

In the previous section the argument was made that increasing pressures on teachers could promote experiental learning. Out of these pressures opportunities for learning emerge when new situations require new teacher behaviour. So in the domain of learning through personal experience, the perceived pressure might provide the urgency to try new things. However, these pressures could at the same time cause uncertainty that in turn could lead to isolation – the point Edmondson (1999) made. It might be the reason for the low

scores in the domain of social learning *present.* This touches on the argument that was made about self-referentiality as a form of self chosen isolation, and the *sturingsparadox* under this notion (see Chapter 1.2.1). These issues require further exploration and they will be elaborated on in the next stages: the collective reflections and the focus groups.

To summarise: the respondents' scores suggest that these teachers believe that social learning should play a much bigger role in their professional learning than it currently does. Interestingly, especially items 12 (*observing colleagues*) and 18 (*coming together with the aim to learn*) show the biggest difference between *present* and *ambition.* These items represent fields that, according to the literature, are potentially particularly effective sources for learning (e.g. Veen et al., 2010; Maandag, Helms-Lorenz, Lugthart, Verkade & Veen, 2017). However, this social domain as a source for learning is one that requires a proactive attitude and supportive school leaders. There appear to be both practical obstacles and psychological ones. For this potential to be fulfilled, schools would need to actively organise the opportunity for teachers to meet colleagues in order to discuss issues or to visit each other's classes (Snoek & Volman, 2014). This is a point that will be elaborated on in Stage 3.

Table 20: Presentation of the item averages Cluster 2 (n=72; 5-point-scale)

PART 2 is about learning from and with others.	present	(SD)	ambition	(SD)	diff. present-ambition
11. I learn from what I see and hear what my colleagues do in their classrooms.	3,06	1,06	4,09	0,77	**1,03**
12. I *observe* my colleagues *with the specific aim* of learning from them.	2,29	1,16	3,96	0,78	**1,66**
difference unplanned - planned	**-0,76**		**-0,13**		
13. I learn from uninvited advice by colleagues (or head master).	3,10	1,08	3,74	0,94	**0,63**
14. I *ask* my colleagues (or head master) *for advice* to learn from.	3,04	1,02	3,96	0,84	**0,91**
difference unplanned - planned	**-0,06**		**0,22**		
15. I learn from uninvited feedback by colleagues (or head master).	3,12	1,06	3,72	0,90	**0,60**
16. I *ask* my colleagues (or head master) *for feedback* to learn from.	2,90	1,00	3,91	0,83	**1,01**
difference unplanned - planned	**-0,22**		**0,19**		
17. I learn much from accidental talks with my colleagues.	3,72	0,91	4,07	0,86	**0,35**
18. I meet with my colleagues *with the specific aim* to learn from them.	2,71	1,20	3,97	0,92	**1,26**
difference unplanned - planned	**-1,01**		**-0,10**		
19. I informally discuss pupil work with my colleagues.	3,31	1,02	3,31	1,12	**0,00**
20. I discuss pupil work with my colleagues *during meetings* .	3,01	1,17	3,94	1,00	**0,93**
difference unplanned - planned	**-0,29**		**0,63**		
21. I am a passive member of a network (for instance a professional learning community or community of pra	2,34	1,41	2,96	1,44	**0,62**
22. I am an *active* member of a network (for instance a professional learning community or community of pra	2,91	1,46	3,82	1,05	**0,91**
difference unplanned - planned	**0,57**		**0,87**		
Social learning UNPLANNED AVERAGE	**3,10**	**0,63**	**3,65**	**0,60**	**0,54**
Social learning PLANNED AVERAGE	**2,81**	**0,73**	**3,92**	**0,61**	**1,11**

Cluster Social learning UNPLANNED Cronbach's Alphas:

present = 0,54; ambition = 0,61

Cluster Social learning PLANNED Cronbach's Alphas:

present = 0,62; ambition = 0,73

7.1.3 Analysis of scores: theory as a source for learning

With an average score of 3.4, in this cluster a main feature is the relatively high score for learning from theory *unplanned*. Especially the items that refer to incidental reading score highly: '*It happens that I hear or read things that confirm what already knew instinctively*' (3.6); '*it happens that I accidentally read something that gives me new insights*' (3.6); '*it happens that I accidentally read something that makes me curious for more*' (3.7). The literature suggested that these scores would be lower, suggesting practitioners make only little (appropriate) use of educational research, because it yields only few practical

results (Broekkamp & Hout-Wolters, 2006; 2007; Eekelen, 2005). This was also reflected in Study 1 - the students' learner autobiographies, in which theory was rarely mentioned as a source for learning (10 out of 60 references) and – as was the case with learning trough social interactions – most of these references were fairly general. The first item '*I learn from courses organised by the school*' scores low on *present* (2.9): one of the lowest scores across the questionnaire. This can be seen as remarkable and potentially problematic, since for many school leaders this is still the predominant way to organise professional learning. And yet, according to the National Research Council (2000, p. 267): "Much of what constitutes the typical approach to formal teacher professional development is antithetical to what promotes teacher learning." The fact that the ambition for this item scores 4.1 – one of the highest in the cluster – is therefore surprising: if teachers rate their engagement in these mandated courses as low (2.9), then why would they want more of them (4.1)? It could be that the phrasing of the ambition item is ambiguous. If a respondent reports to want to more '*learn from courses organised by the school*' it could be that (s)he is not referring to the quantity of courses offered, but rather the quality, the effectiveness, or the content matter of these courses. This explanation is supported by the fact that the *planned* version of this item is even higher: *I learn from courses I choose myself* has the highest score (4.4) of all the items in all of the clusters. It could be that respondents would want to have more say in what mandated courses are about. The scores in these two items (23 and 24) prompt questions about how decisions on appropriate professional learning provision are made: who is responsible for organising professional learning in the first place? The respondents' high score (4.1) on ambition ('*I learn from courses organised by the school*') suggests according to them this is – at least in part – the responsibility of the school. According to a study by Vermeulen, Klaeijsen and Martens (2011) in Dutch primary schools, school organised or school funded professional learning takes up about 1% of the school's budget, considerably lower than the government's guidelines (10%). The high reported ambition here could indicate that teachers would like more of the budget spent on professional learning (a quantity argument), but it might be more complicated than that: it could be that teacher learning agendas do not match with what the schools have on offer, for instance because of a difference in

interests (a quality argument). Broekkamp and Hout-Wolters (2006; 2007) identified two types of problems that constitute the supposed gap between theory/research and practice: that educational research yields only few conclusive and practical results, and that practitioners *believe* that educational research is not conclusive or practical and therefore make only little use of educational research.

All items in 'learning from theory' produced at least fairly big differentials between *present* and *ambitions* in *planned* learning. This indicates the potential for using literature as a source for learning, but it does beg the question why this potential is not being seized already. Item 18, for instance 'I keep up with literature to get new insights' scores 1.1 point higher on *ambition* than on *present*. Fulfilling that ambition would not require any outside intervention, apart maybe from having enough time and energy after a long school day. Interestingly, in Study 1 (the students' learner reports), learning from literature formed the biggest source for learning by far (126 out of 182). Of course this can be explained from the fact that when following a master's programme teachers are expected to consult literature. It also means that teachers then address Meno's paradox: reading about new things both satisfies curiosity and it increases that curiosity, as it opens up new fields that invite to be explored. As was the case with learning through the social, learning from theory seems to require a trigger, an incentive from the outside. This is an observation of which the implications will also be further explored in the following sections.

Table 21: Presentation of the item averages Cluster 3 (n=72; 5-point-scale)

PART 3 is about learning from theory	present	(SD)	ambition	(SD)	diff. present-ambition
23. I learn from courses (workshops, training) organised by the school.	2,87	1,02	4,06	0,86	1,19
24. I learn from courses *I choose myself*.	3,78	1,02	4,43	0,69	0,65
difference unplanned - planned	0,91		0,37		
25. I happens that I hear or read things that confirm what I already knew instinctively.	3,62	0,84	3,85	0,88	0,24
26. I *actively* look for literature to test if my findings are correct.	2,99	1,12	3,90	0,94	0,91
difference unplanned - planned	-0,63		0,04		
27. It happens that I accidentally read something which gives me new insights.	3,57	0,83	3,93	0,85	0,35
28. I *keep up with literature* to get new insights.	3,00	1,19	4,06	0,87	1,06
difference unplanned - planned	-0,57		0,13		
29. It happens that I accidentally read something that makes me curious for more.	3,69	0,91	4,03	0,85	0,34
30. I *keep up with literature* to stimulate my curiosity.	2,87	1,23	3,81	1,01	0,94
difference unplanned - planned	-0,82		-0,22		
31. If I visit a conference (or another network meeting), I learn from talks with other visitors.	3,37	1,02	3,93	0,89	0,56
32. If I visit a conference (or another network meeting), I learn *from the presenters and workshops*.	3,46	0,93	4,07	0,84	0,62
difference unplanned - planned	0,09		0,15		
33. when I read in the newspapers about the political and social discussions on education, I learn from that.	3,54	1,19	3,93	1,14	0,38
34. I'm *focussed* on the political and social discussions on education.	3,10	1,17	3,84	1,02	0,74
difference unplanned - planned	-0,44		-0,09		
Learning from theory UNPLANNED AVERAGE	3,44	0,59	3,95	0,57	0,51
Learning from theory PLANNED AVERAGE	3,20	0,70	4,02	0,59	0,82

Learning from theory UNPLANNED: Cronbach's Alphas:

present = 0.52; ambition = 0.60

Learning from theory PLANNED: Cronbach's Alphas:

present = 0.66; ambition = 0.68

7.1.4 Present state versus ambition

As explained in Chapter 5.2, a core feature of the tool is that it is designed to stimulate reflection, by bringing to light what Akkerman and Bakker (2011a, p. 132) call "the distinction between what is part of me versus what is not (yet) part of me." It does so by forcing the respondents to look at statements that are paired and contrasted:

- '*how it is*' versus '*how I would like it to be*';
- '*unplanned*' versus '*planned*';

- '*learning through personal experience*' versus '*learning through the social*' versus '*learning through theory*'.

The tool made these contrasts visible and directed the respondents' attention to where these contrasts were big, both on item level (in the worksheet that has the items) and on cluster level (in the worksheets that include the interpretation framework). It did so for two reasons: the tool was meant both as an intervention and a research instrument. It was an intervention that brought about reflection. This reflection was then captured in written and spoken statements, which served the research instrument function of the tool. Professional learning is stimulated by confrontations (e.g. Akkerman & Bakker, 2011b; Kelchtermans, 2012; Eraut, 2004; Lankveld & Volman, 2009; Rohaan, Beijaard & Vink, 2012; Ellis, 2008) (see Chapter 2.5.1). The intervention function of the tool was to bring about such a confrontation, constructed by the respondent him/herself, by identifying the difference between the present state and one's ambition. It means that differences in outcomes, so '*how it is*' versus '*how I would like it to be*'; *unplanned* versus *planned*; '*learning through personal experience*' versus '*learning through the social*' versus '*learning through theory*', are crucial.

The differences between 'present state' versus 'ambition' are important to explore here, and thus the tool's reflective potential. The premise is that the bigger the self reported distinctions are, the more cause for reflection they are likely to give; the more confrontational and challenging they are likely to be (Aldridge, Fraser, Bell & Dorman, 2012). This warrants a further exploration of the pairs of items that show the biggest differences. In the tables below, for the reasons explained in Chapter 7.1, the differences between *ambition* and *present* are expressed in effect sizes, or Cohen's d.[15] The items are ordered in the size of difference: from big to small. Using Excel's *conditional formatting* function, I banded the differences for clarity: dark green means very big; green means big; red means small; dark red means very small. Please note that the items that are

---

[15] The formula for calculating Cohen's d is [(ambition-present)/(average SD)]

even numbered are the planned ones; the uneven ones are the unplanned sources.

Table 22: Differences between present and ambition scores in order of size, expressed in Cohen's d

PART 1 is about using your own experiences as a source for learning	present	(SD)	ambition	(SD)	diff. expressed in Cohen's D
2. I systematically collect pupil feedback to learn from	2,68	1,03	3,93	0,73	1,42
10. I systematically reflect on my teaching.	3,00	1,03	4,07	0,67	1,26
6. I learn by consciously trying new things in my lessons.	3,40	0,82	4,34	0,69	1,24
4. I carefully analyse pupil test results to learn from.	2,88	1,16	4,03	1,05	1,04
5. I learn from my mistakes and things that happen to me whilst teaching.	4,22	0,72	4,68	0,54	0,72
3. I look at pupil test results to learn from.	3,49	1,09	4,12	0,94	0,62
1. I adapt my teaching based on spontaneous pupil feedback (the things I hear or see them do).	3,68	0,77	4,13	0,74	0,60
8. I consciously try to improve my routines.	3,21	1,02	3,75	0,97	0,54
7. I learn by repeating the things that work – my "automatic pilot" gets better and better.	3,56	0,87	3,53	0,95	-0,03
9. My intuition is my guide.	3,75	0,84	3,69	0,97	-0,06

PART 2 is about learning from and with others.	present	(SD)	ambition	(SD)	diff. expressed in Cohen's D
12. I observe my colleagues with the specific aim of learning from them.	2,29	1,16	3,96	0,78	1,71
18. I meet with my colleagues with the specific aim to learn from them.	2,71	1,20	3,97	0,92	1,19
11. I learn from what I see and hear what my colleagues do in their classrooms.	3,06	1,06	4,09	0,77	1,13
16. I ask my colleagues (or head master) for feedback to learn from.	2,90	1,00	3,91	0,83	1,10
14. I ask my colleagues (or head master) for advice to learn from.	3,04	1,02	3,96	0,84	0,98
20. I discuss pupil work with my colleagues during meetings.	3,01	1,17	3,94	1,00	0,85
22. I am an active member of a network (for instance a professional learning community or community of pra	2,91	1,46	3,82	1,05	0,72
13. I learn from uninvited advice by colleagues (or head master).	3,10	1,08	3,74	0,94	0,63
15. I learn from uninvited feedback by colleagues (or head master).	3,12	1,06	3,72	0,90	0,62
21. I am a passive member of a network (for instance a professional learning community or community of pra	2,34	1,41	2,96	1,44	0,43
17. I learn much from accidental talks with my colleagues.	3,72	0,91	4,07	0,86	0,40
19. I informally discuss pupil work with my colleagues.	3,31	1,02	3,31	1,12	0,00

PART 3 is about learning from theory	present	(SD	ambition	(SD)	diff. expressed in Cohen's D
23. I learn from courses (workshops, training) organised by the school.	2,87	1,02	4,06	0,86	1,27
28. I keep up with literature to get new insights.	3,00	1,19	4,06	0,87	1,03
26. I actively look for literature to test if my findings are correct.	2,99	1,12	3,90	0,94	0,88
30. I keep up with literature to stimulate my curiosity.	2,87	1,23	3,81	1,01	0,84
24. I learn from courses I choose myself.	3,78	1,02	4,43	0,69	0,77
32. If I visit a conference (or another network meeting), I learn from the presenters and workshops.	3,46	0,93	4,07	0,84	0,70
34. I'm focussed on the political and social discussions on education.	3,10	1,17	3,84	1,02	0,67
31. If I visit a conference (or another network meeting), I learn from talks with other visitors.	3,37	1,02	3,93	0,89	0,58
27. It happens that I accidentally read something which gives me new insights.	3,57	0,83	3,93	0,85	0,42
29. It happens that I accidentally read something that makes me curious for more.	3,69	0,91	4,03	0,85	0,39
33. when I read in the newspapers about the political and social discussions on education, I learn from that.	3,54	1,19	3,93	1,14	0,33
25. I happens that I hear or read things that confirm what already knew instinctively.	3,62	0,84	3,85	0,88	0,27

Eleven difference scores are (dark) green – an indication that they are around or above the average standard deviation of the *present/ ambition* score difference, and almost all of these (9 out of 11) are even items: *planned* ones. The red scores are almost all uneven items: items that refer to *unplanned* learning. This suggests that either the respondents are relatively content with their unplanned learning – content enough to not want to change it, or it could mean that they feel there is not much to be done about unplanned learning. Contentment is less of a problem here than the notion that unplanned learning cannot be organised. If indeed unplanned learning is the most important source for development, then the obvious solution would be to enhance its potential by organising unplanned

learning. The interpretation framework, that is read after having scored the items, suggests a number of ways how this could be done; how unplanned learning can indeed be organised.

7.1.5 Cluster averages

The cluster averages were analysed to see if they could help establish how the different context domains relate to one another, quantitatively. However, the low Cronbach's Alphas indicate relatively little internal consistency, which means the overall averages can only serve as indications of the values the clusters:

Table 23: Overall cluster averages

	how it is	how I would like it to be	difference
pers. experience *unplanned*	3,7	4,0	0,3
pers. experience *planned*	3,0	4,0	1,0
social *unplanned*	3,1	3,6	0,5
social *planned*	2,8	3,9	1,1
theory *unplanned*	3,4	4,0	0,5
theory *planned*	3,2	4,0	0,8

These values result in the following graph:
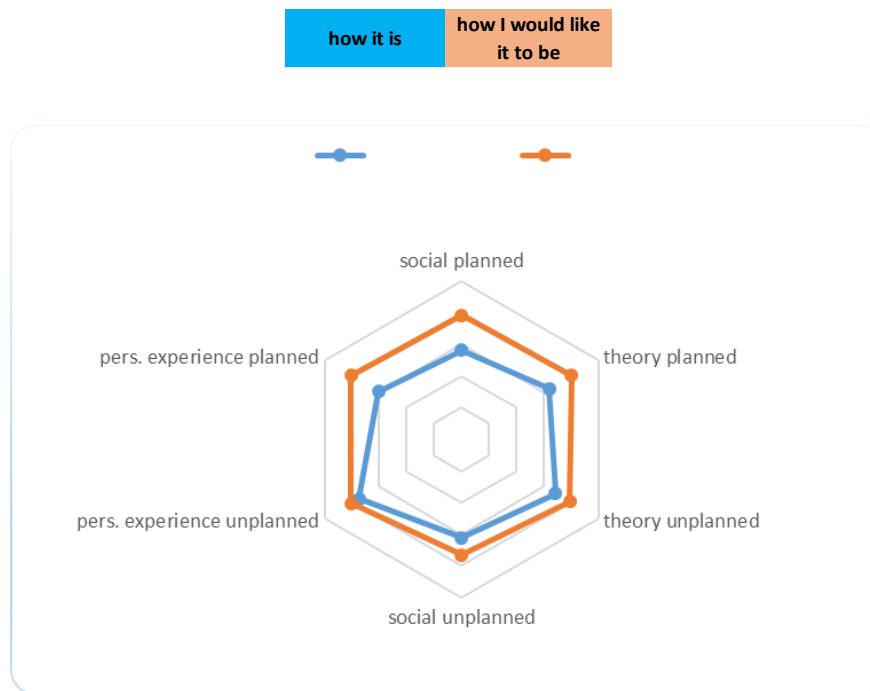
Fig. 12: Overall cluster averages

The cluster reliability (expressed in Cronbach's alphas and reported in the previous sections was relatively low, which means that only general points can be concluded from these averages. What stands out here is that there is little variation in the *ambition* column: all around the 4.0 mark, with the exception of *social unplanned* (3.6). It means that the numbers in the *difference* column can almost completely be attributed to the (far bigger) variation in the *present* column. Figure 12 presents a graph which indicates the distance between the blue (present) and red lines (ambition) in the top half: the planned section. The distances between the lines in the bottom half of the graph – the unplanned section – are much smaller. The red and blue points that represent *personal experience unplanned* almost coincide.

The quantitative data analysis suggests a confirmation of the theoretical perspectives that were discussed in Chapter 2: that learning is more often *unplanned* than *planned*, and that personal experience (*unplanned*) is the biggest source for learning. In terms of the research question (what is the role of context in teacher professional learning), the following is particularly relevant: the scores in the first column (present) demonstrate that the second highest average is for *theory unplanned* (score 3.4). This contradicts what was proposed in the

literature (e.g. Broekkamp & Hout-Wolters, 2006) which suggested that theoretical learning should have scored lower (see Chapter 2.6.3). One explanation could be that in the tool the boundaries of what constitutes learning from theory are stretched – they include (high scoring) activities like incidental reading, for instance in the newspaper. In Chapter 7.1.3 the high scoring items under this cluster average were discussed: especially the ones concerning reading (for confirmation, for discovering new things, to stimulate curiosity) show high scores.

7.2 Qualitative questionnaire responses: individual insights and intentions

The respondents were asked to reflect on the outcomes of the tool in two ways. The first of these was an individual reflection. They wrote down *insights* and *intentions*, which is explained in Chapter 6.4 as Stage 1 – creating a brief text. Below each of these are further explained and explored.

The individual reflections were written down by the respondents on the last page (tab) of the tool, so after having scored all the items, and after having looked at the interpretation framework (see Appendix 7 for the complete tool). In Chapter 2 it was argued that identifying the distinction between where people stand and where they would like to be is an essential feature of learning (e.g. Akkerman & Bakker, 2011a). According to Danielowich (2012) reflection should provoke teachers to identify conflicts between their intentions ('what they are trying to do') and actions ('what they actually do'). Articulating these conflicts enables the thought process and verbalising them supports the possbility of thinking differently (thus supporting the intervention function of the tool), whilst at the same time it allowed me to gain insight in these thought processes (thus supporting the data collection function of the tool) (see Chapter 5.2 for an explanation of the tool's two functions). Danielowich (2012) too stresses the importance of having professionals identify gaps between their own desired goals and actual practices. Following the Deweyian notion that reflection not only

involves looking back, but also looking forward (Chapter 2.7.1), the respondents were asked to write down both *insights* and *intentions*. Marcos *et al.* (2011, p. 23) promote reflection that moves beyond *insights*, and that helps respondents to "identify the practical content of the process or the knowledge gained for improving teaching practice", and this was accommodated by asking the respondents to verbalise not only their insights, but also the possible consequences of those insights, expressed in the form of *intentions*.

They were asked to first write down one or more insights, as an answer to the questions '*What do you see as the most important result of having used this tool?*', followed by intentions: '*What follow-up actions would you like to plan? If none, please indicate the reason for this.*' These texts were first extracted from the spreadsheets and copied to another file for analysis. Three respondents did not write down anything, so a total of 138 texts were collected: 69 (insights) plus 69 (intentions). These were analysed to identify the deliberations behind the scores of the first part of the tool. To explore the role of context factors, a qualitative perspective was needed on the quantitative data on two levels: data generated in an individual setting – which is addressed in this paragraph – as well as in a collective setting, which will be discussed in the following sections.

Because there were so many texts, I used NVivo as a tool to help organise the analysis of these data. I did not use any of NVivo's options to create automated codes – I only used the programme to manage the data. I chose and applied all of the codes (or *nodes* as they are called in the programme) based on the framework discussed in the literature review, and complemented these with *insights* and *intentions*, as I noticed that sometimes respondents had recorded intentions under insights and vice versa. I also added a *general* remarks code, as not all entries were specific enough to code as an insight or an intention.

I uploaded the 69 reflections into NVivo and used this 'node' function to digitally highlight general remarks, insights and intentions in the texts. The *general remarks* referred mostly to the general (perceived) effects of the tool. As for the *insights* and *intentions,* I made a further distinction between remarks that

referred to *practice*, to *social* or to *theory* learning, thus following the framework set out in the literarure review.

Below first the numbers of references are presented, followed by a discussion of indicative examples of the references. The code in brackets after each of the quotes refers to the respondents. The number in the code refers to the group that the respondent was in, to allow cross-referencing. The letters in the code refer to the individual respondents.

Table 24: Numbers of references in the individual reflections (n=69)

CATEGORIES	INDIVIDUAL
general	*49*
Insight practice	26 (14%)
Insight social	49 (27%)
Insight theory	12 (7%)
INSIGHT TOTAL	**87 (48%)**
Intentions practice	31 (17%)
Intentions social	45 (25%)
Intentions theory	18 (10%)
INTENTIONS TOTAL	**94 (52%)**
GRAND TOTAL	*(49+)* **181 (100%)**

7.2.1 General individual insights (49)

A large number (49) of the reported insights were general in nature, possibly because the respondents had been urged to write (at least) something down. It could be that that leads to such general remarks. Some of these remarks referred to the general function of the tool, for instance: *It quickly and clearly gives me an insight in what I want and what I really do (02GK)* or *It gives me an insight into*

how I learn in my work. I find these results very recognisable (04MAA). Others referred to what this insight brought about, for instance: *awareness of what I do and of what I would want to do (02VL)*. Sometimes these general remarks served as an introduction to a more specific insight which then followed, and sometimes the respondent left it at this. These remarks do not really shed any light on the research question, but they do offer some indications on the validity of the tool: it appears to be doing what it set out to do: bring about reflection.

7.2.2 Individual insights (26) and intentions (31) with regard to learning through personal experience

Most of the individual insights – answers to the question '*What do you see as the most important result of having used this tool?*' – were fairly short: in most cases no more than a line or two. This first category, *learning through personal experience,* yielded many such short insights, in accordance with what was discussed in the literature review: personal experience is the main source for learning (e.g. Lankveld & Volman, 2009) and these reflections confirm this. Some of the respondents were content with that. In accordance with Sleegers and Ledoux's (2006) findings that the biggest drive to change practice is practice itself, one respondent stated: *I mainly learn through my experiences. I recognise this in myself, because I like it to try out new things in practice (11CB).* Another one called it: *Confirmation that I learn by doing and that things happen unintentionally (02JG)*. Other teachers not only reported insights but added an ambition to do more or act differently, for instance: *I appreciate the potential of learning through planned experience, but don't organise it as much as I would like (06AG).* Another teacher stated (s)he: *hadn't expected that the differences between planned and unplanned learning would be so big. It makes me think: maybe I rely too much on my intuition and feelings? (04CHR).* Deliberations like these suggest that unplanned learning happens because there is not much room for reflection (which is a condition for planned learning) in the first place. On a meta-level, statements like these illustrate the reflective potential of the tool – this is a typical example of a self-imposed confrontation brought about by deploying the instrument.

There was also a group that was clearly unhappy with how things are: they would like to be less dependent on their unplanned experience as their main source for learning, for instance by stating that they: *should learn more by consciously planning my experiences and looking at them (05LO)*, which is an example of Schön's (1983) reflection on action. *I appreciate the potential of learning through planned experience, but don't organise it as much as I would like (06AG)*, reported another. We do not know if these few statements are examples of social desirable responses. It could be that some respondents felt this is what they should express. Either way, there are very few such references, and the ones there are – like this one – are about what respondents state they feel they *should* do, and not about what they actually do regularly (or at all). The obvious reason is that the instruction points in that direction; that this activity is itself an exercise in reflection on action. Still, the fact that few respondents refer to reflections or observations outside of this activity, combined with the abundance of general insights and awareness, suggests that reflection on action is an occasional thing, rather than a regular part of teacher practice, which again suggests that unplanned learning (only or mainly) happens because there is not much opportunity for reflection. Without room for reflection, it would be hard to plan professional learning activities.

The second question was: '*What follow-up actions would you like to plan? If none, please indicate the reason for this.*]. A total of 31 (out of 94) intentions in this learning from personal experiences domain were reported. Drawing from the literature (e.g. Eraut, 2000; 2004; Eekelen, 2005; Hoekstra, 2007), I anticipated lower numbers here: I had expected respondents would want less of what – according to the literature – is the biggest source for learning, but on second thought it is logical to want to do what you already do: that is why you do it in the first place. There were intentions that explicitly referred to *planned* learning through experience. For instance: *Next year I'm going to more consciously plan my learning through my own experiences, for example by analysing test results (05DK)* and *I will continue to ask for feedback and – at the end of a period – I will study the results to find out whether my teaching was effective or not (01RON)*, an intention that seems to be inspired by the suggestions in the tool's interpretation

framework *.* Others' intentions were more general: *I could probably more consciously organise my own learning experiences, because then I will benefit more from these – learn from them (12AY).* Another teacher reported: *I'd like to create new learning opportunities. It's time for new challenges, for instance by teaching OWO* [16]*(05MS).* Few of the intentions confirmed what respondents said they already had planned: *I will continue to ask for feedback and – at the end of a period – I will study the results to find out whether my teaching was effective or not (01RON).* Overall, the findings in this category are consistent with what was found in the literature. The recorded realisation that teachers tend to be driven by practice confirmed what was found in the learner autobiographies.

7.2.3 Individual insights (49) and intentions (45) with regard to learning through social/ interaction

The respondents appear to recognise the learning potential of interaction as a source for learning. 49 insights were reported – the highest of the three categories. Many of these insights are about the realisation that social learning happens unplanned in their context, consistent with what was found in the literature (e.g. Eraut, 2000; 2004). One teacher wrote: *There is a big difference in planned learning together. During breaks I regularly speak with my colleagues, but I never considered planning this in an organised moment (06TW).* Another one stated: *The instrument has made me realise that (to my opinion) in our school we organise very few moments of team learning (04CHA).* Seemingly surprised that unplanned social learning is something that can be planned, another teacher built on this notion: *The activity has made me realise that I could learn more from others in an unplanned fashion. I do have much contact with my colleagues, also unplanned. Maybe I am unaware of what I learn from them unintentionally. This is a bit of an eye opener for me (11CB).* Others used these kinds of insights to formulate an ambition: *The most notable outcome for me seems that planned social learning happens too little. Ideally, we should have more of that, because exchanges can be very productive and instructive (02CM)*, thus recognizing the learning

---

[16] OWO stands for 'Oriëntatie op Wetenschappelijk Onderzoek'; orientation on scientific research. It is a new multi-disciplinary school subject in some Dutch schools.

potential of what Louis, Marks and Kruse (1996) refer to as the 'deprivatisation of practice'. The data here suggest that such deprivatisations occur little in teachers' practices.

As for concrete intentions, social learning scored high as well: with a total of 45 formulated intentions, it scored higher than intentions in the personal practice domain (31) and in the theoretical domain (18). These intentions are both about *planned* learning and *unplanned* learning. As for the former, one teacher stated: *I would like to sit down with colleagues to learn from one another. In the future I like to make more time for that, because I've become convinced that this is valuable (05DK)*. Some were more operational in their intentions: [I will] *Make appointments with colleagues to observe each other's lessons (01HEN)*, thus setting the stage for vicarious learning to take place (cf. Bandura, 1997)*. Notably, a number of intentions were about *planning* the opportunity for *unplanned* learning, for instance to: *Seek new situations that generate more informal contacts (01HEN)*. Another teacher wrote (s)he had the intention: *to let peope hear and see my point of view (02LH).* This can be seen as a condition for social learning to take place. Another respondent would agree, stating that: *if you have informal contacts then be really specific about what went well [about your teaching] and what didn't (01RON).* This is an insight that again is conditional. Verbalising implicit ideas or tacit knowledge is both a result from and a condition for social learning (e.g. Eraut, 2000). Recognizing responsibility for organising one's own unplanned learning would mean a first step towards more agency.

The analysis indicates an area in the literature that seems under-represented: I discussed the literature on implicit learning (e.g. Billett, 2014b and Eraut, 2000) and on organised professional learning (e.g. Veen, Zwart, Meirink & Verloop, 2010), but there was very limited research on the field between the two that investigates a core conundrum: the active organisation of implicit learning; planning unplanned learning. This is one of the notions that will be elaborated on in the final section of this thesis.

7.2.4 Individual insights (12) and intentions (18) with regard to learning through theory

The first thing that stands out here are the relatively low numbers. There are 12 reported individual insights related to learning through theory and 18 intentions. This is in contrast with what was found in the questionnaires, which suggested big differences between present and ambition for this dimension, especially in planned learning (an average difference of 0,8). It is, however, in line with what was found in the literature (e.g. Broekkamp & Hout-Wolters, 2006; 2007), and extensively discussed in Chapter 2.6.3, where the gap between teaching practice and education research is identified and explained. The most important reported reason for not drawing on literature seems to be lack of interest or lack of energy: *I'm not really into reading literature. Because I'm doing a study[17] I'm forced to read, but I wouldn't do it in my spare time (04MAA)*. One teacher stated the desire to become more interested in reading literature as a meta-ambition: *What I find is that planned learning from theory is not really my thing. I would like it to be, though (01RON)*. Another teacher presented an interesting paradox: *I like to learn from theory and would like to do more of that, but I find I don't do it as much as I would like. That is partially because of external factors, like time, but also because I don't really see it as a priority (04MAR).* If time is limited, (s)he states, keeping up with literature is the first victim. Another teacher reported as an insight the: *Awareness of the availability of sources of information (02JV)*, which raises a question that is addressed in Broekkamp and Hout-Wolters' (2007) study. They problematise this lack of availability of access to theory in that research results are often meant more for other researchers than for practitioners. They promote more reciprocity between researchers and practioners, which would both solve the (perceived) availablity issue, and the point of (perceived) relevance of research results. No references to such reciprocal models were found in the reported insights or intentions: nobody expressed the wish to have a closer relation to the research community, nor did any of the resondents express the

---

[17] Please note that this teacher was not the master's student, but someone involved in another study.

wish for the research community to approach practitioners to collaborate on shared challenges.

As for reported intentions to engage with theory, some of these were general, like: *Read more literature. Acquire more fresh knowledge (02VL)* or *I'd like to become more active in looking for sources outside of [X]: courses, conferences, and make time for that structurally (10SG)*. Others were more specific, like: *I'm going to delve into the Leerkracht![18] method* (02JW). One teacher intended to: *more often visit interesting conferences by myself, instead of waiting what our school has on offer (01LUC)*, another to: *Read more educational journals; make time for that (04MAR).*

The reported intentions reflect what was found in the previously discussed insights, as well as in the numerical questionnaire results: intentions were more *planned* than *unplanned*; more *individual* than *collective*. The low number of intentions to organise unplanned learning in the theory dimension could be problematic. If indeed time and opportunity to organise learning through theory is problematic (which is not likely to change in the near future), then facilitating the chance of unplanned learning could be a solution. The tool's interpretation framework (see Appendix 4) offered concrete suggestions for how to organise this, for instance by signing up for a weekly newsletters – which would increase the chance of learning from theory without having planned to do so. Again, this opportunity appears not to be recognised; at least it is not addressed in the formulated intentions. As for the reflected perception that learning from literature is essentially an individual enterprise: this too is potentially problematic. It reflects what was found in the think tank (Chapter 5.2.3), where also teachers appeared to define using input from the outside mainly as an individual venture: something you do if and when you need it, and on your own. I discussed how this might indicate why, generally speaking, many teachers do not report literature to be a prime source for learning (Oosterheert & Vermunt, 2001; Eekelen, 2005).

---

[18] LeerKracht is a relatively new approach that is beginning to be particularly popular (and successful) in Dutch primary schools. It includes teachers coming together every week around a 'learning board' on which they share, plan and monitor their goals.

7.2.5 Preliminary conclusions on individual text-based responses to the tool

The data generated by the individual written reflections largely confirm what was found in the numeric data, but provide more depth. The responses reflect what deliberations were brought about by the tool. What these insights and intentions first of all illustrate, is that the tool in itself is indeed an instrument of controlled confrontation: it brought about what Akkerman and Bakker's (2011a, p. 132) "distinction between what is part of me versus what is not (yet) part of me" and thus showed potential in terms of reflective power. It proved to be a catalyst to identify ambitions and formulate intentions. As for the nature of these insights and intentions, the social dimension yielded most of the responses, suggesting that here the learning potential is highest. At the same time, of course it also suggests that this potential is currently not seized. The literature suggested that isolation is the enemy of professional learning. The data here – on all of the three context domains – suggest that many teachers learn in isolation, and also that their predominant mental model for professional learning is one in which it is based on individual ambition, and planned as an individual project. It is of course inevitable that these data are influenced by the way in which they were collected: filling in the questionnaire and reflecting on the outcome in writing was an individual exercise. I was therefore curious to find if the collective reflections would present alternative or complementary indications. The idea for organising collective reflection sessions as well, was promoted by Danielowich (2012, p. 103) according to whom reflection should take place in dialogue with colleagues as it may "encourage them to make the conflicting, dissonant, and uncertain choices filtered out by their illusions visible and available for critique," which is a notion that could help prevent self-referentiality. Or, in the words of Hickson (2011, p. 831) "critical reflection occurs when the individual is able to understand and challenge the validity of their assumptions," which is more likely to happen in a social setting. As was the case with the first parts of the tool, this section of the tool aimed to both create a setting that would help generate deep reflection (and in that sense it was an intervention), and it offered the opportunity to record

collective reflection, and allow to compare and contrast its results with those of individual reflection.

8. Results: Study 3, Stage 2: Group reflections

For the group reflections, each of the thirteen students organised a dialogue with their 4-7 (or 17 in one instance) colleagues, following the individual deployment of the tool. In almost all of the cases the master's student was a teacher colleague, which helped to reduce issues of power differentials in status/role within the groups. There was one instance where this was different: the student who led group 2 is also the team leader of this group. This also accounts for the fact that this group was much larger (17) than the others: the student wanted her whole team to participate. A possible relation issue for all of the groups is the fact that the teachers know that their colleague is enrolled in a master's programme. The students engaged with their colleagues in earlier instances in the context of the master's programme. This may have influenced the way they responded. I did not address this explicitly in the way the students were prepared for their role in the project, as this part of the project is an example of the kinds of activities that they are expected to carry out, not only as part of their study programme, but also as a result of their ambitions. As a reminder, the master's programme is directed at developing teacher leadership: "the process by which teachers, individually and collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, p. 287), which is precisely what happened here. In a future deployment of the tool, it is acknowledged that factors such as power relations could be anticipated. A future project might seek to further understand the possible impacts of those who are selected to coordinate the deployment on those who participate.

The dialogues lasted from 16-25 minutes and were recorded (12 audio; 1 video). First I listened to all of the recordings twice and then they were transcribed. There were 13 group recordings, resulting in 13 texts to be analysed. The dialogues varied in length and richness: in terms of the number and the nature of references to insights and intentions. It is difficult to determine the reason for the qualitative and quantitative differences. It could be that one student was more skilful in eliciting information, it could also be that the group dynamics accounted

for the variation. In either case, the students were allowed what Bolam *et al.* (2005) refer to as 'discretionary autonomy' – it was crucial they owned the intervention, in accordance with the PAR approach.

Identifying the categories of the references was consistent with how this was organised in the individual reflections, the difference being that there the words 'insight' and 'intention' had been used to prompt the respondents to express these. In these collective, more open reflections, I had to distill whether something was an insight/ intention or not. References to learning that had occurred through the deployment of the reflective tool, were considered insights. References to consequences of deploying the tool, for instance new plans, were considered as intentions. Below is a short characterisation of each of the dialogues: the number of participants, the length of the discussions, as well as the number of references to insights/ learning that were found, which is an indicator for the richness of the data.

Table 25: Group reflections - overview

Group	Partici-pants	Time in minutes	Summary, remarks	Total of references to insights and learning
01	6	36m	Mainly discussion on the results, exchanges of insights and intentions.	52
02	17	16m	Very big group! First half: discussion on the instrument itself (e.g. "*What did you think of the questions?*") Then a fairly long interaction on a specific example of an exchange that took place in the recent past (*You know, last week, we had the conference...*), which was used to confirm the potential of social encounters as a means to learn. Finally, a specific example from the past was introduced by one of the respondents. There were very many participants and not so much time, which meant the discussion was not very rich.	16
03	4	15m	Mainly discussion of what came out of the tool and an exchange of examples (so clarification).	9
04	5	19m	Mainly discussion on the results – exchange of insights and intentions.	43
05	5	17m	Mainly discussion on the results – exchange of insights and intentions. Many examples.	17
06	7	19m	Mainly discussion on the results – exchange of insights and intentions. A relatively long part of the discussions was about a limited number of examples.	12

07	6	32m	A more general discussion on teacher learning. Relatively much attention for lack of time as a cause for low scores.	29
08	6	10m	Mainly discussion on the results – exchange of insights and intentions.	17
09	6	24m	First half: discussion of the results; second half: exploration of possibilities to promote professional learning in a more general sense.	25
10	5	20m	Mainly discussion on the results – exchange of insights and intentions. Many examples.	20
11	6	15m	In the first half some discussion on the instrument itself (e.g. the way the questions were formulated); then it was about the results.	9
12	5	19m	Almost the whole discussion is about how one could learn more from gathering feedback from your pupils.	11
13	5	25m	More than half of the discussion is about lack of time to organise the kinds of things that are suggested in the tool.	10
AVG	**6.4**	**20.5m**		**20.8**

I first listened to the recordings and read the transcripts to get a general sense of the reflections (a summary of which is recorded in Table 25). I did so against the background of the analyses of the individual scores and reflections as documented in the above sections. I then uploaded each of the 13 transcripts of these collective (oral) reflections into NVivo. As was the case with the individual reflections, I used the NVivo 'node' function to first digitally highlight general remarks, insights and intentions in the texts, allowing patterns and characteristics to be identified. Here too, the *general remarks* referred mostly to the general effects of the tool. As for the *insights* and *intentions,* again I made a

further distinction between remarks that referred to *practice* domains, to *social* domains or to *theory* domains for teachers' learning. In the sections below, the findings will be further explored.

Table 26: Numbers of references in the collective reflections

Categories	Number of references
general	*9*
Insight practice	21 (23%)
Insight social	27 (29%)
Insight theory	17 (18%)
INSIGHT TOTAL	**65 (70%)**
Intentions practice	4 (4%)
Intentions social	18 (19%)
Intentions theory	6 (6%)
INTENTIONS TOTAL	**28 (30%)**
GRAND TOTAL	*(9+)* **93 (100%)**

8.1 Collective insights - general (9)

As was the case with the individual written reflections, part of the insights that were uttered in the collective reflections were of a general nature. For example, some of the groups briefly discussed the tool's usefulness at the beginning of the dialogues – which led to general remarks – to then quickly go into the specific insights or consequences. Some remarks concerned the tool itself, for instance *[…] The tool works well. For me, this is like a wake-up call: oh yes, this is something we could do. I trained for four years, but what do I do these days? (group 13)*. Most of the general remarks were about awareness. For instance, a teacher in group 11 stated: *What I'd like to say about it is that it is good to become aware of the things that you might not yet do, or the things that you do, but are unaware of*. A teacher in group 10 stated: *Well, it tells me what I already knew: I tend to do things*

unplanned and intuitively. And to be honest: I'd like to keep it that way (group 10). This exposed honesty is interesting: when comparing the individual and collective reflections, I found the respondents in the former appeared to be more exposing than in the latter, so this utterance is an exception. The notion of honesty will be further elaborated on in Chapter 9.2.

8.2 Collective insights (21) and intentions (4) with regard to learning in the practice domain

Most of the collective insights were longer and richer than the ones expressed in the individual textual reflections captured by the tool. This first category – learning through personal experience in the practice domain – yielded many insights, in line with what the literature had suggested: personal experience was expressed as the main source for learning. Some of the respondents were happy with that – or not unhappy:

> *I'm not too keen on theory. I think – this is really my thing: experiencing things, letting things happen. We can design what we want, but at the end of the day it's all about the students: what you bring to them and how they respond. That can only be done by trying, experiencing (group 03).*

More respondents shared this view:

> *My results show – and this is something I know about myself – that I learn more unplanned than planned. [...] I like to improvise; act on what happens during a lesson. I'm just not a lesson plan person (group 08).*

Others expressed that they would like to be less dependent on their own experience as their main source for learning. Some of these insights were formulated fairly generally, like:

> *I would like to learn more about learning from own experience planned [...] that is where I find the biggest difference – between where I would want to be and where I am (group 06).*

Others were more specific in their insight:

> *What struck me was my low scores in the graph on planned learning from my own experiences. I mean, I do learn from my experiences, but it isn't planned. It makes me think: maybe I should try out some new things... move away from the beaten track (group 10).*

While these insights suggest that the tool is doing its work in that it provokes reflection and thoughts about finding alternatives for present practices, at the same time it raises the question why teachers are not contemplating these insights outside of this exercise, so as part of their work. It could be that a specific event, tool or something that works as a catalyst is needed to discover that you mainly learn from your own experiences and in an unplanned manner. It might be an example of *Meno's paradox*: maybe indeed you cannot know what you do not know; maybe you need to experience unconscious incompetence before becoming consciously incompetent.

As for the intentions, there were only four in this category of learning from experience (against 31 in the individual reflections). Three of these were about collecting student feedback to learn from. One respondent said: *And maybe – if we can find the time for it – we can ask more pupils for feedback [colleagues mumble approvingly]. How they experience it (group 05).* Interestingly, the respondent uses a plural here: *we* could do differently, not *I* could. Another respondent was more specific:

> *And I would like to do more with analysing test results. [...] I'd like to do more with this. To find out: which are the questions that students fail to do well on. What can I do with that in a next round? What can I do to make them better understand? That's what I intend to do (group 08).*

Since there were only four of these references to planning to learn through personal experience, not too much significance can be attributed to the content of these few utterances. It does raise the question where the difference between the number of individual (31) and collective (4) insights comes from. It could be that respondents feel inhibited to publicly express intentions that involve

essentially individual actions, that could – if followed through – be visible, be checked by their peers. It might feel safer to express such intentions in an individual, anonymous response – and this might account for the higher frequency in this category in the written insights. This would be consistent with Edmondson's (1999, p. 352) assertion that "asking for help, admitting errors, and seeking feedback exemplify the kinds of behaviors that pose a threat to face, and thus people in organizations are often reluctant to disclose their errors or are unwilling to ask for help." It could also be that teachers do not want to appear too ambitious – as a form of enforced modesty. Staton and Hunt (1992, p. 130) argue that "teaching norms tend to stress individualism and egalitarianism, leaving teachers unwilling to critique other teachers." In either case, these findings problematise the fruitfulness of teachers' social settings as a place to generate experiential learning. This is an issue that will be further elaborated on in the final Chapter.

One respondent commented:

> *This is the thing: planning… my own unplanned learning […] I'd like to improve this […] and that is surprising, it's funny really. Apparently our school and the pupils require this approach (group 10).*

If the remark is representative (it was not contradicted by others in the same group), that suggests that not actively seeking student feedback is part of the school culture, again an issue that might have serious implications. It again raises questions as to how much schools are organised as places in which teachers' development is promoted by having them generate and actively engage with feedback as a source for learning.

8.3 Collective insights (27) and intentions (18) with regard to learning through social/ interaction

An important observation in this section is that the respondents recognised the learning potential of lesson visits and peer-to-peer coaching as a source for learning. They expressed the intention to organise it:

> *Yes, as for planned social learning: I think this suggestion in the interpretation framework is useful: that if you visit each other's lessons, you first agree on an aspect that you will focus on. In the past – correct me if I'm wrong – we used a form, an enormous checklist for this. It forced you to pay attention to everything and check boxes the whole time. And then, in the subsequent discussions you only gave each other compliments. Whilst if you focus on one agreed aspect, for instance what you agreed in a PLC, then lesson visits become much more productive (group 10).*

This is positive considering the potential of such activities. As discussed in Chapter 2.6.2, the literature on teacher learning suggests that this potential is very high (e.g. Macbeath, 2019). Moreover, the number of references to insights (27) and intentions (18) was the highest within this activity, suggesting this potential is appreciated.

These numbers are, however, still relatively small if compared to the individually expressed insights (49) and intentions (45) for social learning that were reported in Stage 1. Moreover, some of these collective references were not so much articulated as personal ambitions, but as things that all teachers could or should do, for instance:

> *The question that struck me: do you discuss pupil work with your colleagues during meetings? Then I thought: well, actually: we don't ever do that! (group 02).*

Another respondent stated:

> *And I think I agree with what T. says, that this is something we could do better as a team (group 06).*

The subject here – we – is plural; it is about the responsibility of the group, not of the individual respondent. This reference to *we* is typical in this category and it suggests that in the social setting of a collective reflection either teachers do not see the social as related to individual learning, or it could be that teachers feel inclined to deflect their individual responsibities by referring to the collective.

The (few) insights that were uttered in the first person (I, me), were formulated as non-problematic, non-culpable in that sense, for instance:

> *And about informal conversations, well, we have plenty of those. More with one colleague than with the other, though. I think that... it really helps me (group 04).*

Another respondent said:

> *I'm thinking: we only ever discuss the programme, but never the way you teach it [...] I've never had a colleague in my classroom [...] That is odd, because you could learn so much from them (group 03).*

Here we see a similar mechanism at work: the reflection is not really self-critical, but expresses a thought about the others, who – in this case – fail to visit the respondent. Other examples of such external attributions can be heard in intentions that were directed at school leadership:

> *As for me, I would like to have peer-to-peer coaching. And I would like to be supported in how we give each other feedback (group 04).*

Or, even more directly:

> *I'd like it if our school leader would organise it, structurally. Last year we organised it ourselves on Monday mornings when we were all free. But now it's just free periods and breaks and spontaneous lesson visits to generate ideas. I'd like It to be included in the time table (group 08).*

The respondents were much more self-critical in the individual reflections (Stage 1) than in these collective ones (Stage 2). It reflects a point that was discussed in the literature regarding working and learning in isolation (Chapter 2.3). Many teachers appear to ambivalent with regard to autonomy. Van Driel (2003, p. 43)

discusses how "Dutch teachers operate in isolation and cherish this at the same time." Nias (1989, p. 5) found that what when she talked with teachers what they have in common is their "persistent self-referentialism". Drawing from Nias's work, Kelchtermans (2009) refers to this as the "who I am in how I teach is the message". It could be that in this social setting teachers tend to be more prone to giving than to receiving (cf. Baumeister, Vohs, Aaker, & Garbinsky, 2013), more about showing expertise, than about displaying uncertainty. There were more indications of uncertainty in the individual reflections than there were in the collective ones.

To summarise: a telling quote in this section is: *I think it comes with the job: you go it alone (group06).* Bruining *et al.* (2015) refer to this as professional loneliness and it was reflected in two ways in the data. First, in the words of the respondents, who reported that social learning does not happen very often and that when it does, it is often untentional. Second, in the collective reflections the respondents tended to speak collectively. Rather than referring to their own position, they referred to the group, to the school, or aimed their intentions at school leadership. This could at least in part be attributed to the methodology. One of the disadvantage of focus groups is that they can induce 'group think' and seeking confirmation from peers (e.g. Bryman, 2004). However, it might also reflect the point that was made in Chapter 2 on professional isolation: that teachers tend to prevent potential criticism and feedback (e.g. Edmondson, 1999; Kelchtermans & Ballet, 2002; Van Driel, 2006; Inspectie van het Onderwijs, 2013).

8.4 Collective insights (17) and intentions (6) with regard to learning through theory

The first thing that stands out in this cluster is the difference between respondents' earlier individual positions (as recorded in Stage 1) and these collective positions (as recorded in Stage 2) with regard to using theory as a source for learning. In the individual reflections, respondents seemed to be more reluctant to use theory than in the collective reflections. In the individual

relections the most frequently reported reason for not using literature was a lack of interest or energy; in the collective ones it was a lack of time:

> *We could do much better there. It has to do with what I see here as advice: a subscription, professional literature, digital newsletters. I'm thinking: we could all do these things, but we'd need to make the time for it – and get the time for it (group 04).*

Another respondent said:

> *Then I think: this indeed is something we could do, but then we should make the time for that, and be given the time. I really hope the school will pick this up next year (group 04).*

This could be another indication of what was discussed in the previous section: that in a social setting like in this one-off meeting teachers might be less self-critical, or less honest, feel less safe (cf. Kelchtermans & Ballet, 2002). A reported lack of time or facilitation is an external attribution; lack of interest or energy is an internal one. Focussing on external attributions could be an indication of self-defense.

In the individual reflections, in the questionnaire part of the tool (Stage 1), 'unplanned theoretical learning' was one of the highest scores in *present*, with a score of 3.4. However, the spoken references here (so in Stage 2) seem to suggest it does not happen very often. One teacher stated: *I am not someone who uses theory, who reads a lot, and definitely not in my spare time. And so, I depend on unplanned input (group 04).* Theoretical learning was particularly discussed in group 4 – it could be that their relatively large input in this section (most of the references are from this group) might have distorted the general image. It could be that their opinions are less representative than their disproportional presence in this part of the data leads to believe.

As for intentions with regard to learning through theory, these reflect what was found in the insights: there are more about *planned* than *unplanned* learning; and more on an individual level than a collective one. The total number of both individual and collective reported intentions for theoretical learning was 24: the

lowest of all three clusters. The particularly low number of intentions to organise unplanned learning (3), could be problematic. If indeed time and opportunity to organise learning through theory is problematic (which is not likely to change in the near future, considering the teacher shortage in the Netherlands), then facilitating the chance of unplanned learning could be a solution. However, this opportunity appears not to be recognised, except for this response:

> *What I liked in the interpretation framework... I had scored myself a bit low, and when I read the recommendations on for example these digital newsletters – they can really trigger me. Just a weekly newsletter – it makes you discover things that make you think: oh yes (group 05).*

On the other hand, there was always going to be something paradoxical about planning for the unplanned. Establishing conditions, optimal opportunities and exposure to sources and networking opportunities, so that the individual is immersed in an environment that is expansive, may not be something that teachers are familiar with. It raises questions on the concept of serendipity: can the unplanned be organised if it is considered to be the same as chance? Accepting learning by chance as a strategy could imply accepting that you might miss that chance.

8.5 Differences between the references in individual and collective reflections

The analyses of the individual (Stage 1) and collective reflections (Stage 2) suggested differences between the nature of the statements that were made individually and those that were made collectively and this point is further analysed in this section. Korthagen (2017) argues that individual notions will be influenced positively by the social context. Valli (1990, p. 86) states that, "If left unsocialized, individual reflection can close in on itself, producing detached, idiosyncratic teachers." This suggests that the collective reflections could be seen as developed (improved, or operationalised) from the individual ones. There is yet another factor at play. According to Staton and Hunt (1992), Edmondson

(1999), and Kelchtermans and Ballet (2002), teachers might feel reluctant to open up in collective reflections – they could choose to 'play it safe' and not be prepared to place themselves in a vulnerable position by sharing the self-criticism that might have originated from the individual reflections. In that case the collective reflections would be more superficial and generate less rich data. Both of these possibities – collective reflection as a deeper or as a more superficial one were relevant to explore, in terms of the research question: the role of context in teacher learning. This point was further explored by examining the differences between the references in individual (activity 1b in Stage 1) and collective reflections (Stage 2). One way of testing whether the issues raised in the literature were present in the data was by quantifying them, both in terms of individual-collective, and in terms of references to practice, the social and theory as a source for learning. Below in Table 27 the frequency of these references is combined in one overview.

Table 27: Numbers of references in the individual and collective reflections

CATEGORIES	No. of references in INDIVIDUAL reflections (Stage 1)	No. of references in COLLECTIVE reflections (Stage 2)	TOTAL no. of references
general	49	9	**58**
Insight practice	26 (14%)	21 (23%)	**47**
Insight social	49 (27%)	27 (29%)	**76**
Insight theory	12 (7%)	17 (18%)	**29**
INSIGHT TOTAL	**87 (48%)**	**65 (70%)**	**152**
Intentions practice	31 (17%)	4 (4%)	**35**
Intentions social	45 (25%)	18 (19%)	**63**
Intentions theory	18 (10%)	6 (6%)	**24**
INTENTIONS TOTAL	**94 (52%)**	**28 (30%)**	**122**
GRAND TOTAL	(49+) **181 (100%)**	(9+) **93 (100%)**	(58+) **274**

Before looking into the difference between individual and collective reflection, it is important to note the following. I discussed the difference in how the respondents were prompted in the two activities and the effect this might have had on the numbers. In the 72 individual reflections each respondent was asked to mention at least one insight and one intention, and this could account for the large total here: 49 general and 181 specific (so 230 combined) references in total. If 72 people are asked to mention at least two things, these numbers are not a surprise (230 means an average of a little more than three references for each respondent). In the collective reflections there was a total of 9 general and 93 specific references (102 combined). This lower number can be explained through the difference of the prompt: if 13 groups are asked to reflect on insights and intentions, it is not a surprise that they come up with this lower number (102 still means an average of almost eight references per group). This means that in the following analysis I will not focus on the absolute differences, but on the standardised, relative ones. To this end I calculated and added percentages to the scores between brackets, so that the quantified differences can be compared (see Table 27). Please note that the percentages are based on the total number of *specified* references per group – the general remarks have been kept out of this equation.

The first difference between the individual and collective reflection that stands out is the distribution between insights and intentions across the two activities. In the individual reflections this distribution is fairly equal: 48% insights against 52% intentions, which is logical, given the instruction in the tool to mention (at least) one for each of these. In the collective reflections the distribution is skewed: the insights (70%) score much higher than the intentions (30%). One explanation could be that in a more or less anonymous questionnaire it is relatively safe to articulate an intention. In a social setting things could feel less voluntary, more binding. If that explanation is correct, it suggests that teachers respond differently in a social setting; their holding back information in a social setting could mean they are less open than they would ideally be (the 'play it safe' argument discussed in the introduction of this section).

In both the individidual and collective reflections the *social* scores are highest, both in *insights* and *intentions*, which might have been prompted by the social nature of both activities – most co-reseachers had their workplace colleagues fill in the tool shortly before the collective reflection, and in the same room as their colleagues. It could also be that the 'reflective power' of the tool is most evident in this dimension; that in this particular dimension the distinction between present and ambition is most prominent. It would confirm what was found in the literature: that social learning has most potential as a source for learning (see Chapter 2.6.2). It is also reflected in the numerical scores, where the difference between *social planned present* and *social planned ambition* was the highest (1.1) of all the averaged differences.

In addition to the differences between *present* and *ambition*, I was interested in the differences between *planned* and *unplanned* learning. Below, in Table 28, the combined totals for both individual and collective reflections are presented with regard to *planned* and *unplanned* learning.

Table 28: Numbers of planned and unplanned references (for this the two datasets of Stage 1 and 2 were added together)

CATEGORIES	No. of references to planned learning	No. of references to unplanned learning
Insight practice	22	23
Insight social	33	23
Insight theory	20	9
INSIGHT TOTAL	**75**	**55**
Intentions practice	26	7
Intentions social	48	7
Intentions theory	20	3
INTENTIONS TOTAL	**94**	**17**
GRAND TOTAL	**169**	**72**

What stands out are the low numbers on *intentions* for *unplanned* learning (7; 7; 3), especially when measured against the numbers of *insights unplanned* (23; 23; 9). It could of course be that an insight does not automatically lead to an intention. There could also be an alternative conclusion. For all of the reasons discussed in Chapters 1 and 2 teachers are mostly prone to unplanned, coincidental learning as opposed to planned, organised learning. In times of teacher shortages and pressures these reasons are unlikely to change. If such unplanned learning remains the dominant model, then organising more of that would seem an obvious way forward. These results suggest that that is not self-evident – it would not be the natural course of events if left to individual teachers, at least if these numbers are representative. The feasibility of planning unplanned learning, of organising informal learning, by focusing on conditions that enable such learning is a concept that will be further discussed in the final chapter.

Fig. 13: Planned informal learning

9. Results: Study 3, Stage 3: Students discussing the role of context in professional learning

This third and last stage centred around focus group discussions, involving the master's students who had been prepared extensively as part of their master's programme, and who had introduced the tool to their workplace colleagues. They had asked them to first fill in the questionnaire and reflect individually (Stage 1), and then they had organised the collective reflection (Stage 2). The students sent me the data shortly thereafter: the digital questionnaires and a recording of the dialogues, as well as the consent forms, signed by their workplace colleagues. The purpose of this final focus group activity – students discussing the role of context in professional learning – was to gain a deeper understanding of the individual and collective reflections and of what they indicated about the role of context. Not only could the students add insights that might not have been captured in their colleagues' written or spoken reflections, but – being aspiring teacher leaders – the students would have their own ideas and interpretations, based on their individual experiences, and on their critical engagement with their colleagues. This is where the participatory character of the project was most evident: the role of researcher and researched interchanged, because "[P]eople other than formally trained researchers have good ideas to offer about the research question(s), the actual design, the interpretation and the findings, and how the findings can and should be used" (Lawson, *et al.*, 2015, p. xv).

I met the students at the university within a month of them organising the reflections. I first presented a summary of the data generated through Stages 1 and 2 to the group that at that moment consisted of eleven students (two students had left the programme for personal reasons). These data consisted of the tables I had drawn as a preparation for my own analyses, and they are included as Appendix 8. They were presented without any form of interpretation – just the summary of the data: the averages of the items' scores as presented in Table 22, and a table that included an overview of three typical responses for each of the categories (*insights* and *intentions* for *experience, social* and *theory* learning, divided in *unplanned* and *planned* learning). I was interested in how they, who

had first-hand experience (in their capacity of being teachers), who had been present in the collective reflections (in their capacity of co-researchers), and who had a keen interest in the theme (in their capacity of aspiring teacher leaders), would make sense of the data. Here I followed Heron's (1996, p. 19) notion that in co-operative inquiry "there is intentional interplay between reflection and making sense on the one hand, and experience and action on the other." Not only did the students have a relevant perspective on how these data could be understood and that added to the accumulation of understanding of the research question, but also because they could offer a perspective on the possible consequences of those understandings – in terms of teacher leadership.

To this end, they formed three subgroups (n= 4; n=4; n=3) in which to discuss how – from their respective understanding of the presented data, their individual experiences in leading and participating in the group reflections, and their experience as teaching professionals – the role of context as a source for learning might be understood. This way, the sense-making of the data could be developed further. I did not interfere in the discussions – was not present, except when there were procedural questions. I did not want to influence the discussions, but rather maximise the students' agency, following Williams and Katz's (2001) claim that focus groups are about empowering participants. I did not want them to please me in any way. I was interested in their independent sense-making.

9.1 Working with the data

The three discussions, each of which lasted about a quarter of an hour, were audio recorded by the students using smart phones, transferred to me and transcribed professionally. I first listened to the recordings and read the transcripts twice, before analysis. When looking to make sense of the data, I applied abductive reasoning as a combination of deduction and induction (cf. Tavory & Timmermans, 2012). I looked for a situational fit between 'rules' and observed fact; I oscillated between what I knew from theory and my own experience, and from what I found in the data. Deduction was used when applying the framework that was developed

through the literature review: learning through personal experience, through the social and through theory, and differentiating between references to unplanned and planned learning. Induction was applied when trying to make sense of the students' deliberations through my own understanding of the themes, in line with Mirza *et al.*'s (2014) claims that the implicit and explicit knowledge that the researcher already has should not be set aside but be deployed in order to make sense of the data. The underlying question was: how is the students' thinking about the role of context developed, here? First I openly coded the texts; in a next step I applied axial coding (see Table 29).

For open coding, "the process of breaking down, examining, comparing, conceptualising and categorising data" (Strauss & Corbin, 1990, p. 61), I used the framework developed in Chapter 2, in which the main features of three context domains are summarised (see Table 3), while focussing on the research question: what is understood to be the role of context as a source for teacher learning in these deliberations? Through this abductive process that brought together open coding with a framework in mind, I learnt about the respondents' insights with regard to that research question. It meant that I looked for examples of context playing a role, and – more particularly – for clues as for *how* these examples worked – how they stimulated or facilitated teacher learning, or maybe did the opposite: how they hindered learning from taking place. Whilst analysing the texts, I found that the students gave much attention to this negative side as well: when and why learning does/ did not take place.

As for axial coding, "a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories" (Strauss & Corbin, 1990, p. 96), I used this to bundle the data; to try and find coherence in the open codes. The obvious codes were EXPERIENCE, SOCIAL and THEORY, and UNPLANNED and PLANNED. I found that in all three groups a number of topics were discussed, and the common denominators informed the other codes: conditions (CONDITIONS), about what hinders (OBSTACLES) and what stimulates (OCCASION/ INITIATIVE/ TRIGGER/ AMBITION/ SOLUTION) contextual learning.

Table 29: Open and axial codes

Open Codes	Axial Codes	Order/cluster
Example of organised social learning	SOCIAL	5
Example planned social learning	SOCIAL	5
Example unplanned social learning	SOCIAL	5
How can we stimulate teacher learning?	OCCASION/ TRIGGER	4
What would theory think of my practice?	THEORY	5
If the context stays the same, learning doesn't take place	OBSTACLES	3
Insight: having learning objectives is conditional for professional learning	CONDITION	4
Insight: theoretical learning requires a social context, too	CONDITION	4
Learning from your own experience has its limits	UNPLANNED	1
Reflection on context factors is a good starting point	CONTEXT	1
Role model learning	SOCIAL	5
Social is particularly important	SOCIAL	5
Social learning should be stimulated	AMBITION	2
Someone must take the initiative	INITIATIVE	4
Something is needed to set the wheel in spin	OCCASION/ TRIGGER	4
Teachers have a lot on their minds	OBSTACLES	3
Teachers need to be willing to be vulnerable	CONDITION	4
Teachers should ask for feedback	SOCIAL	5
Teachers should be facilitated	SOLUTION	4
Teachers want to learn	AMBITION	2
There are obstacles	OBSTACLES	3
This instrument helps as a starting point	INSTRUMENT	1
Unplanned learning is powerful	UNPLANNED	1
What is keeping it from happening?	OBSTACLES	3

I then put the axial codes and their corresponding text fragments into a logical (hierarchical) order (see Table 29 from right to left). I first clustered general remarks on the issue of professional learning (1), such as: "*what I very much recognise in the discussion with my colleagues and what is reflected in the data is indeed the awareness of teachers of the role of their contexts*" or "*I think that the role of context... I think it plays a big role, but that it shouldn't be the same every time [...] the person should ask: what context is needed here?*"

What followed were fragments that defined the ambiton to do something about this problem (2), like: "*yes, and in my discussion actually everyone said they want to learn*" or "*what I noticed: learning through theory is something everybody wants [...] it is without doubt that they all want that, but they want it organised for them: courses, workshops, literature.*"

The third cluster of remarks were about how the problem could be understood (3). These were the remarks about obstacles to learning, such as: "*teachers need to be given time and space, also for awareness [...] because of day-to-day affairs I think we tend to forget about that*" and "*and then you ask yourself: why doesn't it just happen? Why doesn't happen what requires an effort? [...] Teachers are content with how they learn – they score themselves on a lot of items: 'well, this is something I do okay'. It is all about not doing the unimportant [sic] but that what does not require an effort.*"

The next cluster combined solutions or conditions for solutions (4) and included remarks like "*but who is the one that changes that context? Yes, I think in part the teacher himself, but I think all three of us have experienced in the discussions that they would like someone to take the lead for them, someone to take the initiative.*"

The last cluster combined conclusions and follow up activities as seen by the students (5), like "*in my team we proposed to start organising peer-to-peer coaching. And we did – we just put in our annual calender [...] and this worked really well: we had a really good meeting and we learned from one another. Everyone was very positive about this*" and "*once every two weeks we now organise a 'lunch case', which means that someone brings in a case from his own practice to the lunch meeting and then we*

discuss that in in an informal matter – although it is to some extent planned and focussed."

Finally, I condensed the long text that thus appeared to a readable version, in which I made sure the selected fragments were representative for the total. Thus a first tentative version of the analysis appeared. This text was presented to the students to verify that my analysis represented the respondents' sense-making. I shared the findings of the three groups, to deepen the learning process for the students themselves, while challenging my own first interpretations and contributing to refinements as part of the PAR process. This included each getting a printed version with the request to read it and to write feedback on the paper. This resulted in the correction of errors and one important addition: in my initial interpretation and identification of codes, the obstacles that prevent learning ambitions from being realised were (only) defined as external. Students suggested there might also be internal, psychological reasons that were in the way of realising these ambitions and I revised the analysis accordingly. The notion – which is a relevant one – will be elaborated on in the final chapter of the thesis.

9.2 Results: Master's students making sense of the data

The three groups appreciated that understanding the role of context is important in understanding professional learning, but also that the role and influence of context varies – depending on a number of factors.

Spontaneous teacher learning

According to one group, unplanned learning will always take place: as long as there are pupils, there will be situational opportunities and reasons for teachers to learn. Some students took comfort in this perpetual learning potential of personal experience. Others claimed that many teachers tend not to seek new contexts and thus stay away from opportunities, from zones of proximal development – which typically can be found where there is change and challenge. If change and challenge are actively avoided, and if only challenges are met that

cannot be avoided, then that could be problematic. Ideally, teachers should not only be re-active, but pro-active as well, it was argued.

This initial conclusion that spontaneous teacher learning, invoked by the dynamics of a day's work, will always take place – even without any form of organisation – is reassuring on the one hand. It is possibly problematic at the same time, if this notion is used as an excuse (either conscious or unconscious) not to engage in any other learning activity. In the literature review I discussed teacher quality and it was argued that whilst learning from first-hand experiences is by its nature a powerful source for learning new things, there are limitations to (only) using practice as a source for learning, especially if such endeavors are limited to reactive learning. Buitink (2009, p. 118) refers to it as "the acquisition of a 'mediocre pedagogy.'" Coenders (2010) also claims the potential of this kind of learning from practice (only) is problematic. According to him it is necessary to complement first-hand experiences with social interactions and input from outside the school context.

Theory learning as a social endeavour

Another student observation was that theoretical learning could and probably should be stimulated socially – not only in the obvious sense (conferences, lesson study, *Leerkracht*), but also in a more general sense: the social could form the context for the theoretical. "*There is little chance that theoretical learning will thrive if it's a strictly individual endeavour*", one student remarked. Another student added that "*as a teacher you stimulate that pupils learn from and in their social domain. As a professional you should be part of such a domain, too.*" The teacher needs a stimulating social environment as well, he claimed.

The ambitions to learn (more)

When discussing the data, the students noticed the ambitions teachers expressed across the domains: learning from theory scored high – which they had expected – but they also noticed the very high (4.7) ambition score for "I learn from my mistakes and things that happen to me whilst teaching." One student claimed that often the unplanned actions – for instance lessons that were unprepared and

were the cause of unexpected events – have the biggest learning impact, precisely because of this. As for the reasons behind these generally high ambitions, another student stressed that no teacher will admit to not learning regularly. This also applies to ambition: they believed that every teacher will claim to be ambitious. All groups, however, agreed that teachers' reported learning ambition is real – both in the context of this reflection tool and in daily practice: no teacher will claim that they are done learning. And yet, despite this ambition, the students noticed that many of the opportunities for learning that present themselves (many of which are listed in the tool) are not seized right now. "*Something or someone acts as a brake,*" one student sighed. There appear to be many obstacles to opportunities being taken, and these obstacles could either be external or internal, it was claimed. In any case, the students argued, what is needed is occasions *and* triggers to rise to these occasions. As for these triggers, these reasons to organise learning in the first place. I was surprised that improving teacher quality – which is the *raison d'être* for teacher learning (cf. Chapter 2.1) – was hardly mentioned in any of the stages. It could be that the need for teacher learning to improve teacher quality is so obvious that it does not require to be appreciated. It could also be the opposite: maybe the lack of references to teacher quality indicates an overestimation of that quality.

Obstacles to professional learning

As for the observation of the differences between *present* and *ambition* with regard to professional learning: all three groups discussed how to interpret these large self-defined differences: if there is a will, then there should be a way, they argued. They concluded that there must be obstacles between the two. These could either be external, for instance if teachers experience a lack of time, or logistical problems, or have school leaders who do not prioritise it, or if they experience an absence of occasion. The isolation that teachers experience could be 'institutional' if it is invoked or endorsed by the school organisation. On the other hand, perceived obstacles might also be internal, they found: the students argued that sometimes teachers' reported obstacles are effectively no more than external attributions, meant to justify the status quo, a conclusion in line with what was found in the analysis and comparison of the individual and collective

reflections, and discussed in the literature review: especially teachers who operate under pressure might feel inclined to disengage themselves from activities that put them in the spotlight (Edmondson,1999; Kelchtermans & Ballet, 2002; Van Driel, 2006). One student went as far as to argue that complaints about not being facilitated might be just (false) justifications not to move into action. Most students thought that the reported obstacles were real, though: time was a problem, but also lack of backing – "*if the school leader doesn't prioritise professional learning, then why should I?*" This conclusion touches on the paradigm in which the school leader plays the role of hero and in which teachers are waiting to be saved (cf. Snoek, Hulsbos, & Andersen, 2019). One student argued that in her school social learning was effectively discouraged, because the school leader would not facilitate any of the initiatives that had been put forward by teachers themselves.

In one group it was argued that the main problem is that teachers operate on their own. For some (unspecified) reason there is little to no communication between teachers, and that stands in the way of social learning, they observed. If teachers are on their own; if they are self-reliant regarding their professional learning, it makes them vulnerable, and prone to *status quo* practices, they argued. Moreover, the questionnaire outcomes show that whilst *ambition* scores higher than *present*, *present* still scores sufficiently high, which suggests there is no real urgency to change things. That might restrict action, too, they argued. In the literature review I discussed how – according to the Dutch Inspectorate – most teachers in the Netherlands have too positive an image of their own teaching qualities (Inspectie van het Onderwijs, 2013). The inspectors, who observed hundreds of lessons of teachers in different schools, and compared their findings with the results of a survey conducted among the observed teachers and their school leaders, concluded that more often than not the positive image that teachers have is inaccurate. They suggested that almost two thirds of Dutch secondary school teachers are significantly more optimistic about their own abilities than the inspectors were. I discussed how the Inspectorate blamed this on the absence of reference points for what constitutes a good lesson: in many of the schools, it is up to the individual teacher. Drawing from Eekelen (2005) and

Hoekstra (2007), this can be problematised as *self-referentiality*, a state in which teachers use their own personal experiences as the measure of all things. The findings here indicate the need to recognise this. The problem with self-referentiality is that it is self-sustaining: it is *Meno's* paradox about the unknown unknown: a bubble from which it is difficult to escape on your own.

Conditions for professional learning

In all three groups the following paradox was discussed: that on the one hand there is (reported) ambition and opportunity, as expressed in the questionnaires (Stage 1); at the same time there is hesitation and there are (reported) obstructions, expressed in the group reflection (Stage 2). In either case, the students thought the way forward would be a combination of three kinds of things:

- first there should be awareness of opportunity, of relevance;
- second, this opportunity should be organised more clearly and be made available to reduce disengagement; and
- third, there needs to be an initiative: an event or an apparent reason that helps to prioritise professional learning activities to be pursued.

As for *awareness*: the students discussed how many teachers said things like "*here is something I'd really like to do*" and "*maybe we should do more of...*" For awareness to be effective, one student argued, teachers should be prepared to be vulnerable, reflecting Watkins, Carnell and Lodge's (2007) stance that "effective learning happens when people are willing to be vulnerable". They should be open to feedback, not just given by their colleagues (thus stimulating social learning) but also by their students (thus stimulating learning from experience). In general, planned (future) actions scored high, suggesting that awareness was already there – albeit in the context of this reflection intervention, they observed. The challenge is to turn this awareness into actions, they then argued; to have awareness beat the attention that is required by the day-to-day affairs.

That brings us to the second condition: *perceived opportunity*. One group wondered whether the reported distance between expressed ambition and actual

practice might exist purely for pragmatic reasons. Spending time on professional learning means having less teaching time. Like teachers, schools are focused on pupil learning, rather than teacher learning. One student recalled how study days for staff in her school were seldom about professional learning, but rather focussed on organisational issues. Another group thought that a lack of organisation was to blame. As an example, they found that the biggest reported difference between *how it is* and *how it should be* is in learning from courses (workshops, training) organised by the school. Bridging the gap requires external action in this case: someone would need to initiate such courses. This point of initiative was mentioned more often across the focus groups: "*when we observe our colleagues, we all experience that they want someone [else] to take the lead.*" Could it be that teachers are just waiting for someone to build the bridge from ambition to action, they questioned, which again reflects the paradigm of role-based leadership (cf. Snoek, Hulsbos, & Andersen, 2019).

As for the third point – *initiative and reason* – students discussed examples from their own practice. One student explained how the development of a new subject for her had formed such an occasion – it forced all those involved to verbalise their ideas and practices and from this renegotiation professional learning emerged. According to another student, disappointing student results could be used as a reason to address this third point – that could be used to create the urgency. Another group stressed the importance of organising time to reflect collectively. For that to happen, again, someone needs to take the initiative to make that happen, they said. All groups agreed that the initiative should be taken by – or at least be supported by someone with power over the curriculum/ timetable. Especially the organisation of *collective* professional learning requires strong leadership, it was argued. One student reported an example of that: in their school unplanned learning was stimulated by the school leader who organised bi-weekly lunches in which teachers discuss a case or present something they read. In all groups, it was stressed that stimulating social learning would be worth the effort: the students saw this as having the most potential as a source for learning, not just when looking at the data, but also drawing from their own experience.

Teacher leadership

The students pointed at school leaders to take their responsibilities, but acknowledged their own role in this as well, and discussed examples of how they had successfully taken on this role themselves, thus showing teacher leadership: "the process by which teachers, individually and collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, p. 287). From the discussions that followed, it appeared that in many instances it had been one of the students themselves who had taken on this role. This very reflection intervention had been such an occasion. Other examples included engaging colleagues in the student's research project or adding forms of peer-to-peer coaching to already planned meetings. In some cases, it had been the student who had organised this personally, in other cases (s)he had stimulated others to organise it. To conclude, one student repeated a quote that said it all: "*let's go and just do it.*"

9.3 Conclusions

The third and last study was complex, both in terms of the various activities and subsequent data collection methods it involved, and in the results that it yielded.
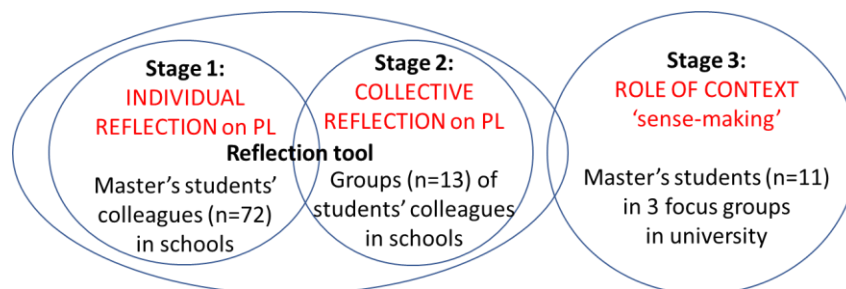

Fig. 14: Study 3: Teachers reflecting on context as a source for professional learning (PL)

Rather than repeat the results for each of the three stages or reveal what will be discussed in the next and concluding chapter, in this concluding section I will discuss the process by which Study 3 developed.

The decision to engage the students as co-researchers proved to be fruitful. As a result, the data that were generated were relevant and rich. Moreover, the students grew in their role of co-researchers. Some of them used part of the data that their colleagues had produced for their own research projects; others adopted the PAR-principles for their own research, having become enthusiastic about its potential. Parts of the project functioned as a promising example of the *controlled confrontation* or *desirable difficulties* that was discussed in Chapter 2.8: (action) research is by its nature a form of self-initiated challenge (cf. Cochran-Smith in Fiorentini & Crecci, 2015). Moreover, having teachers engage in collaborative research and own the research question created an environment in which the norm was to be (self)-critical, and to look for external points of reference. In that sense the methodology that was applied did not just generate data, it generated the activity that generated the data as well. Although this is not a case study, the exploratory approach is in line with Stake's (1995; 2006) observation that a (case) study is both the process of learning about the case and the product of our learning. Study 3 offered a glimpse of what effective professional learning could look like and that meant a further accumulation of my understanding of the research question. In Chapter 3.1 I discussed how "[t]hrough these stories the participants are able to describe their views of reality and this enables the researcher to better understand the participants' actions" (Baxter & Jack, 2008, p. 545). These stories and actions indeed helped explore the research question, but my witnessing the participants' own sense-making added a dimension to my understanding.

Much of this is reflected in the analysis of Stage 3, in which the students not only analysed the data at hand, but their sense-making also reflected what they had learnt through participating in the project. It reflected what Lewin (in Peters & Robinson, 1984, p. 116) calls "the discovery of the meanings actors gave to the events while they were acting." The combination of interventions and research

can be a powerful form of professional learning (Rijlaarsdam *et al.*, 2012), as showed from the results and analysis in the three stages of Study 3.

10. Conclusion: reflections and implications.

10.1 Introduction

This research explored the role of context as a source for teacher professional learning. In this concluding chapter, I will first discuss and reflect on the most prominent findings. I will then discuss their significance: what are the points to be taken from the results of these studies? Finally, I will reflect on the methodology that drove this research: the exploratory approach and the tool that was at the heart of the study, and that could be seen as an experiment to expand teachers' sources for learning. I will then take one more look at the three-domain context framework and its usefulness for future research. Finally, I will briefly discuss how participatory action research (PAR) can be deployed as a way to address self-referentiality.

10.2 Conclusions and reflection

I began the research with the observation that the teaching profession is characterised by a number of complexities and paradoxes and I discussed the implications of these for teacher learning. These complexities not only include the kinds of things that need to be learnt: the acquisition of skills to address the challenges that teachers face when they are actually teaching – to pupils who are increasingly demanding in their specific needs, and increasingly articulate in expressing these demands. Complexities also include the competing discourses on what constitutes a good teacher, and on what professionalism entails (cf. Mockler, 2013). Teaching in the modern world requires professionals who are resilient and agile. New demands and an uncertain future require teachers "to be able to constantly reflect on and evaluate their work and to innovate and adapt accordingly" (OECD, 2014, p.97). It implies that teacher learning should be continuous and sustainable.

Drawing on the literature, I discussed how for many teachers "adaptive expertise" and "capacity to innovate" is not self-evident (Darling-Hammond & Bransford, 2005, p. 360, 362), and neither is lifelong learning (Muijs *et al.*, 2014). Moreover, traditional professional learning arrangements appear to fall short in terms of long term effects (e.g. Grift, 2007; 2010; Veen *et al.*, 2010; Guskey, 2002; Borko, Jacobs, & Koellner, 2010). That does, however, not prevent teachers from learning. Recent studies suggest broadening the concept of professional learning. Rather than being limited to the results of formal, organised learning activities such as workshops and courses, it can be understood as the result of an array of experiences – as long as existing ideas and practices are being challenged through these experiences, and addressing these challenges leads to new ideas and practices (Lankveld & Volman, 2009; Eraut, 2004; Akkerman & Bakker, 2011a; 2011b).

The most powerful example of such practice driven learning can be witnessed today: the COVID-19 crisis is transforming schools at an unprecedented level. The urgency to adapt to the new situation is felt by all teachers, as everywhere in the world, teachers are forced to reinvent their teaching practice. It shows that reactive learning can be very powerful. While I was working on this chapter, schools in the Netherlands (and in many other parts of the world) closed their doors because of the COVID-19 pandemic. In a very short time teachers have had to adapt to the new circumstances and the scale of the innovation that ensued is unprecedented: within days the world of education changed as teachers re-invented the way they instruct, guide, motivate and assess their pupils. This observation confirms the notion that teachers' learning can indeed be greatly situation driven. If the circumstances require it, teachers are capable of developing new practices. It is still too early to assess the long-term effects of this sudden transformation, or the quality of the newly developed practices. This study suggests that for new circumstances to lead to sustainable innovation, they should prompt teachers to move beyond reactive responses that are individually induced and based on individual experiences. Instead, challenges should be addressed collectively, and responses should be informed by theory. Wenger *et al.* (2002) argue that whilst some theory might

be self-discovered, many concepts are too complex for that: theory helps to go beyond the 'common sense'.

The three studies both reflected and contributed to what was found in the literature. If context is explained as a combination of teachers' personal practice domain, their social domain and the theoretical domain, then it appears that teacher professional learning is predominantly directed by what takes place in the personal practice domain. In that sense individual, personal experience can be understood as the main source for teacher learning. "Practice makes practice", according to Hargreaves (2000, p. 156), and this study helps understand the nature of this kind of learning. The data suggest that much of the learning within this domain of personal practice appears to be situational: it is determined by pressing problems and by coincidence, rather than being the result of careful analysis and controlled experiments. Teacher professional learning thus appears to be predominantly reactive, rather than proactive. The focus group in Study 3 addressed this point, raising the question of how teacher learning should be organised. On the one hand a case could be made for organising professional learning arrangements that compensate for this and that force teachers to become more pro-active, an argument that was made by the students (see Chapter 9.2). On the other hand, if indeed teachers have this preference to learn reactively, then the case could be made to harness this inclination to learn from first hand experiences. The findings from this study could serve as an impetus for starting to experiment with ways to do that, for instance by making sure teachers continue to have 'new' experiences and/ or to have them collect new feedback on current practices – feedback that leads to adaptations.

The data suggest that if indeed professional learning emerges out of challenge, and if indeed the world is changing rapidly, then there will be many such confrontations to be faced by teachers. That would perhaps initially suggest that teacher professional learning will emerge automatically (with the Covid crisis as a stark example). This evolutionary model can only work, however, if confrontations are identified: if they are perceived as opportunities to learn and addressed as such. From the literature it was argued that this is not always the

case, and this notion was also reflected in the empirical data. If perceived pressures are too high and not experienced as a reason for change, they can cause a "leave me alone" attitude (Bolt *et al.*, 2006) and lead to professional loneliness (Bruining *et al.*, 2015). Especially when pressures are experienced as imposed from above, they can cause teachers to seek isolation, in order to escape outside interference (Hargreaves, 1994). Understanding this paradox is key in understanding context as a source for learning: again, context can be a powerful source for learning if it is identified and addressed as such: if teachers appreciate the learning potential of contextual confrontations. This study suggests that if context does not provide a perceived new, challenging point of reference (one that requires new behaviours), then it will at best confirm teachers in prevailing practices. This complex relationship with external points of reference can be understood through the concept of *self-referentiality*. This notion, as discussed in Chapters 1.1.2 an 1.3, refers to the situation in which teachers use their personal experiences as the measure of all things, rather than using external references as a source for learning. This tendency to self-referentiality was reflected in the group discussions (Stage 2 in Study 3) and it lies at the heart of the challenge: again context can only be a fruitful source for learning if it is welcomed as a challenge to the status quo.

These studies confirm what was found in the literature, that many teachers find it difficult to look beyond the scope of their own experience. The teacher autobiographies showed that the biggest drive to change teaching practice was individual experience (cf. Eraut, 2000; 2004; Eekelen, 2005; Hoekstra, 2007; Lankveld & Volman, 2009). Reported learning took place if a dissonance was encountered between previous experience and the current demands of the situation, for instance when a new role was taken that required different behaviour, or when students needed other forms of guidance. Out of urgent situational challenges – that required new teacher behaviours – learning had emerged. As a result, the reported learning was mainly incident-driven. This prevalence of unplanned personal practice learning was also reflected in the outcomes of the questionnaire (Study 3): it was the highest scoring category in '*how it is*' (3.7 on a 5-point scale), and the reported difference between '*how it is*'

and '*how I would like it to be*' was the smallest for this category (ambition scored only 0.3 points higher), indicating that teachers in the study felt this form of learning hardly needed enhancement.

To some extent, that could be considered as reassuring – apparently teachers do not need to rely on organised learning alone. One of the focus groups (Study 3) indeed took comfort in that: as long as there are pupils, they stated, there will be situational opportunities and reasons for teachers to learn. The capriciousness of pupils and situations will see to that, they argued. However, other students highlighted that in their experience many teachers tend not to seek new contexts. They stay on familiar routes and steer clear from places of change and challenge, and thus shun the opportunity to learn new things. There is a double risk here. First, for these teachers it will be it hard to acquire the 'adaptive expertise', to develop the 'capacity to innovate.' Moreover, teachers who are self-referential, who are looking inward rather than outward, might not know what they do not know, the *Meno paradox.* If teachers think they know all there is to know, then they will have little ambition. Self-referentiality, self-confirmation and isolation can thus lead to stagnation and status quo. This is problematic in a world that is dynamic, in a profession that requires resilience and agility.

10.3 Conclusions and implications for practice

This study suggests that if self-referentiality indeed is the problem, as it has an inhibiting effect on professional learning, then the solution is in finding ways to expand the reference points that teachers allow themselves to be exposed to. As discussed in Chapters 1 and 2, the issue is complex and multi-faceted, and to address these complexities and their implications, I will discuss them from three levels: macro, meso and micro. In addition, this expansion of reference points can be sought in each of the three discussed domains: teachers' personal practice domain, their social domain and the theoretical domain. When looking at macro level, I will discuss how the profession could benefit from redefining

itself; how it could strengthen its professionalism by reorganising career paths .
At meso level I will suggest what schools and school leaders could do to turn
their schools into nourishing bases that drive professional learning. The micro
level implications are directed at the teachers themselves: I will discuss how
organising teacher reflection and teacher leadership could promote teacher
professional learning if they lead to an expansion of reference points.

10.3.1 MACRO: redefining the profession and career paths

Both the literature and the data suggest that self-referentiality is influenced by a
number of factors. The first one is the way in which the profession is organised.
In the Netherlands, teachers operate mainly individually: they teach on their
own with little room for collegial interaction. Moreover, the Netherlands has a
'flat' career structure: teacher responsibility is high and constant from the very
start, as is the pressure under which teachers operate. Under such stressful
circumstances it is understandable that many beginning teachers fall back on
coping strategies. These coping strategies include fostering individuality and are
aimed at avoiding uncertainty and vulnerability (Kelchtermans & Ballet, 2002).
They are directed at dealing with the here and now, at 'survival'. The learner
autobiographies, the questionnaire results and the group reflections suggested
that for many teachers, from the outset professional learning is mainly
perceived as an individual activity, pursued in the context of one's personal
practice and directed at current individual needs. The challenge is to find ways
to expand that definition of learning; to move beyond coping strategies.

If indeed self-referentiality is prompted by the system, then addressing it would
imply changing that system. The European Commission/EACEN Eurydice
(2018) advocates a more progressive system than today's binary classification –
in the Netherlands you are either a teacher or you are not. They emphasise the
need to make teaching careers more attractive, and to change the paradigm of
the profession from static to dynamic. They suggest that this could be done by
introducing a multi-level career system. In such systems, career levels are
structured according to ascending levels of job complexity and increased
responsibility, and with complexity and responsibility comes a higher salary.

Snoek, de Wit and Dengerink (2020) propose a further differentiation: they argue that teachers should be stimulated to specialise in either pedagogy, in school organisation, in coaching colleagues, or in research and development. In each of these domains, they propose four different levels that can be seen as standards or registers. These can be used to direct professional learning. Using the standards supports teachers in determining their ambitions and in working productively within their zone of proximal development. As a result, it helps teachers to avoid self-referentiality.

Another macro level implication is in the way the profession is perceived and maintained by the collective of the professionals themselves. If teachers as a professional body claim more responsibility for teaching standards and for maintaining these, there could be less room for self-referentiality (cf. Hooge, 2013). There were plans to introduce a mandatory Teacher Register in the Netherlands in 2017, as part of a strategy to boost teacher professionalism (Ministerie van OCW, 2013). It proposed that the Register would be governed by a council of 24 representatives which would define the professional status, the standards and criteria for (re-registration and development (Gomendio, 2017), and in that sense be 'self-imposed'. However, there was insufficient support from individual teachers and these plans were put on hold. Reported reasons included that it was felt as something that was imposed from outside: the majority of teachers perceived the register as a bureaucratic exercise, designed by the government as a way of holding teachers accountable, and thus adding to the already high pressures (Hardy, Jakhelln, & Smit, 2020). The unsuccessful introduction of the Register could be explained from the concept of the *steering paradox*, discussed in Chapter 1.2.1 (A profession under pressure): from the moment the introduction of the Register was perceived as an outsider's intervention, it was doomed to fail. When reintroducing the Register, this point should be addressed: the Register would have to be framed and perceived as a 'desirable difficulty', as was discussed earlier in Chapter 2.8: registering should be perceived as a form of self-initiated challenge. The steering paradox was echoed in the group reflections (Study 3). There appears

to be a delicate balance between teacher autonomy and their need to be directed.

10.3.2 MESO: reorganising school structures

A second way to consider the implications of self-referentiality in teacher professional learning is at the meso-level, the level of school organisation. The focus groups in Study 3 promoted an environment where experiments and new ideas would be valued as something positive and where teacher innovation would be welcomed. It was argued that the school setting should be one that is full of learning opportunities, for instance by having mutual class visits facilitated. Instead of steering clear of anything that could involve risks (which they felt happened more often than not), new ideas and situation should be embraced as possible learning opportunities, not just by teachers, but by school leaders as well, the focus groups suggested.

The personal practice domain

The implication is that professional learning would benefit from school leaders actively organising learning opportunities as part of the daily teaching practice. Most Dutch schools have induction programmes that are aimed at inexperienced teachers and these appear to be effective (e.g. Kessels, 2010). Most schools, however, apply a sharp divide between teachers who are inexperienced (and thus entitled to support) and those who are experienced (and thus expected to not need support). Boogaard *et al.* (2018) advocate structures that view teacher development as a lifelong process and urge schools to actively facilitate that process. Schools could invest in creating favourable conditions for learning in the personal practice domain, the social domain and the theoretical domain, both in terms of planned and unplanned learning. If indeed professional learning depends greatly on coincidence, on chance, then it would be advisable to optimise the conditions for such coincidental learning to take place, to create chances for the unplanned to happen. Some concrete examples of such created chances (e.g. teach another group, change the coursebooks, experiment with new approaches, etc.) can be found in the tool's

interpretation framework (see Appendix 4). The focus groups promoted an environment in which experiments and new ideas are valued as something positive; a setting in which teacher innovation is welcomed. If practice makes practice, then experimenting with new practices should be stimulated. In the age of accountability, however, school leaders might not always welcome experiments. Instead, they might feel pressured to be averse to risk, favouring practices that maintain the status quo as a result (Ball, 2016). The student focus groups argued that time and opportunity should be organised more visibly, so as part of the teachers' timetables. The availability of opportunity should be so pervasive that there is no room for self-isolation or disengagement. For this, they claimed, there need to be organised occasions: events or apparent initiatives that help to prioritise professional learning activities to be taken up. The student claimed that first there should be awareness of opportunity, of relevance; then second, this opportunity should be organised more clearly and be made available to reduce disengagement; and third, there would need to be an initiative: an event or an apparent reason that helps to prioritise professional learning activities to be pursued.

The social domain

This point of organised opportunity applies even more with regard to social learning. Both this study's data and the reviewed literature (e.g. Veen *et al.*, 2010; De Vries *et al.*, 2013; Admiraal *et al.*, 2016) suggest that the social domain offers a potentially powerful source for professional learning: if isolation and self-referentiality are the problem, then engaging with others and opening up to external points of reference would be the obvious solution. However, judging from the student focus groups in Study 3, the cultures of schools seem not all and not always supportive of social learning. If it happens, it was suggested, it does so *in spite of* the organisation, instead of thanks to it. The results of the questionnaire appear to appreciate the potential of social learning (Study 3): of all the reported differences between '*how it is*' and '*how I would like it to be*' the biggest one was for *social planned* (*ambition* scored 1,1 points higher than *present*). This is also reflected in the subsequent individual and collective reflections: the number of reported insights and intentions in this domain top

the rankings. Whilst that is in itself positive, it does beg the question why *social learning present* was the lowest ranked (2,8) category in the questionnaire results. The teacher think tank generated a variety of practical ideas and activities that could promote such learning, but almost all of these would require school leaders to facilitate these activities. That conclusion was also reflected in the student focus groups (Study 3), where it was argued that "the lessons are sacred", referring to school leaders' inclination to not permitting anything that would lead to lesson cancelation. Essentially, social learning is perceived as somebody else's responsibility. This problematic stance was identified and addressed by some students in the focus groups, arguing that such activities could also initiate from teacher leadership, a point that will be addressed in the next section.

The *collective insights and intentions with regard to social learning* (Study 3, teachers' collective refections) suggested a possible explanation for social learning not reaching its potential in the current situation. In Chapter 8.5, I discussed how the reference to *we* was typical in this category, suggesting that in the social setting of a collective reflection teachers might feel inclined to deflect their individual responsibilities by referring to the collective. If this is true, that would be problematic in terms of organising social learning activities: if everyone waits for someone else to take the initiative, then little will happen. There is another explanation as well: in the section on *collective insights and intentions with regard to learning through personal experience* (8.5.2), I argued from the data that teachers might not want to appear too ambitious – as a form of enforced modesty. Staton and Hunt (1992, p. 130) argue that "teaching norms tend to stress individualism and egalitarianism, leaving teachers unwilling to critique other teachers." In either case, these findings put into question the fruitfulness of teachers' social settings as a place to generate learning. Facilitating teachers to sit together and engage in exchanging and critiquing ideas and practices, will only be effective if teachers experience enough safety to express their insecurities; if they feel welcomed to address them. According to Vangrieken, Meredith, Packer and Kyndt (2017, p. 57), who studied teacher communities as a context for professional development: "[t]o realise these

dynamics, a culture of trust and respect is essential, this creates the possibility for teachers to open up and feel safe to take risks". The students' learner reports that were composed one semester into the programme reflected this point. The master's programme compels students to organise themselves into professional learning communities and from the very beginning the balance is sought between what Vangrieken *et al.* (2017, p. 57) call "safety (creating openness) and challenge (making room for constructive discussions and deep-level collaboration) in order to create the most learning opportunities". As a result, in the students' learner reports, the number of references to social learning quadrupled compared to the learner autobiographies.

Recent research (e.g. Schaik, Volman, Admiraal, & Schenke, 2020) suggests that the integration of learning-centred leadership and distributed leadership practices can prompt school leaders to support such collaborative teacher learning. Schaik *et al.* (2020) found that managers who chose to focus on daily school practice are not successful in influencing teacher learning, nor in promoting school development leadership practices. For professional learning to become sustainable, schools should embed collaborative learning in their organisation and culture, and effectively become professional learning communities (Admiraal, Schenke, De Jong, Emmelot, & Sligte, 2019).

The theoretical domain

As for stimulating planned professional learning in the theoretical domain: in the questionnaire (Study 3), one of the biggest reported differences between *how it is* and *how I would like it to be* is in the item *learning from courses (workshops, training) organised by the school*. Addressing this specific ambition would require institutional commitment: schools would need to initiate such courses. Moreover, to strengthen the theoretical domain as a context for teacher professional learning, it would be necessary to create structures and cultures that facilitate and stimulate teachers to actively use the collective knowledge on teaching and learning that is available through research, to reflect on and evaluate their own practices. Moreover, school cultures should promote the *normality* of consulting theory, and this nomality should include consulting

theory in a collaborative context. This is currently not the case: in the reflections, for example, learning from theory was seen as a strictly individual endeavour. Hardly any of the reflections included references to reciprocal learning; none referred to Boundary-Crossing Practices and Knowledge Communities, models that are promoted in the literature (see Chapter 2.6.3). They referred to 'what can I learn from…', rather than 'what can I contribute to the learning of others'. This raises the question on what part theory plays – not just in teacher learning, but also in teacher identity. It might well be that many teachers do not see consulting theory as part of their domain, but as part of the domain of researchers and experts.

The challenge is how to bring those domains together. Strengthening and expanding the relations with institutes of education could form a context for engaging with theory. In the Netherlands, the infrastructure of 'training schools' could be used for this. In training school programmes, institutes of education work together with schools in order to optimise teacher training programmes and carry out practitioner research (Snoek & Moens, 2011; Rijlaarsdam *et al.*, 2012; Admiraal, Smit, & Zwart, 2013). In such contexts, theory is not only available for consultation, but consulting theory is also the norm; it is what teachers are expected to do. The powerful presence of literature as a source for learning in the learner reports offer an indication of the potential of theory – if it is this is indeed the norm as is the case when following a master's programme.

10.3.3 MICRO: organising reflection and promoting teacher leadership

The third and most immediate level at which to address self-referentiality, is that of the individual teachers. In the literature review I discussed how reflection can help teachers' incidental, informal learning experiences, become explicit and specific, and thus become open for discussion and lead to development. Reflection can thus become a catalyst for professional learning, as it helps develop interactions and confrontation with and within professional context into sustainable learning experiences (e.g. Eneroth, 2008; Kelchtermans, 2009; Endedijk, 2010; Enthoven & Bruijn, 2010). However, the evidence in

these studies suggests that individual teacher reflection can not be taken for granted as a source professional learning. Neither in the learner biographies, nor in the group discussions is reflection identified as a common source for learning, that is, occurring outside of the actual activity that was generated by these studies. All of the studied activities themselves, so the construction of biographies and learner reports, applying the tool and discussing its results, and the meta-discussions on the results, did act as catalysts for learning. They led the respondents to new insights and to their expressing intentions to change practices. The participants appreciated this potential. That raises the question why these kinds of activities are not carried out more often. The students in the focus group (Stage 3) suggested this might be because of a combination of workload and performance culture. Workload leaves little time for contemplation, and the pressures to perform stand in the way of adopting a position of vulnerabilty. Collective reflection requires an environment in which teachers feel confident enough to share insecurities.

Well-established studies suggest that a promising way forward in terms of innovation is the development of teacher leadership: "the process by which teachers, individually and collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, p. 287). Snoek, Hulsbos and Andersen (2019) recently conducted a review study into how teacher leadership can be promoted, and they validated their findings through consulting focus groups. The study results in seven qualities that promote teacher leadership. The first one of these is that teachers should develop a sense of perspective that transcends the individual perspective – effectively resulting in the end of self-referentiality. The research is inconclusive on how to achieve this situation, but it does report good practices (e.g. Frost, 2012). What these have in common is teachers getting involved in the organisational structure of their school, its culture and the educational vision of the school. It does require school leadership that welcomes such involvement, like learning-centred leadership and distributed leadership practices (Schaik *et al.*, 2020). The focus groups (Study3) promoted

teacher leadership as well. In their experience, taking on ownership leads to change. Rather than waiting for others to take the initiative, teachers should take the lead, it was argued.

10.3.4 Understanding the role of context in teacher professional learning

I began this exploratory study with the assumption that teacher learning is more prompted by teachers' responses to unplanned and unexpected challenges and events, than it is the result of pro-activity, of planned activities. I discussed how this presents a potential problem as such an approach might lead to mediocre pedagogies (cf. Chapter 2.6.1). The data generated and analysed in these studies strongly suggests that indeed teacher learning is reactive. The project's contribution to understanding context as a source for learning is that the overview of sources for learning in each of the three domains, developed in this project and captured in the tool, can act as a conceptualised frame of reference. It is relevant not just for researchers, but also for teachers, school heads, school boards and HRD staff. It offers a way to help them in their reflections on the ways in which they may mobilise these three contexts for teacher learning. The extent to which such a framework is indeed helpful could be the subject of further research: to see if and how the framework might serve as a means not only ofidentifying existing or potential sources for learning, but also to mobilise these sources for promoting professional learning with specific domains.

10.4.1 Reflections on the methodology: PAR as a way to address self-referentiality

Further reflection concerns the methodology, which not only set out to understand context as a source for teacher learning but was an experiment to develop it as well. Having teachers own the research question created an environment in which the norm was to be (self)-critical, and to regularly look for and reflect on external points of reference. In that sense the methodology that was applied did not just generate data, it was also an experiment in what

effective professional learning could look like. In Chapter 9.3 I discussed how PAR can have the potential to create desirable difficulties. It could be argued that (at least to some extent) all action research is a form of 'self-inflicted challenge' (cf. Rijlaarsdam *et al.*, 2012; Cochran-Smith in Fiorentini & Crecci, 2015). In that sense, PAR can be used as a way to address the discussed *sturingparadox* (cf. Chapter 1.2.1) as it invokes reciprocity and invites participants to actively engage with and reflect on external points of reference. The reflection tool forms an example of this: quite possibly, it was not so much the act of deploying the tool that provoked the respondents' learning, but the activities in which it was embedded: co-operatively developing the tool, collectively discussing its implications, and making sense of the results together. One might argue that as a researcher, you pay a price for having the respondents (co-)own the research question as there is less control of the direction of the research project, and less predictability of its outcomes. As an example: allowing the students in Stage 2 of Study 3 to choose their own way to introduce the collective reflection and group size led to a variation in the data. This 'collateral damage' was a worthwhile risk if compared to both the impact the co-researchers' 'discretionary autonomy' had on the ownership and – as a consequence – on their participation and the richness of the data.

Moreover, the collective nature of this particular project guaranteed all participants (including me as the principal researcher) to regularly 'go boundary crossing' (cf. Bakker & Akkerman, 2011). Both the researcher and the co-researchers commuted between the activity systems of their workplace and that of the university, which led them to address the issues from different sets of rationales, from different logics. Approaching matters from various perspectives proved a powerful way to challenge self-referentiality, not just for the respondents, but for me the researcher as well(!) For me as a teacher-researcher, applying the principles of PAR have proven to be a promising way to capture rich data.

10.4.2 Reflections on the tool and its future use

From the literature, I argued that for confrontations to be a fruitful source for learning, they should preferably be situated in the teacher's zone of proximal development. Moreover, drawing from Bjork (1994) I discussed how – ideally – confrontations should be perceived as *desirable* difficulties, and in that sense be self-imposed. The intervention that was at the centre of this study consisted of such a self-imposed confrontation. The reflection tool prompted teachers to identify the sources for learning they tap into. It then provoked them to articulate ambitions, as well as intentions for how to fulfil these ambitions. In that sense it served as a trigger to instigate awareness, and this was reinforced in the collective reflections. An obvious follow-up research question would be how these insights and intentions could be harnessed to regenerate teacher learning, and lead to new ideas and practices.

Changing teacher behaviour is not an easy feat. Van Eekelen (2004) compares changing teachers' patterns of behaviour to trying to quit smoking: merely expressing the intention to do so is seldom sufficient. Van Eekelen developed a model that distinguishes five phases that eventually lead to sustainable change: precontemplation (not seeing the problem); contemplation (recognising that there is room for improvement); preparation (expressing intention); action (experimenting with new practices and reflection on these); maintenance (consolidation). The reflection tool can play a role in the first three phases; prompting stages 4 and 5 could be the subject of a follow-up study. For this, the intervention would need to be extended: more collective meetings could be organised in which the follow-up of the expressed intentions could be shared, operationalised and monitored. Such a research project could help to find complementary ways to organise professional learning, for instance by optimising the workplace as a learning environment, both in terms of unplanned, implicit, and unconscious processes and in terms of planned, explicit, and conscious learning. The study at hand could serve as a first step for such an analysis.

Another field that could benefit from further research is more study on *planned informal learning*. This study was prompted by the observation that teacher professional learning is often not the consequence of expressed ambitions and planned interventions. Instead, it often is the result of coincidence: the outcome of what transpired when teachers dealt with challenges that came about: experiences they happened to have, interactions that happened to pass; and things they happened to read. In the Netherlands, teacher shortages and subsequent pressures for teachers to work long hours, may cause unplanned learning to remain the predominant source for professional development in years to come. In such circumstances the pragmatic solution would be to try and organise conditions that make such coincidental learning opportunities more likely to happen, and – if they do – to make them more effective and sustainable by promoting awareness and reflection. This study could support such initiatives to be conceptually informed and specifically focused, and provide the theoretical background to understand the implications.

Fig. 15: Planned informal learning

The literature on implicit learning (e.g. Billett, 2014b; Eraut, 2000) and organised professional learning (e.g. Veen *et al.*, 2010) made minimal satisfactory exploration of the inter-connectedness between these two: the active organisation of implicit learning; planning unplanned learning (see figure 15). This is a field where my study contributes some understanding and that suggests there would be benefits from further research. Such research could be informed by the field of complexity theory, which takes up ecological perspectives on creating creating conditions to enable the emergence of desirable behaviours and actions (e.g. Daly, Milton, & Langdon, 2020).koffa

10.4.3 Limitations of the study

It is important to appreciate that teacher professional learning is a complex issue, and these studies into the learning habits and ambitions of a limited number of teachers are not representative for the profession as a whole. Much more research is needed. Moreover, for the sake of clarity, in this study the proposed three context domains were discussed as separate entities. This separation is of course an artificial one: in real life, the domains overlap; they are reciprocal. Geijsel *et al.* (2009, p. 409) refer to the work of Bandura, arguing that "human learning and functioning are explained in terms of a triadic reciprocality: individual behavior, cognitions, and environmental conditions operate as interacting determinants of one another". In this view, the environmental conditions include social interaction, and cognitions include theoretical knowledge. Drawing on the work of Lave and Wenger (e.g. 1999), Kelly (2006, p. 507) discusses how "the process of knowing-in-practice does not reside within individuals; rather it is distributed across teachers, students and both conceptual artefacts such as models and theories, and physical artefacts such as books and computers". Thus professional learning does not just take place in a practice setting, or in a social setting or in a theory setting, but in all three combined: the three domains can be considered as complementary to one another. It means that this study's findings must be viewed with that caveat. Having said that, the value of distinguishing between the three helps deepen the examination of each and their relative benefits and degrees of accessibility. It paints a sharper picture of the role that context plays and in understanding the nature of teacher professional learning within the 'real worlds' experienced by the teachers who participated in this project.

References

Admiraal, W., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., Smit, B., Tigelaar, D. & de Wit, W. (2016). Affordances of teacher professional learning in secondary schools. *Studies in Continuing Education*, *38*(3), 281–298. https://doi.org/10.1080/0158037X.2015.1114469

Admiraal, W., Schenke, W., De Jong, L., Emmelot, Y., & Sligte, H. (2019). Schools as professional learning communities: what can schools do to support professional development of their teachers? *Professional Development in Education*, *00*(00), 1–15. https://doi.org/10.1080/19415257.2019.1665573

Admiraal, W., Smit, B., & Zwart, R. (2013). *Academisch docentschap in het basis- en voortgezet onderwijs: Aard en betekenis van onderzoek van docenten naar hun onderwijspraktijk, 59*. Retrieved from http://www.nwo.nl/documents/magw/proo/programmaraad-voor-onderwijsonderzoek---academisch-docentschap-in-het-basis-en-voortgezet-onderwijs

Akkerman, S. F., & Bakker, A. (2011). Boundary Crossing and Boundary Objects. *Review of Educational Research*, *81*(2), 132–169. http://doi.org/10.3102/0034654311404435

Akkerman, S. F., & Bakker, A. (2011). Learning at the boundary: An introduction. *International Journal of Educational Research*, *50*(1), 1–5. http://doi.org/10.1016/j.ijer.2011.04.002

Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education*, *27*(2), 308–319. http://doi.org/10.1016/j.tate.2010.08.013

Alaranta, M. (2006). Combining Theory-Testing and Theory-Building: Analyses of Case Study Data. In *ECIS 2006 Proceedings* (pp. 1–12). https://doi.org/10.1128/AAC.1.4.289

Aldridge, J. (2015). *Participatory research: working with vulnerable groups in research and practice*. Policy Press.

Aldridge, J. M., Fraser, B. J., Bell, L., & Dorman, J. (2012). Using a New Learning Environment Questionnaire for Reflection in Teacher Action Research. *Journal of Science Teacher Education, 23*(3), 259–290. http://doi.org/10.1007/s10972-012-9268-1

Altschuld, J. W. & Witkin, B. R. (1999). *From Needs Assessment to Action: Transforming Needs Into Solution Strategies.* Thousand Oaks, Calif.: Sage Publications, Inc.

Anderson, G. L., & Herr, K. (1995). The New Paradigm Wars: Is There Room for Rigorous Practitioner Knowledge in Schools and Universities? *Educational Researcher*, *28*(5), 12–21. https://doi.org/10.3102/0013189X028005012

Argyris, C., & Schön, D. A. (1989). Participatory Action Research and Action Science Compared. *American Behavioural Scientist*, *32*(5), 612–623.

Arnseth, H. C. (2008). Activity theory and situated learning theory: contrasting views of educational practice. *Pedagogy, Culture & Society*, *16*(3), 289–302. http://doi.org/10.1080/14681360802346663

Ashby, p. , Hobson, A. J., Tracey, L., Malderez, A., Tomlinson, p. D., Roper, T., Chambers, G.N., Healy, J. (2008). *Beginner Teachers' Experiences of Initial Teacher Preparation, Induction and Early Professional Development: A review of literature. Training*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/222236/DCSF -RW076.pdf

Atkins, L. & Wallace, S. (2012). *Research Methods in Education: Qualitative research in education.* London: SAGE Publications Ltd. http://dx.doi.org/10.4135/9781473957602

Bakker, A., & Akkerman, S. F. (2014). Leren door boundary crossing tussen school en werk. *Pedagogische Studien*, *91*(1), 8–23.

Ball, S. J. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, *18*(2), 215–228. https://doi.org/10.1080/0268093022000043065

Ball, S. J. (2016). Neoliberal education? Confronting the slouching beast. *Policy Futures in Education*, *14*(8), 1046–1059. https://doi.org/10.1177/1478210316664259

Bandura, A. (1977). *Social Learning Theory.* Englewood Cliffs: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W. H. Freeman.

Bassey, M. (2001). A Solution to the Problem of Generalisation in Educational Research: Fuzzy prediction. *Oxford Review of Education*, *27*(1). https://doi.org/10.1080/03054980123773

Bastings, T. (2018). *Meester van papier. De leraar in de Nederlandse romanliteratuur.* Eindhoven: Grafiprint.

Baumeister, R. F., Vohs, K. D., Aaker, J. L., & Garbinsky, E. N. (2013). Some key differences between a happy life and a meaningful life. *The Journal of Positive Psychology, 8*(6), 505–516. https://doi.org/10.1080/17439760.2013.830764

Baxter, p. , & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, *13*(4), 544–559. Retrieved from http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf

Beijaard, D., Meijer, p. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education, 20*(2), 107–128*.* http://doi.org/10.1016/j.tate.2003.07.001

Beijaard, D., Verloop, N., & Vermunt, J. D. (2000). Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective. *Teaching and Teacher Education*, *16*(7), 749–764. http://doi.org/10.1016/S0742-051X(00)00023-8

Bengtsson, J. A. N. (2003). Possibilities and limits of self-reflection in the teaching profession. *Studies in Philosophy and Education, (22),* 295–316.

Bergen, T. C. M., & Vermunt, J. (2005). Het leren van leraren op de werkplek. *VELON Tijdschrift Tijdschrift Voor Lerarenopleiders*, *4*, 45–52.

Bhattacharjee, J. (2015). Constructivist Approach to Learning--An Effective Approach of Teaching Learning. *International Research Journal of Interdisciplinary & Multidisciplinary Studies*, *1*(4), 65–74. Retrieved from http://www.irjims.com

Biesta, G. (2015). What is Education For? On Good Education, Teacher Judgement, and Educational Professionalism. *European Journal of Education*, *50*(1), 75–87. https://doi.org/10.1111/ejed.12109

Billett, S. (2010). Lifelong learning and self: work, subjectivity and learning. *Studies in Continuing Education*, *32*(1), 1–16. http://doi.org/10.1080/01580370903534223

Billett, S. (2010). The perils of confusing lifelong learning with lifelong education. *International Journal of Lifelong Education*, *29*(4), 401–413. http://doi.org/10.1080/02601370.2010.488803

Billett, S. (2014). Learning in the circumstances of practice. *International Journal of Lifelong Education*, *33*(5), 674–693. http://doi.org/10.1080/02601370.2014.908425

Billett, S. (2014). Mimesis: Learning Through Everyday Activities and Interactions at Work. *Human Resource Development Review*, *13*(4), 462–482. http://doi.org/10.1177/1534484314548275

Bimmel, p. , Canton, J., Fasoglio, D., & Rijlaarsdam, G. (2008). *Handboek Ontwerpen Talen.* Amsterdam: Vossius Pers UvA.

Bjork, R. A. (1994). Institutional impediments to effective training. In D. Druckman & R. A. Bjork (Eds.), *Learning, Remembering, Believing: Enhancing Individual and Team Performance*. (pp. 295–306). Washington, DC: National Academy Press.

Bolam, R., Mcmahon, A., Stoll, L., Thomas, S., Wallace, M., Greenwood, A., Hawkey, K., Ingram, M., & Smith, M. (2005). *Creating and sustaining effective professional learning communities*. DfES Research Report RR637.

Bolt, L. Van Der, Studulski, F., Vegt, A. Van Der, & Bontje, D. (2006). *De betrokkenheid van de leraar bij onderwijsinnovaties: Een verkenning op basis van literatuur*. Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschap.

Boogaard, M. Glaudé, M., Schenke, W. Weijers, D., Snoek, M. (2018). *Loopbanenvan leraren in het voortgezet onderwijs. (Rapport 996).* Amsterdam: Kohnstamm Instituut.

Borko, H., Jacobs, J., & Koellner, K. (2010). Contemporary approaches to teacher professional development. In *International Encyclopedia of Education* (Vol. 7, pp. 548–556). https://doi.org/10.1016/B978-0-08-044894-7.00654-0

Bourdieu, p. (1990). *The Logic of Practice.* Cambridge: Polity Press.

Braun, A. (2012). Trainee teachers, gender and becoming the "right" person for the job: care and authority in the vocational habitus of teaching. *Oxford Review of Education*, *38*(2), 231–246. http://doi.org/10.1080/03054985.2012.676250

Broekkamp, H., & Van Hout-Wolters, B. (2006). *De kloof tussen onderwijsonderzoek en onderwijspraktijk*. Kohnstamm publicaties.

Broekkamp, H., & van Hout-Wolters, B. (2007). The gap between educational research and practice: A literature review, symposium, and questionnaire. *Educational Research and Evaluation*, *13*(3), 203–220. http://doi.org/10.1080/13803610701626127

Bruining, T., Loeffen, E., Uytendaal, E., & Koning, H. de. (2015). *Creëren van professionele ruimte in het onderwijs.* 's-Hertogenbosch / Utrecht: KPC Groep / APS.

Bryman, A. (2004). *Social Research Methods*. New York: Oxford University Press Inc.

Buitink, J. (2009). What and how do student teachers learn during school-based teacher education. *Teaching and Teacher Education*, *25*(1), 118–127. http://doi.org/10.1016/j.tate.2008.07.009

Canrinus, E. T. (2011). *Teachers' sense of their professional identity*. Dissertation. Retrieved from http://dissertations.ub.rug.nl/faculties/gmw/2011/e.t.canrinus/?pLanguage=en&pFullItemRecord=ON

Chevalier, J. M., & Buckles, D. J. (2019). *Participatory Action Research. Theory and Methods for Engaged Inquiry.* London/ New York: Routledge.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, *18*, 947–967.

Coenders, M. (2010). Netwerkleren is heel gewoon. *Meso Focus*, 1–7.

Coenders, M. (2015). Community of Practice. In M. Ruijters & R.-J. Simons (Eds.), *Canon van het leren - 50 concepten en hun grondleggers* (pp. 125–136). Deventer: Kluwer.

Coleman, M. R., Gallagher, J. J., & Job, J. (2012). Developing and Sustaining Professionalism Within Gifted Education. *Gifted Child Today, 35*(1), 27–36. http://doi.org/10.1177/1076217511427511

Coonen, H. (2006). Leraarschap en professionaliteit: tien aanbevelingen Reflecties bij de stellingname. *Tijdschrift Voor Hoger Onderwijs*, *24*(4), 249–253.

Cooper, J.M. (Ed.) (1997). *Plato - Complete Works*. Indianapolis/ Cambridge: Hacket Publishing Company, Inc.

Cörvers, F., Mommers, A., Van der Ploeg, S., & Sapulete, S. (2017). *Status en imago van de leraar in de 21ste eeuw*. Retrieved from http://www.nwo.nl/onderzoek-en-resultaten/onderzoeksprojecten/i/11/13811.html

Council of the European Union. (2014). *Conclusions on effective teacher education* (Vol. 32). Brussels.

Craig, J., & Fieschi, C. (2007). *DIY Professionalism: Futures for Teaching*. Retrieved from www.demos.co.uk/files/DIY Professionalism.pdf

Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, *11*(1), 100. https://doi.org/10.1186/1471-2288-11-100

Daly, C., Milton, E. & Langdon, F. (2020). How do ecological perspectives help understand schools as sites for teacher learning? *Professional Development in Education, 46*(4), 652-663. https://doi.org/10.1080/19415257.2020.1787208

Dam, G. T. M. ten, & Blom, S. (2006). Learning through participation. The potential of school-based teacher education for developing a professional identity. *Teaching and Teacher Education*, *22*(6), 647–660. http://doi.org/10.1016/j.tate.2006.03.003

Danielowich, R. M. (2012). Other Teachers' Teaching: Understanding The Roles of Peer Group Collaboration in Teacher Reflection and Learning. *The Teacher Educator, 47*(2). http://doi.org/10.1080/08878730.2012.660373

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

Day, C. (1999). *Developing Teachers: The Challenges of Lifelong Learning. Educational Change and Development Series.* London: Falmer Press.

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

Day, C., Kington, A., Stobart, G., & Sammons, p. (2006). The personal and professional selves of teachers: stable and unstable identities. *British Educational Research Journal*, *32*(4), 601–616. http://doi.org/10.1080/01411920600775316

Day, C., Stobart, G., Sammons, p. , Kington, A., Gu, Q., Smees, R., & Mujtaba, T. (2006). *Variations in in Teachers' Work, Lives and Effectiveness*. *Dfes*. Retrieved from http://eprints.worc.ac.uk/1924/

Denison, D. R., Hooijberg, R., & Quinn, R. E. (1995). Paradox and performance: Toward a theory of behavioral complexity in managerial leadership. *Organization Science*, *6*(5), 524–540. https://doi.org/10.1287/orsc.6.5.524

Denzin, N., & Lincoln, Y. S. (2005). *The SAGE handbook of qualitative research* (3rd ed.). Thousand Oaks, Calif.; London: SAGE.

Dewey, J. (1933). *How we think.* [Kobo version].

DiMaggio, p. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*(2), 147–160.

Dolton, p. , Marcenaro, O., De Vries, R., & She, p. W. (2018). *Global Teacher Status. Index 2018*. London. Retrieved from https://www.varkeyfoundation.org/media/4790/gts-index-9-11-2018.pdf

Driel, L. van. (2006). *Professionalisering in school: Een studie naar verbetering van het pedagogisch-didactisch handelen*. Dissertation. Universiteit Utrecht

Earley, p. & Porrit, V. (Eds). (2009). *Effective Practices in Continuing Professional Development.* London: Institute of Education.

Ebbens, S., & Ettekoven, S. (2015). *Effectief leren. Basisboek*. Groningen: Wolters-Noordhoff.

Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly, 44*(2), 350-383.

Edwards, R., & Miller, K. (2007). Putting the context into learning. *Pedagogy, Culture & Society*, *15*(3), 263–274. http://doi.org/10.1080/14681360701601887

Eekelen, I. M. V. a N., Boshuizen, H. P. A., & Vermunt, J. D. (2005). Self-Regulation in Higher Education Teacher Learning. *Higher Education*, *50*(3), 447–471. http://doi.org/10.1007/sl0734-004-6362-0

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

Eekelen, I. van. (2005). *Teachers'will and way to learn. Studies on how teachers learn and their willingness to do so*. Dissertation. Universiteit Maastricht.

Ellis, V. (2008). Exploring the contradictions in learning to teach: The potential of developmental work research. *Changing English: Studies in Culture and Education*, *15*(1), 53–63. https://doi.org/10.1080/13586840701825295

Endedijk, M. D. (2010). *Student teachers' self-regulated learning*. Dissertation. Universiteit Utrecht.

Eneroth, B. (2008). Knowledge, sentience and receptivity: A paradigm of lifelong learning. *European Journal of Education*, *43*(2), 229–240. http://doi.org/10.1111/j.1465-3435.2008.00342.x

Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research.* Helsinki: Orienta-Konsultit.

Engeström, Y., & Kerosuo, H. (2007). From workplace learning to inter-organizational learning and back: the contribution of activity theory. *Journal of Workplace Learning*, *19*(6), 336–342. http://doi.org/http://dx.doi.org/10.1108/13665620710777084

Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, *5*(1), 1–24. http://doi.org/10.1016/j.edurev.2009.12.002

Engeström, Y., Engeström, R., & Kärkkäinen, M. (1995). Polycontextuality and boundary crossing in expert cognition: Learning and problem solving in complex work activities. *Learning and Instruction*, *5*(4), 319–336. http://doi.org/10.1016/0959-4752(95)00021-6

Enthoven, M., & Bruijn, E. de. (2010). Beyond locality: the creation of public practice - based knowledge through practitioner research in professional learning communities and communities of practice . A review of three books on practitioner research and professional communities. *Educational Action Research*, *18:2*. http://doi.org/10.1080/09650791003741822

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

Eraut, M. (2004). Informal Learning in the Workplace. *Studies in Continuing Education*, *26*(2), 247–273. http://doi.org/10.1080/158037042000225245

Eraut, M. (2007). Learning from other people in the workplace. *Oxford Review of Education*, *33*(4), 403–422. http://doi.org/10.1080/03054980701425706

European Commission/EACEA/Eurydice. (2015). *The teaching profession in Europe: Profile, trends and concerns. Eurydice Report.* https://doi.org/10.2797/512210 EC-01-15-389-EN-C

European Commission/EACEN Eurydice. (2018). *Teaching Careers in Europe: Access, Progression and Support. Eurydice Report.* Luxembourg: Publications Office of the European Union.

Evans, K., Guile, D., Harris, J., & Allan, H. (2010). Putting knowledge to work: A new approach. *Nurse Education Today*, *30*(3), 245–251. http://doi.org/10.1016/j.nedt.2009.10.014

Axinn, W. G., & Pearce, L. D. (2006). *Mixed Method Data Collection Strategies*. Cambridge University Press.

Fancourt, N., Edwards, A., & Menter, I. (2015). Reimagining a School University Partnership: The Development of the Oxford Education Deanery Narrative. *Education Inquiry*, *6*(3), 353–373. https://doi.org/10.3402/edui.v6.27724

Festinger, L. (2007). A theory of social comparison processes. In Stapel, D.A., & Blanton, A. (Eds.). *Social Comparison Theories* (pp.29-44). New York: Psychology Press.

Fiorentini, D., & Crecci, V. M. (2015). Dialogues with Marilyn Cochran-Smith. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 88*(1), 9–14. https://doi.org/10.1080/00098655.2014.977841

Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education*, *22*(2), 219–232. http://doi.org/10.1016/j.tate.2005.09.002

Fraser, C., Kennedy, A., Reid, L., & Mckinney, S. (2007). Teachers' continuing professional development: contested concepts, understandings and models. *Journal of In-Service Education*, *33*(2), 153–169. http://doi.org/10.1080/13674580701292913

Frost, D. (2012) From professional development to system change: teacher leadership and innovation. *Professional Development in Education, 38*(2), 205-227. https://doi.org/10.1080/19415257.2012.657861

Gaventa, J. & Cornwall, A. Reason, P., & Bradbury, H. (2008). Power and Knowledge. In P. Reason & H. Bradbury (Eds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice* (pp 172-189). SAGE Publications Ltd. https://doi.org/10.1177/1476750311414740

Geijsel, F. P., Sleegers, p. J. C., Stoel, R. D., & Krüger, M. L. (2009). The Effect of Teacher Psychological and School Organizational and Leadership Factors on Teachers' Professional Learning in Dutch Schools. *The Elementary School Journal*, *109*(4), 406–427. http://doi.org/10.1086/593940

Girard, R. (2008). *Mimesis and Theory: essays on literature and criticism, 1953-2005.* Stanford: Stanford University Press.

Glaser, B. G., & Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine de Gruyter.

Gomendio, M. (2017). *Empowering and Enabling Teachers to Improve Equity and Outcomes for All*, International Summit on the Teaching Profession. Paris: OECD Publishing. https://doi-org.proxy.uba.uva.nl:2443/10.1787/9789264273238-en

Gorodetsky, M., & Barak, J. (2009). Back to schooling: challenging implicit routines and change. *Professional Development in Education*, *35*(4), 585–600. http://doi.org/10.1080/19415250903000990

Govaerts, M. J. B., Bisscheroux, T. J. H. I., & Merkx, A. C. M. (2004). Docentenprofessionalisering door integratie van theoretisch leren, ervaringsleren, intervisie en reflectie. *Tijdschrift Voor Medisch Onderwijs*, *23*(2), 91–99.

Grift, W. J. C. M. van de, & Helms-Lorenz, M. (2012). Classroom practice in secondary schools. In *ICSEI conference*. Malmö.

Grift, W. van de (2007). Quality of teaching in four European countries: a review of the literature and application of an assessment instrument. *Educational Research*, *49*(2), 127–152. http://doi.org/10.1080/00131880701369651

Grift, W. van de (2010). *Ontwikkeling in de beroepsvaardigheden van leraren*. Inaugural lecture. Eindhoven: Drukkerij Lecturis. Retrieved from https://www.rug.nl/education/lerarenopleiding/onderwijs/oratie-van-de-grift.pdf

Groot, A.D. de (1974). The problem of evaluating national educational systems. In H.F. Crombag & Dato N. de Gruyter (Eds.), *Contemporary issues in educational testing* (pp. 9-27). The Hague: Mouton.

Guskey, T.R. (2000). *Evaluating professional development*. Thousand Oaks: Corwin Press.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, *8*(3/4), 381–391. http://doi.org/10.1080/135406002100000512

Hanushek, E. A., & Rivkin, S. G. (2006). Teacher Quality. In E. A. Hanushek & F. Welch (Eds.), *Handbook of the Economics of Education* (Vol. 2, pp. 1051–1078). Elsevier B.V. http://doi.org/10.1016/S1574-0692(06)02018-6

Hardy, I., Jakhelln, R., & Smit, B. (2020). The policies and politics of teachers' initial learning: the complexity of national initial teacher education policies. *Teaching Education*, *00*(00), 1–23. https://doi.org/10.1080/10476210.2020.1729115

Hargreaves, A. (1994). *Changing Teachers, Changing Times: Teachers' Work and Culture in the Postmodern Age*. New York: Teachers College Press.

Hargreaves, D. H. (1994). The new professionalism: The synthesis of professional and institutional development. *Teaching and Teacher Education, 10*(4), 423–438. https://doi.org/10.1016/0742-051X(94)90023-X

Hargreaves, A. (2000). Four Ages of Professionalism and Professional Learning. *Teachers and Teaching: Theory and Practice*, *6*(2), 151–182. http://doi.org/10.1080/713698714

Harteis, C., & Billett, S. (2013). Intuitive expertise: Theories and empirical evidence. *Educational Research Review*. Elsevier Ltd. http://doi.org/10.1016/j.edurev.2013.02.001

Hattie, J. (2003). *Teachers Make a Difference. What is the research evidence?* (pp. 1–17). Retrieved from https://cdn.auckland.ac.nz/assets/education/hattie/docs/teachers-make-a-difference-ACER-(2003).pdf

Hattie, J. (2009). *Visible Learning*. New York: Routledge.

Hébert, C. (2015). Knowing and/or experiencing: a critical examination of the reflective models of John Dewey and Donald Schön. *Reflective Practice, 16*(3), 361–371. http://doi.org/10.1080/14623943.2015.1023281

Hermes, J., Adolfsson, R., Versluis, J., & Geugten, J. van der. (2008). *Begeleider, idealist, organisator, pedagoog, perfectionist, politie-agent, psycholoog, maatschappelijk werker, solist, streber, eeuwige student, vakman, ambtenaar, vakantievierder, bijscholer: vijftien goede redenen om leraar te worden.* Onderzoeksrapportage. Hogeschool INHolland.

Heron, J. (1996). *Co-operative Inquiry. Research into the Human Condition*. London: SAGE Publications.

Hickson, H. (2011). Critical reflection: reflecting on learning to be reflective. *Reflective Practice, 12*(6), 829–839. http://doi.org/10.1080/14623943.2011.616687

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

Hoekstra, A. (2007). *Experienced teachers' informal learning in the workplace*. Dissertation. Utrecht University.

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

Hoffman-Kipp, p. , Artiles, A. J., & López-Torres, L. (2003). Beyond Reflection: Teacher Learning as Praxis. *Theory Into Practice, 42*(3), 248–254. http://doi.org/http://dx.doi.org/10.1207/s15430421tip4203_12

Hollingsworth, S. (1989). Prior Beliefs and Cognitive Change in Learning to Teach. *American Educational Research Journal*, *26*(2), 160–189.

Hooge, E. (2013). *Besturing autonomie*. Tilburg: Prima Print, Tilburg University.

Hoyle, E. (1982). The Professionalization of Teachers : A Paradox. *British Journal of Educational Studies*, *30*(2), 161–171.

Hughes, J. and Goodwin, J. (2014). *Human Documents and Archival Research*. Sage Benchmarks in Research Methods (Four Volumes). London: Sage.

Hustler, D., Mcnamara, O., Jarvis, J., Londra, M., & Campbell, A. (2003). *Teachers ' Perceptions of Continuing Professional Development*. Nottingham.

Inspectie van het Onderwijs. (2013). *Professionalisering als gerichte opgave*. Utrecht: Inspectie van het Onderwijs.

Inspectie van het Onderwijs. (2016). *Onderzoek Onder Afgestudeerden Deel 3: De Universitaire Lerarenopleiding*. Utrecht: Inspectie van het Onderwijs.

Inspectie van het Onderwijs. (2017). *De Staat van het Onderwijs 2015/ 2016*. Utrecht: Inspectie van het Onderwijs.

Jeffrey, B., & Woods, p. (1996). Feeling deprofessionalised: The social construction of emotions during an OFSTED inspection. *Cambridge Journal of Education, 26*(3), 325–343. https://doi.org/10.1080/0305764960260303

Johansson, T., & Kroksmark, T. (2004). Teachers' intuition-in-action: how teachers experience action. *Reflective Practice*, *5*(3), 357–381. http://doi.org/10.1080/1462394042000270673

Kärner, A., Lesničar, B., Maurits, W., Nutt, G., & Van de Sande, R. (Eds.) (2015). *The common conceptual framework of project Linpilcare*. Brussel: VSKO.

Kelchtermans, G. (2009). Who I am in how I teach is the message : self-understanding , vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, *15*(2), 257–272. http://doi.org/10.1080/13540600902875332

Kelchtermans, G. (1996). Teacher Vulnerability: understanding its moral and political roots. *Cambridge Journal of Education, 26*(3), 307-323. https://doi.org/10.1080/0305764960260302

Kelchtermans, G. (2012). *De leraar als (on)eigentijdse professional. Reflecties over de "moderne professionaliteit" van leerkrachten.* Leuven: Centrum voor Onderwijsbeleid, -vernieuwing en lerarenopleiding.

Kelchtermans, G., & Ballet, K. (2002). The micropolitics of teacher induction. A narrative-biographical study on teacher socialisation. *Teaching and Teacher Education*, *18*(1), 105–120. http://doi.org/10.1016/S0742-051X(01)00053-1

Kelly, p. (2006). What is teacher learning? A socio-cultural perspective. *Oxford Review of Education*, *32*(4), 505–519. http://doi.org/10.1080/03054980600884227

Kemmis, S., McTaggart, R, & Nixon, R. (2014). *The Action Research Planner: Doing Critical Participatory Action Research.* Singapore: Springer.

Kessels, C. (2010). *The influence of induction programs on beginning teachers ' well-being and professional development*. Leiden University.

Kessels, J. W. M. (2012). *Leiderschapspraktijken in een professionele ruimte*. Heerlen: Open Universiteit.

Kesteren, B. van. (1993). Applications of De Groot's "Learner Report": A tool to identify educational objectives and learning experiences. *Studies in Educational Evaluation*, *19*, 65–86.

Khanlou, N., & Peter, E. (2005). Participatory action research: Considerations for ethical review. *Social Science and Medicine*, *60*(10), 2333–2340. https://doi.org/10.1016/j.socscimed.2004.10.004

Koffeman, A. (2015). Professioneel leren: leren van grenservaringen. *Van 12 Tot 18(1)*, 19-20.

Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall.

Korthagen, F. A. J. (2010). Situated learning theory and the pedagogy of teacher education: Towards an integrative view of teacher behavior and teacher learning. *Teaching and Teacher Education, 26*(1), 98–106. http://doi.org/10.1016/j.tate.2009.05.001

Korthagen, F. A. J. (2017). Inconvenient truths about teacher learning: towards professional development 3.0. *Teachers and Teaching*, *23*(4), 387–405. https://doi.org/10.1080/13540602.2016.1211523

Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education*, *19*(2), 149–170. http://doi.org/10.1016/S0742-051X(02)00101-4

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

Lagerweij, N. & J. Lagerweij-Voogt (2004). *Anders Kijken. De dynamiek van een eeuw onderwijsverandering.* Antwerpen: Garant.

Lagueux, R. C. (2014). *A spurious John Dewey quotation on reflection*. Retrieved from https://www.academia.edu/17358587/A_Spurious_John_Dewey_Quotation_on_Reflection

Lankveld, T. Van, & Volman, M. (2009). Hoe krijgen we ze over de brug? Professionalisering van docenten in de context van onderwijsvernieuwing in communities of practice. In *VELOV-VELON congres 2009* (pp. 1–16).

Lave, J. & E. Wenger (1991). *Situated Learning: Legitimate Peripheral Participation.* Cambridge, UK: Cambridge University Press.

Lawson, H. A., Caringi, J., Pyles, L., Jurkowski, J.M., & Bozlak, C.T. (2015). *Participatory action research.* New York: Oxford University Press.

Leeman, Y., & Wardekker, W. (2010). Leraren leren met behulp van onderzoek over pedagogische kwaliteit? *Tijdschrift Voor Lerarenopleiders*, *31*(2).

Leeman, Y., & Wardekker, W. (2010). Verbetert onderzoek het onderwijs? *Tijdschrift Voor Lerarenopleiders*, *31*, 19–22.

Leigh, A. (2010). Estimating teacher effectiveness from two-year changes in students' test scores. *Economics of Education Review*, *29*, 480–488. http://doi.org/10.1016/j.econedurev.2009.10.010

Locke, K., Golden-Biddle, K., & Feldman, M. S. (2008). Making Doubt Generative: Rethinking the Role of Doubt in the Research Process. *Organization Science*, *19*(6), 907–918. https://doi.org/10.1287/orsc.1080.0398

Lombardo, M. M., & Eichinger, R. W. (2006). *The Career Architect Development Planner* (fourth edition). Lominger Limited, Inc. Retrieved from http://johncollinscareerdevelopmentplan.weebly.com/uploads/2/4/4/0/24401899/lominger_career_architect_development_planner.pdf

Louis, K. S., Marks, H. M., & Kruse, S. (1996). Teachers' Professional Community in Restructuring Schools. *American Educational Research Journal, 33(4)*, 757–798. https://doi.org/10.3102/00028312033004757

Lunenberg, M., & Korthagen, F. (2009). Ervaring, theorie en praktische wijsheid in de professionele ontwikkeling van leraren. *Tijdschrift Voor Lerarenopleiders*, *30*(2), 16–22.

Lunenberg, M., & Korthagen, F. (2009). Experience, theory, and practical wisdom in teaching and teacher education. *Teachers and Teaching Theory and Practice*, *15*(February 2015), 225–240. http://doi.org/10.1080/13540600902875316

Maandag, D. W., Helms-Lorenz, M., Lugthart, E., Verkade, A. T., & Veen, K. van. (2017). *Features of effective professional development interventions in different stages of teacher's careers. A review of empirical evidence and underlying theory.* Groningen: Lerarenopleiding Rijksuniversiteit Groningen.

Macbeath, J. (2019). The future of the teaching profession (second edition). Education International. https://doi.org/10.1177/08920206010150030901

Macnaghten, p. & Myers, G. (2004). Focus groups. In Seale, C., Gobo, G., Gubrium, J. F. & Silverman, D. *Qualitative research practice* (pp. 66-80). London: SAGE Publications Ltd. doi: 10.4135/9781848608191

Marcos, J. M., Sanchez, E., & Tillema, H. H. (2011). Promoting teacher reflection: what is said to be done. *Journal of Education for Teaching, 37*(1), 21–36. http://doi.org/10.1080/02607476.2011.538269

McCulloch, G. (2004). *Documentary research in education, history, and the social sciences* (Social research and educational studies series; 22). London/ New York: RoutledgeFalmer.

McDaniel, O., Neeleman, A., Schmidt, G., & Smaling, H. (2009). *De professionaliteit van MBO-docenten in vergelijkend perspectief. Comparatieve analyse van professionaliteit in 9 beroepen in vergelijking tot de MBO-docent.* Gids voor Beroepsonderwijs en Volwasseneneducatie.

McDaniel, O., Immers, R., Neeleman, A., & Schmidt, G. (2010). *Op de grens van individuele verantwoordelijkheid en bestuurlijk verlangen, Onderzoek bij 12 mbo-intstellingen naar de professionaliteit van de docent.* CBE.

Meijer, P. C., Verloop, N., & Driel, J. Van. (2001). Teacher knowledge and the knowledge base of teaching. *International Journal of Educational Research*, *35*(5), 441–461. http://doi.org/http://dx.doi.org/10.1016/S0883-0355(02)00003-4

Meirink, J. A., Imants, J., Meijer, p. C., & Verloop, N. (2010). Teacher learning and collaboration in innovative teams. *Cambridge Journal of Education*, *40*(2), 161–181. http://doi.org/10.1080/0305764X.2010.481256

Meirink, J. (2011). *Docentprofessionalisering in het hoger onderwijs*. (H. H. van Rijst, R.M. van der; Voorkamp, M.P.; Bork, I.; Smit, B.H.J.; Hulshof, H.; Driel, Ed.). Leiden: ICLON. Retrieved from http://hdl.handle.net/1887/44768

Ministerie van Onderwijs, Cultuur en Wetenschap (2013). *Lerarenagenda 2013-2020: De leraar maakt het verschil* [Teachers calendar 2013-2020: The teacher makes the difference]. Den Haag: OCW.

Mirza, N. A., Akhtar-danesh, N., Noesgaard, C., Martin, L., & Staples, E. (2014). A concept analysis of abductive reasoning. *Journal of Advanced Nursing*, *70*(9), 1980–1994. https://doi.org/10.1111/jan.12379

Mockler, N., & Sachs, J. (2006). More Than "Identity": Tools for the Teaching Profession in Troubled Times. In *Australian Association for Research in Education Annual Conference*. Retrieved from https://www.aare.edu.au/data/publications/2006/moc06579.pdf

Mockler, N. (2013). Teacher professional learning in a neoliberal age: Audit, professionalism and identity. *Australian Journal of Teacher Education, 38*(10). https://doi.org/10.14221/ajte.2013v38n10.8

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

National Research Council. (2000). *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. Washington, DC: The National Academies Press. https://doi.org/10.17226/9853

Newman, L., & Mowbray, S. (2012). 'We were expected to be equal': Teachers and academics sharing professional learning through practitioner inquiry. *Teachers and Teaching: Theory and Practice*, *18*(4), 455–468. https://doi.org/10.1080/13540602.2012.696046

Nias, J. (1989). *Primary teachers talking: A study of teaching as work*. London/New York: Routledge.

OECD. (2009). *Creating Effective Teaching and Learning Environments: First Results from TALIS*. Retrieved from http://www.oecd-ilibrary.org/education/creating-effective-teaching-and-learning-environments-first-results-from-talis-executive-summary_9789264072992-en

OECD. (2014). *TALIS 2013 Results: An International Perspective on Teaching and Learning*. Retrieved from http://dx.doi.org/10.1787/9789264196261-en

OECD. (2016). *Netherlands 2016: Foundations for the Future, Reviews of National Policies for Education*. Paris: OECD Publishing. Retrieved from http://dx.doi.org/10.1787/9789264257658-en

OECD. (2019). *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners.* Paris: TALIS, OECD Publishing. https://doi.org/10.1787/1d0bc92a-en.

Ohlsson, J. (2013). Team learning: collective reflection processes in teacher teams. *Journal of Workplace Learning, 25*(5), 296–309. http://doi.org/10.1108/JWL-Feb-2012-0011

Onderwijsraad. (2009). *Naar doelmatiger onderwijs*. Den Haag. Retrieved from http://books.google.com/books?id=OiwrYAAACAAJ&pgis=1

Oosterheert, I. E., & Vermunt, J. D. (2001). Individual differences in learning to teach: Relating cognition, regulation and affect. *Learning and Instruction*, *11*(2), 133–156. http://doi.org/10.1016/S0959-4752(00)00019-0

Parkison, P. (2008). Space for performing teacher identity: through the lens of Kafka and Hegel. *Teachers and Teaching: Theory and Practice*, *14*(1), 51–60. https://doi.org/https://doi.org/10.1080/13540600701837640

Peters, Michael, and Viviane Robinson. (1984). The Origins and Status of Action Research. *The Journal of Applied Behavioral Science 20*(2), 113-24.

Pickering, J., Daly, C. & Pachler, N. (2007). *New Designs for Teachers'Professional Learning.* London: Institute of Education.

Plantinga, S., Van Diepen, M., Schildmeijer, R., & Van Bruxvoort, M. (2008). *Onderwijsmeter 2008*.

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

Potter, J. (2002). Two kinds of natural. *Discourse Studies, 4*, 539–542. https://doi.org/10.1177/14614456020040040901

Potters, H., & Poelmans, p. (2008). *Virtuele Communities of Practice in het Onderwijs*. Heerlen: Ruud de Moor Centrum OU.

Räisänen, C., Josephsson, p. -E., & Luvö, B. (2015). Stakeholders' Views and Experiences of Leadership Education in Construction: Suggestions for Improvements. *Procedia Economics and Finance*, *21*(15), 540–547. https://doi.org/10.1016/S2212-5671(15)00210-5

Reason, p. , & Bradbury, H. (Eds.). (2008). *The SAGE Handbook of Action Research Participative Inquiry and Practice*. (second edition). London: SAGE Publications Ltd. https://doi.org/10.1177/1476750311414740

Rogers, G. (2011). Learning-to-learn and learning-to-teach: the impact of disciplinary subject study on student-teachers' professional identity. *Journal of Curriculum Studies*, *43*(2), 249–268. http://doi.org/10.1080/00220272.2010.521262

Rohaan, E., Beijaard, D., & Vink, R. (2012). *Persoonlijke professionaliteit. Overtuigingen, disposities en competenties van docenten in het voortgezet onderwijs*. Eindhoven.

Roth, G. & Bradbury, H. (2008). Learning History: An Action Research Practice in Support of Actionable Learning. In Reason, P., & Bradbury, H. (Reds.) *The SAGE Handbook of Action Research Participative Inquiry and Practice*. (second edition). London: SAGE Publications Ltd. https://doi.org/10.1177/1476750311414740

Rijlaarsdam, G., Janssen, T., Romein, p. , Kappé, J., & Koffeman, A. (2012). Onderzoek op Academische Opleidingsscholen: een nieuw soort onderzoek. *Pedagogische Studiën, 89*(6), 381–384.

Ruijters, M. (2016). Het is de toon die de muziek maakt. *M&O, 6*, 79–93.

Sachs, J. (2016). Teacher professionalism: Why are we still talking about it? *Teachers and Teaching: Theory and Practice*, *22*(4), 413–425. https://doi.org/10.1080/13540602.2015.1082732

Sahlberg, p. (2011). The Fourth Way of Finland. *Journal of Educational Change*, *12*(2), 173–185. https://doi.org/10.1007/s10833-011-9157-y

Sammons, p. , Day, C., Kington, A., Gu, Q., Stobart, G., & Smees, R. (2007). Exploring Variations in Teachers' Work, Lives and Their Effects on Pupils: Key Findings and Implications from a Longitudinal Mixed-Method Study. *British Educational Research Journal*, *33*(5), 681–701. http://doi.org/10.1080/01411920701582264.

Sarason, S. (1996). *Revisiting the culture of the school and the problem of change*. Boston: Allyn and Bacon.

Schaik, P., Volman, M., Admiraal, W., Schenke, W. (2020). Fostering collaborative teacher learning: A typology of school leadership. European Journal of Education, *00*, 1–16. https://doi.org/10.1111/ejed.12391

Schön, D.A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Schnabel, p. , ten Dam, G., Douma, T., van Eijk, R., Tabarki, F., van der Touw, A., Verweij, J., Visser, M. (2016). *Ons onderwijs2032 Eindadvies*. Den Haag.

Seale, C., Gobo, G., Gubrium, J.F. & Silverman. (2007). *Qualitative Research Practice*. London: SAGE Publications.

Shulman, L. S., & Shulman, J. H. (2004). How and what teachers learn: a shifting perspective. *Journal of Curriculum Studies*, *36*(2), 257–271. http://doi.org/10.1080/0022027032000148298

Sikkes, R. (2015). *Status en salaris. Aanzien en aantrekkelijkheid van het leraarsberoep*. Utrecht.

Sleegers, p. , & Ledoux, G. (2006). *Innovatie in het primair onderwijs: strategieën, ervaringen en aanbevelingen. Een literatuurstudie naar werkzame principes*. Amsterdam: SCO-Kohnstamm Instituut.

Smylie, M. A. (1989). Teachers' Views of the Effectiveness of Sources of Learning to Teach. *The Elementary School Journal*, *89*(5), 543–558. http://doi.org/10.1086/461591

Snoek, M. (2004). *Van veranderd worden naar zelf veranderen: Veranderingsbekwaamheid als metacompetentie van leraren.* Amsterdam: HVA Publicaties.

Snoek, M., Hulsbos, F., & Andersen, I. (2019). *Teacher leadership. Hoe kan het leiderschap van leraren in scholen versterkt worden?*

Snoek, M., & Moens, E. (2011). The impact of teacher research on teacher learning in academic training schools in the Netherlands. *Professional Development in Education*, *37*(5), 817–835. http://doi.org/10.1080/19415257.2011.587525

Snoek, M., & Volman, M. (2014). The impact of the organizational transfer climate on the use of teacher leadership competences developed in a post-initial Master's program. *Teaching and Teacher Education*, *37*, 91–100. http://doi.org/10.1016/j.tate.2013.10.005

Snoek, M., Wit, B. de, & Dengerink, J. (2020). *Leraar: een professie met perspectief. Deel 1: Een veelzijdig beroepsbeeld.* Meppel: Ten Brink Uitgevers.

Stake, R.E. (2006). *Multiple Case Study Analysis*. New York: The Guilford Press.

Stake, R.E. (1995). *The art of case study research*. London: Sage Publications.

Sternberg, R. J., Forsythe, G. B., Horvat, J. A., Snook, S., Hedlund, J., Tremble, T., … Grigorenko, E. L. (1999). *Tacit Knowledge in the Workplace*. United States Army Research Institute for the Behavioral and Social Sciences.

Strauss, A. & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. California: Sage.

Stray, I. E. (2017). *Teachers Ways in Times of Fluidity - IDIOSYNCRATIC CULTURAL RESPONSES TO GLOBAL EDUCATIONAL REFORM MOVEMENTS*. Dissertation. University of Agder.

Swants, M. L. (2008). Participatory Action Research as Practice. In P. Reason & H. Bradbury (Reds.), *The SAGE Handbook of Action Research Participative Inquiry and Practice*. Sage Publication Ltd (second edition, pp. 31-48). https://doi.org/10.1177/1476750311414740

Tavory, I., & Timmermans, S. (2012). Theory Construction in Qualitative Research. From Grounded Theory to Abductive Analysis. *Sociological Theory*, *30*(3), 167–186. https://doi.org/10.1177/0735275112457914

Thoonen, E. E. J., Sleegers, p. J., Oort, F. J., Peetsma, T. T. D., & Geijsel, F. P. (2011). How to Improve Teaching Practices: The Role of Teacher Motivation, Organizational Factors, and Leadership Practices. *Educational Administration Quarterly*, *47*(3), 496–536. http://doi.org/10.1177/0013161X11400185

Thurlings, M., & Brok, p. , den. (2017). Learning outcomes of teacher professional development activities: a meta-study. *Educational Review*, *69*(5), 554–576. https://doi.org/10.1080/00131911.2017.1281226

Tsui, A. B. M., & Law, D. Y. K. (2007). Learning as boundary-crossing in school-university partnership. *Teaching and Teacher Education*, *23*(8), 1289–1301. http://doi.org/10.1016/j.tate.2006.06.003

Valli, L. (1990). Listening to other voices: A description of teacher reflection in the United States. *Peabody Journal of Education, 72*(1), 67–88. http://doi.org/10.1207/s15327930pje7201

Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, *61*, 47–59. https://doi.org/10.1016/j.tate.2016.10.001

Veen, K. van, Zwart, R., Meirink, J., & Verloop, N. (2010). *Professionele ontwikkeling van leraren - een reviewstudie naar effectieve kenmerken van professionaliseringsinterventies van leraren*. Leiden: ICLON.

Verbiest, E. (2004). *Samen wijs. Bouwstenen voor professionele leergemeenschappen in scholen.* Antwerpen-Apeldoorn: Garant.

Vermeulen, M. (2003). *Een meer dan toevallige casus; de tekorten aan leraren bezien as aansluitingsvraagstuk tussen opleiding en arbeidsmarkt in het hoger onderwijs.* Open Universiteit.

Vermeulen, M. (2016). *Leren organiseren. Een rijke leeromgeving voor leraren en scholen*. Open Universiteit.

Vermeulen, M., Klaeijsen, A., & Martens, R. (2011). *De lerende leraar. Docentprofessionalisering in de praktijk*. Retrieved from http://www.regionaaltrefpuntparkstad.nl/Docs/Expertise/RdMC/2011Rapporten/WEB_rapport_13.pdf#page=24

Vermunt, J. D. H. M. (2006). *Docent van deze tijd: Leren en laten leren*. Utrecht: IVLOS. Retrieved from http://igitur-archive.library.uu.nl/ivlos/2007-0105-200145/UUindex.html

Vries, S. de, Grift, W. J. C. M. van de, & Jansen, E. P. W. A. (2013). How Teachers' Beliefs about Learning and Teaching Relate to their Continuing Professional Development. *Teachers and Teaching*, *20*(3), 338–357. http://doi.org/10.1080/13540602.2013.848521

Vries, S. de, Jansen, E. P. W. A., & Grift, W. J. C. M. van de. (2013). Profiling teachers' continuing professional development and the relation with their beliefs about learning and teaching. *Teaching and Teacher Education*, *33*, 78–89. http://doi.org/10.1016/j.tate.2013.02.006

Watkins, C., Carnell, E. and Lodge, C. (2007). *Effective Learning in Classrooms*. London: Sage.

Wenger, E. (1998). *Communities of practice*. Cambridge: Cambridge University Press.

Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice: a guide to managing knowledge*. Boston: Harvard Business School Press.

Wetzel, A. P., De Arment, S. T., & Reed, E. (2015). Building teacher candidates' adaptive expertise: engaging experienced teachers in prompting reflection. *Reflective Practice, 16*(4), 546–558. http://doi.org/10.1080/14623943.2015.1064380

Wideen, M., Mayer-Smith, J., & Moon, B. (1998). A Critical Analysis of the Research on Learning to Teach: Making the Case for an Ecological Perspective on Inquiry. *Review of Educational Research*, *68*(2), 130–178.

Wiliam, D. (2014). Teacher expertise: why it matters and how to get more of it. *Licensed to Create: 10 Essays on Improving Teacher Quality*, 27–36.

Williams, A., & Katz, L. (2001). The Use of Focus Group Methodology in Education: Some Theoretical and Practical Considerations. *International Electronic Journal for Leadership in Learning*, *5*(3).

Wisconsin Department of Public Instruction. (n.d.). *Comparison of Professional Learning Communities and Communities of Practice*. Retrieved from http://dpi.wi.gov/sites/default/files/imce/sped/doc/wpdm-comparison.doc

Wise, D., Brown, C., Oliver, S., & Poblete, X. (2018). *The BERA Close-to-Practice Research Project*. https://www.bera.ac.uk/wp-content/uploads/2018/07/BERA-Close-to-Practice_report_Nov2018.pdf?noredirect=1

York-Barr, J., & Duke, K. (2004). What Do We Know About Teacher Leadership? Findings From Two Decades of Scholarship. *Review of Educational Research*, *74*(3), 255–316. https://doi.org/10.3102/00346543074003255

Yperen, N. W. van, Brenninkmeijer, V., & Buunk, A. P. (2006). People's responses to upward and downward social comparisons: the role of the individual's effort-performance expectancy. *The British Journal of Social Psychology / the British Psychological Society*, *45*(Pt 3), 519–533. http://doi.org/10.1348/014466605X53479

Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan.*, *9*, 1–6. https://doi.org/10.1177/15222302004003007

Zwart, R. C., Korthagen, F. A. J., & Attema-Noordewier, S. (2014). A strength-based approach to teacher professional development. *Professional Development in Education*, *41*(3), 579–596. http://doi.org/10.1080/19415257.2014.919341

Appendices

Appendix 1: Learner Report Task/Instructions to students

Reflection after semester 1 "Perspectives on Learning".[19]

Write a *learner report* in which you reflect on your learning experiences of the first semester.

Over the past half year, you've acquired new knowledge, insights and skills, both about theory (i.e. the lectures on *Perspectives on Learning*) and through your research project, and about yourself and your development as a professional. In this assignment we ask you to reflect on your learning experiences by writing a *Learner Report* (as developed by De Groot). We use the Learner Report as a reflection tool, as it is a tried-and-tested method to record subjective learning experiences. Moreover, it is a method that you might apply yourself, should you opt for qualitative research.
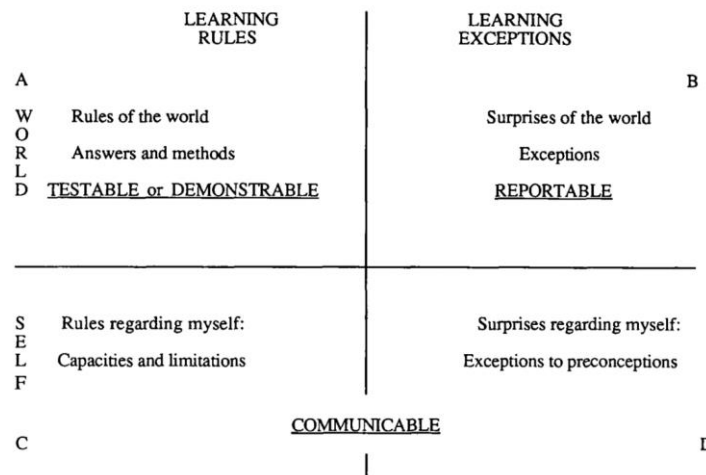
The assignment is divided into two subtasks: part 1 is about your reflections on the *object*: the content matter of the lectures and workshops. Part 2 is about what you learnt about yourself. The questions below are meant to help you get started.

Part 1 – reflect on what you learnt

Write a Learner Report on your learning experiences, using the questions below. Begin with taking another look at the learners' autobiography you composed before the semester began; pay particular attention to the intentions you had at the time.

Question 1: I learnt/ noticed/ discovered that… (think about the lectures: you encountered pedagogic/ didactic ideas and concepts. Are you better equipped now to translate your professional identity into new actions or methods?)

Prompting questions:

---

[19] Please note that this is translation of the original assignment (which was in Dutch)

- I learnt/ noticed/ discovered …

… that something is like this-and-that
… that something works like this-and-that
… that something should be done like this-and-that

…

Question 2: I learnt/ noticed/ discovered that it is NOT true that… (surprises). Think about the lectures: did what you heard change things that you took for granted? Were your ideas challenged? Are there practices that you would/ could question as a result of this?

Prompting questions:
I learnt/ noticed/ discovered that it is not true …
… that something is like this-and-that
… that something works like this-and-that
… that something should be done like this-and-that

…

Part 2 Reflect on what you learnt about yourself

Question 3: I learnt/ noticed/ discovered about myself that it… (focus on self-discovery, your experiences and in relationship with your colleagues/ fellow students)

Prompting questions:
I learnt/ noticed/ discovered I …
… am good (or not so good!) at …
… that if I encounter these kinds of problems, it works best for me if I …
… that enjoy/ like… (don't like) to …

…

Question 4: I learnt/ noticed/ discovered about myself that I … (surprises that you had. Focus on your own learning, your learning experiences and in relationship with your colleagues/ fellow students)

Prompting questions:
I learnt/ noticed/ discovered that it is not true that I …
… am always good (or not so good!) at …
… that I never …
… that always (never) enjoy/ like…

Appendix 2: Ethics Approval

Institute of Education

🏛 **UCL**

Ethics Application Form: Student Research

Anyone conducting research under the auspices of the Institute (staff, students or visitors) where the research involves human participants or the use of data collected from human participants, is required to gain ethical approval before starting. This includes preliminary and pilot studies. Please answer all relevant questions in terms that can be understood by a lay person and note that your form may be returned if incomplete.

For further support and guidance please see accompanying guidelines and the Ethics Review Procedures for Student Research http://www.ucl.ac.uk/srs/research-ethics-committee/ioe or contact your supervisor or IOE.researchethics@ucl.ac.uk.

Before completing this form you will need to discuss your proposal fully with your supervisor(s). Please attach all supporting documents and letters.

For all Psychology students, this form should be completed with reference to the British Psychological Society (BPS) Code of Human Research Ethics and Code of Ethics and Conduct.

Section 1 Project details					
a.	Project title			*Context as a Source for Teachers' Professional Learning*	
b.	Student name			*André Koffeman*	
c.	Supervisor/Personal Tutor			*Caroline Daly*	
d.	Department			*CCM*	
e.	Course category (Tick one)	PhD/MPhil	X	EdD	☐
		MRes	☐	DEdPsy	☐
		MTeach	☐	MA/MSc	☐
		ITE	☐		
		Diploma (state which)	☐		
		Other (state which)	☐		
f.	Course/module title			PhD dissertation	
g.	If applicable, state who the funder is and if funding has been confirmed.				
h.	Intended research start date			8-3--2017	
i.	Intended research end date			1-8-2018	
j.	Country fieldwork will be conducted in *If research to be conducted abroad please ensure travel insurance is obtained through UCL http://www.ucl.ac.uk/finance/insurance/travel*			**The Netherlands**	

k.	Has this project been considered by another (external) Research Ethics Committee?	
	Yes ☐	External Committee Name:
	No X ⇨ *go to Section 2*	Date of Approval:

If yes:
- Submit a copy of the approval letter with this application.
- Proceed to Section 10 Attachments.

Note: Ensure that you check the guidelines carefully as research with some participants will require ethical approval from a different ethics committee such as the <u>National Research Ethics Service</u> (NRES) or <u>Social Care Research Ethics Committee</u> (SCREC). In addition, if your research is based in another institution then you may be required to apply to their research ethics committee.

Section 2 Project summary

Research methods (tick all that apply)

Please attach questionnaires, visual methods and schedules for interviews (even in draft form).

X Interviews ☐ Focus groups X Questionnaires ☐ Action research ☐ Observation ☐ Literature review	☐ Controlled trial/other intervention study ☐ Use of personal records ☐ Systematic review ⇨ *if only method used go to Section 5.* ☐ Secondary data analysis ⇨ *if secondary analysis used go to Section 6.* ☐ Advisory/consultation/collaborative groups X Other, give details: *Document analysis: student coursework (learning autobiographies and learner reports)*

Please provide an overview of your research. This should include some or all of the following: purpose of the research, aims, main research questions, research design, participants, sampling, your method of data collection (e.g., observations, interviews, questionnaires, etc.) and kind of questions that will be asked, reporting and dissemination (typically 300-500 words).

The proposed research involves a methodological study to develop a tool[1] to help teachers reflect on their professional learning. It will involve participation of adult students who will provide feedback and implement the tool in their own working contexts.
Research suggests (eg. Engeström & Kerosuo (2007) and Akkerman & Bakker (2011)) that teachers' professional learning is strongly context oriented, and that learning is prompted by teachers finding their contexts confronted with alternatives that challenge their own ideas or practices. The proposed research aims to help teachers reflect on the learning potential of their professional contexts by developing a tool to support that reflection.
For this reason I intend to look at the different contexts teachers operate in and the (instructive) confrontations that occur within these contexts. The thesis' objective is to design and test an instrument that helps teachers reflect on the influence their contexts have or could have on their professional learning.
A core feature of the research is its participatory design: the tool will be developed based on teachers' feedback and reflections in response to working with the tool. The proposed research is built up in three stages:

---

[1] This tool/ instrument will have the shape of a questionnaire, combined with a spreadsheet to help the respondent calculate and visualise the outcomes, as well as an interpretation framework to help reflect thereon.

I.   I am a tutor in a masters programme for experienced teachers, called *Professioneel Meesterschap*[2] (PM). Every year, right before they start their programme, these teachers/ students – who are interested in their own learning as well in the learning of their organisation – are asked to write a learning autobiography. After the first semester, they write a learner report on what they have learnt so far and these sets of reflections are used to discuss concepts of professional learning as part of the course work. I asked one particular group of students' (cohort PM'15; n≈20) permission to use these two sets of journals to make an inventory of typical (self reported) contextual learning experience. The issues and features identified in this student coursework produced the principles for developing a reflection tool. Students gave consent at that time for me to design a tool for use at a later date with subsequent student cohorts. This is now being taken forward in my research project. Fully informed consent will now be sought from this previous cohort of students to take the ideas forward in developing the tool as part of my doctoral research.

II. This instrument will be presented to another cohort of students in the same masters programme (PM'16; n=18) who will function as a pilot group. They will be asked to fill in the questionnaire and – using a spreadsheet and interpretation framework – to reflect on the outcome as part of their coursework (NB: the reflection on the outcome is the coursework; not the outcome itself). Different outcome patterns will be discussed in a group discussion, lead by the applicant. They will then be invited to become co-researchers.

III. The ones who consent – the co-researchers – will then each approach 5-10 colleagues in their school, asking them to use the instrument to prepare for a discussion with the co-researcher on the way the professional context is used as a source for professional learning, and – if appropriate – to formulate learning intentions.
I will later interview the co-researchers on their experiences with the instrument, in order to optimise the instrument and the interpretation framework.

Section 3 Participants

Please answer the following questions giving full details where necessary. Text boxes will expand for your responses.

a.	Will your research involve human participants?		Yes X	No ☐ ⇨ *go to Section 4*

b. Who are the participants (i.e. what sorts of people will be involved)? Tick all that apply.

☐ Early years/pre-school	☐ Unknown – specify below
☐ Ages 5-11	X Adults *please specify below*
☐ Ages 12-16	☐ Other – specify below
☐ Young people aged 17-18	

NB: Ensure that you check the guidelines (Section 1) carefully as research with some participants will require ethical approval from a different ethics committee such as the National Research Ethics Service (NRES).

c. If participants are under the responsibility of others (such as parents, teachers or medical staff) how do you intend to obtain permission to approach the participants to take part in the study?

(Please attach approach letters or details of permission procedures – see Section 9 Attachments.)

---

[2] Which translates as *Professional Mastery*. This is a post-initial two-year part-time Master's programme aimed at improving teacher leadership competences: the curriculum is focused on developing the knowledge, skills, and attitudes required for teacher leadership. The design is intended to connect the participant's learning process with the school's change agenda.

d.	How will participants be recruited (identified and approached)?
	Participants (PM'15 and PM'16) are students in a masters' programme for experienced teachers in which the applicant/ researcher is a tutor. The participants first will be approached and informed as a group during a course day. They are then asked to become participants and are given time to confer and asked to respond individually, via e-mail, to reduce the chance of possible pressure (tutor-student or group). For this the attached consent forms will be used. The applicant will let them know that not all students are needed to participate for the research to take place. This should further reduce pressure to feel obliged to participate. The next group of participants consists of students' colleagues. They will be recruited by the students themselves and asked for consent using the attached consent form.
e.	Describe the process you will use to inform participants about what you are doing.
	The PM'15 students who contributed feedback and whose coursework was discussed to develop a first draft of an instrument are still studying the programme. I will have a meeting with them to explain my plans and project, and to seek permission to carry forward the initial draft instrument and ideas that were discussed with them for my doctoral work. They will be under no pressure to agree and I will make it clear that I will delete any reference to any piece of coursework work they contributed in my future development of the tool.
	The participants and I meet regularly in the context of the courses they follow. In addition to the introduction to the project as described above, I will present and discuss all relevant follow-up steps. In phase I, feedback on the first version was presented after such an update. The update consisted of an overview of the steps that had taken place between the analysis of the journals and the construction of the first version of the instrument. The participants were then handed out a paper version of the instrument and asked to write their comments on this paper (anonymously), looking at both comprehensiveness and language. I used the comments to adapt the instrument. Once ethical approval is obtained, the participants will be sent the attached consent form. If consent is given, the next steps will be taken.
	In phases II and III – this is with the students of the next cohort, PM'16 – there will be more interaction between the students and me, as the former will become active participants in the research. As an introduction, I will present the research so far: a summary of the literature reviewed and the process that lead to the construction of the instrument. This introduction forms part of the curriculum, of the coursework, as does filling in the instrument and analysing and reflecting on the outcome. Students then have a choice to leave it there, or to further participate in the research in the manner described in d.
	The students who opt to become co-researchers will then discuss their experiences with the instrument together with the applicant, who will use the input to further adapt the interpretation framework that accompanies the instrument to help reflect on its outcome.
	The students' colleagues will be informed by the students themselves. Using an information sheet issued by the applicant, they will explain what the project is all about, in face to face discussions.
f.	How will you obtain the consent of participants? Will this be written? How will it be made clear to participants that they may withdraw consent to participate at any time?
	See the guidelines for information on opt-in and opt-out procedures. Please note that the method of consent should be appropriate to the research and fully explained.
	The students in phase I (PM'15) were approached during a class session as described in d. If they decided to become participants, they were asked to e-mail a short statement (for which an example was be provided[3]) in which they declare to give permission for their anonymized coursework to be used to

---

[3] This is the literal suggested tekst [and the translation]: "Ik geef toestemming om mijn (geanonimiseerde) reflectieverslagen te

	construct an instrument. The statement includes permission for publishing about the results. After ethical approval is granted, they will be asked to undersign the attached consent form (I), which will replace the provisional consent.
	The students in phase II (PM'16) will be approached in a similar way.
g.	Studies involving questionnaires: Will participants be given the option of omitting questions they do not wish to answer?
	Yes X No ☐
	If NO please explain why below and ensure that you cover any ethical issues arising from this in section 8.
h.	Studies involving observation: Confirm whether participants will be asked for their informed consent to be observed.
	Yes ☐ No ☐
	If NO read the guidelines (Ethical Issues section) and explain why below and ensure that you cover any ethical issues arising from this in section 8.
	(no observations)
i.	Might participants experience anxiety, discomfort or embarrassment as a result of your study?
	Yes X No ☐
	If yes what steps will you take to explain and minimise this?
	There are a number of possible issues here, not so much as a result of the study, but as the result of partaking.
	First of all, the respondents in phases I, II and III are students and therefore might feel pressured to partake – if not they might feel it would be negative for their relationship with the applicant. To minimise this, not only will the applicant use 'reassuring words', but also explain that not all students need to partake for the research to take place.
	Second, students in phase I might feel uncomfortable about their journals being used as research material: there might be passages there that are personal or otherwise not meant for publication (please note that the applicant would read the journals anyway; they were written with him as a reader in mind in the first place). To minimise this, the applicant will explain that the journals themselves will not be published or quoted from, but they will be used to draw up an inventory of typical instances of used learning sources. That means that outliers or very particular or personal instances will not be part of that inventory – the applicant is interested in common denominators. Moreover, these will be paraphrased rather than quoted, meaning that no connection can be made between the items in the questionnaire and individual students. Of course no student names will appear in the thesis. Finally, the respondents get to see the result of the inventory (i.e. the instrument) and can comment on it and/or withdraw from the research, in which case their contributions would be deleted.
	Third, in phase II students will be asked to apply the instrument themselves and might feel uncomfortable with the results, or with the idea that these results would in any way become public. Again, the applicant will clarify that the research is not about individual students or particular results, but rather about patterns. Here too, the applicants are informed every step of the way and can opt out at any point.

laten gebruiken voor een (te publiceren) onderzoek naar leeropbrengsten van de master Professioneel Meesterschap": [I give you my permission to use my (anonymized) reflection journals to be used to research the learner outcomes of the master Professional Mastery and to use it for publication"

	Fourth, in phase III students are invited to use the instrument to reflect on the use of context factors as a source for learning with their colleagues. That means a double issue here: the students might encounter discomfort, as well as the colleagues who are approached. With regard to the students: what applies to phases I and II applies here, too (guaranteed anonymity, full information, possibility to opt out). The colleagues in question might feel pressurised or uncomfortable. To avoid this, there will be full information and transparency, the option not to partake or to later opt out. As for the results, these will be anonymised – results can in no way be connected to individual respondents. The students choose themselves which colleagues to approach and they will have a training session with me as part of the course, about how to manage such an approach and exercise judgements about to do this; furthermore they will be able to contact me at any stage for support and will be told to inform their colleagues that they may contact me directly for further information/clarification. The student participants may withdraw at any stage and may change or reduce the number of colleagues they approach. It will be clear that this is a learning opportunity from which they may gain wider benefits and there will be no penalties if they choose not to proceed or encounter barriers which prevent them from trying out the instrument with colleagues. *Finally, please note that I am more interested in the process of applying the instrument and its effect on reflecting on professional learning than in individual outcomes generated by the instrument.* If not, explain how you can be sure that no discomfort or embarrassment will arise?
j.	Will your project involve deliberately misleading participants (deception) in any way? Yes ☐ No X
	If YES please provide further details below and ensure that you cover any ethical issues arising from this in section 8.
k.	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)? Yes X No ☐
	If NO please explain why below and ensure that you cover any ethical issues arising from this in section 8.
l.	Will participants be given information about the findings of your study? (This could be a brief summary of your findings in general; it is not the same as an individual debriefing.) Yes X No ☐
	If no, why not?

Section 4 Security-sensitive material
Only complete if applicable

Security sensitive research includes: commissioned by the military; commissioned under an EU security call; involves the acquisition of security clearances; concerns terrorist or extreme groups.

a.	Will your project consider or encounter security-sensitive material?	Yes ☐ * No ☐

b.	Will you be visiting websites associated with extreme or terrorist organisations?	Yes ☐ *	No ☐
c.	Will you be storing or transmitting any materials that could be interpreted as promoting or endorsing terrorist acts?	Yes ☐ *	No ☐

* Give further details in Section 8 Ethical Issues

Section 5 Systematic review of research
Only complete if applicable

a.	Will you be collecting any new data from participants?	Yes ☐ *	No ☐
b.	Will you be analysing any secondary data?	Yes ☐ *	No ☐

* Give further details in Section 8 Ethical Issues

If your methods do not involve engagement with participants (e.g. systematic review, literature review) and if you have answered No to both questions, please go to Section 10 Attachments.

Section 6 Secondary data analysis Complete for all secondary analysis

a.	Name of dataset/s	
b.	Owner of dataset/s	
c.	Are the data in the public domain?	Yes ☐ No ☐ *If no, do you have the owner's permission/license?* Yes ☐ No* ☐
d.	Are the data anonymised?	Yes ☐ No ☐ *Do you plan to anonymise the data?* Yes ☐ No* ☐ *Do you plan to use individual level data?* Yes* ☐ No ☐ *Will you be linking data to individuals?* Yes* ☐ No ☐
e.	Are the data sensitive (DPA 1998 definition)?	Yes* ☐ No ☐
f.	Will you be conducting analysis within the remit it was originally collected for?	Yes ☐ No* ☐
g.	If no, was consent gained from participants for subsequent/future analysis?	Yes ☐ No* ☐
h.	If no, was data collected prior to ethics approval process?	Yes ☐ No* ☐

* Give further details in Section 8 Ethical Issues

If secondary analysis is only method used and no answers with asterisks are ticked, go to Section 9 Attachments.

Section 7 Data Storage and Security
Please ensure that you include all hard and electronic data when completing this section.

a.	Confirm that all personal data will be stored and processed in compliance with the Data	Yes X

251

	Protection Act 1998 (DPA 1998). *(See the Guidelines and the Institute's Data Protection & Records Management Policy for more detail.)*		
b.	Will personal data be processed or be sent outside the European Economic Area?	Yes ☐ *	No X

*If yes, please confirm that there are adequate levels of protections in compliance with the DPA 1998 and state what these arrangements are below.

c.	Who will have access to the data and personal information, including advisory/consultation groups and during transcription? *The applicant and his supervisor(s)*

During the research

d.	Where will the data be stored? *The primary data consists of existing student work which is stored digitally in a secured digital environment (Blackboard Gradecentre). The processed data will be stored on the hard disk of the applicants' computer and on an external back up disk. The same applies for the data generated by the (yet to be developed questionnaire).*

e.	Will mobile devices such as USB storage and laptops be used? Yes X No ☐ *If yes, state what mobile devices: Laptop computer *If yes, will they be encrypted?: *Yes, the documents can only be accessed by entering a password. Moreover, the student names will be replaced by a (random) number.*

After the research

f.	Where will the data be stored? See above.
g.	How long will the data and records be kept for and in what format? *The primary data will be stored for seven years as is required by the University of Applied Science Amsterdam (the data consists of coursework in a masters' programme and Dutch Law says it should be kept for accreditation purposes). The processed data will be kept for three years after completion of the thesis, so five years.*
h.	Will data be archived for use by other researchers? Yes ☐ * No X *If yes, please provide details.

Section 8 Ethical issues

Are there particular features of the proposed work which may raise ethical concerns or add to the complexity of ethical decision making? If so, please outline how you will deal with these.

It is important that you demonstrate your awareness of potential risks or harm that may arise as a result of your research. You should then demonstrate that you have considered ways to minimise the likelihood and impact of each potential harm that you have identified. Please be as specific as possible in describing the ethical issues you will have to address. Please consider / address ALL issues that may apply.
Ethical concerns may include, but not be limited to, the following areas:

− Methods − Sampling − Recruitment	− International research − Risks to participants and/or researchers − Confidentiality/Anonymity − Disclosures/limits to confidentiality

252

− Gatekeepers	−	Data storage and security both during and after the research (including transfer, sharing, encryption, protection)
− Informed consent		
− Potentially vulnerable participants	−	Reporting
− Safeguarding/child protection	−	Dissemination and use of findings
− Sensitive topics		

To summarise, the most important issues with this research are as follows:

1. *The fact that the participants are students and the applicant is the tutor of these students. This difference in position might result in participants feeling obliged to participate, to respond in 'socially acceptable' ways, or to feel otherwise uncomfortable. In addition to the measures mentioned in this form, it is important that the applicant is aware of this.*

2. *The proposed instrument will be designed to make respondents reflect on their professional learning. It does so by helping make explicit the difference between the present situation and a (more) ideal situation. It is important that this confrontation is not (too!) uncomfortable, whilst at the same time the idea of confrontation is key. For this the instrument is designed it such a way that the (more) ideal situation is expressed by the repondent her/himself. It is important that the applicant is aware of this during the research, not only in terms of explaining how the instrument works, but also to be sensitive to the reaction of applicants.*

3. *In phase III students will approach their colleagues in school and engage with them in applying the instrument and reflecting on the outcome. The applicant will not be present in those schools and should monitor the process from a distance. This requires careful planning and interaction with the students. The student will be prepared beforehand, councelled during and debriefed after the project.*

Section 9 Further information

Outline any other information you feel relevant to this submission, using a separate sheet or attachments if necessary.

| | | |
| | | |

	Section 10 Attachments Please attach the following items to this form, or explain if not attached		
a.	Information sheets and other materials to be used to inform potential participants about the research, including approach letters	Yes ☐	No ☐
b.	Consent form	Yes X	No ☐
	If applicable:		
c.	The proposal for the project	Yes ☐	No ☐
d.	Approval letter from external Research Ethics Committee	Yes ☐	No ☐
e.	Full risk assessment	Yes ☐	No ☐

Section 11 Declaration

	Yes	No
I have read, understood and will abide by the following set of guidelines.	X	☐

BPS ☐	BERA X	BSA ☐	Other (please state) ☐

	Yes	No
I have discussed the ethical issues relating to my research with my supervisor.	X	☐
I have attended the appropriate ethics training provided by my course.	☐	X

I confirm that to the best of my knowledge:

The above information is correct and that this is a full description of the ethics issues that may arise in the course of this project.

Name	André Koffeman
Date	8 March 2017

==Please submit your completed ethics forms to your supervisor.==

Notes and references

254

Professional code of ethics
You should read and understand relevant ethics guidelines, for example:
British Psychological Society (2009) *Code of Ethics and Conduct*, and (2014) *Code of Human Research Ethics*
or
British Educational Research Association (2011) *Ethical Guidelines*
or
British Sociological Association (2002) *Statement of Ethical Practice*

Disclosure and Barring Service checks
If you are planning to carry out research in regulated Education environments such as Schools, or if your research will bring you into contact with children and young people (under the age of 18), you will need to have a Disclosure and Barring Service (DBS) CHECK, before you start. The DBS was previously known as the Criminal Records Bureau (CRB)). If you do not already hold a current DBS check, and have not registered with the DBS update service, you will need to obtain one through UCL.

Ensure that you apply for the DBS check in plenty of time as will take around 4 weeks, though can take longer depending on the circumstances.

Further references
The www.ethicsguidebook.ac.uk website is very useful for assisting you to think through the ethical issues arising from your project.

Robson, Colin (2011). *Real world research: a resource for social scientists and practitioner researchers* (3rd edition). Oxford: Blackwell.
This text has a helpful section on ethical considerations.

Alderson, P. and Morrow, V. (2011) *The Ethics of Research with Children and Young People: A Practical Handbook*. London: Sage.
This text has useful suggestions if you are conducting research with children and young people.

Wiles, R. (2013) What are Qualitative Research Ethics? Bloomsbury.
A useful and short text covering areas including informed consent, approaches to research ethics including examples of ethical dilemmas.
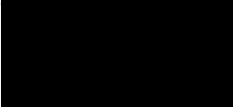
Departmental use

If a project raises particularly challenging ethics issues, or a more detailed review would be appropriate, you may refer the application to the Research Ethics and Governance Administrator (via IOE.researchethics@ucl.ac.uk) so that it can be submitted to the Research Ethics Committee for consideration. A Research Ethics Committee Chair, ethics representatives in your department and the research ethics coordinator can advise you, either to support your review process, or help decide whether an application should be referred to the Research Ethics Committee.

Reviewer 1

Supervisor name	Caroline Daly
Supervisor comments	This student has discussed extensively with me the ethical considerations involved in working with students in this project and in seeking appropriate informed consent from all of them. I am satisfied that the ethical issues have been understood and addressed.
Supervisor signature	███████████

Reviewer 2

Advisory committee/course team member name	John O'Regan
Advisory committee/course team member comments	I have reviewed the research and am satisfied that all the requisite ethical procedures have been followed.
Advisory committee/course team member signature	███████████

Decision

Date decision was made	10.01.2017	
Decision	Approved	☐
	Referred back to applicant and supervisor	☐
	Referred to REC for review	☐
Recording	Recorded in the student information system	☐

Once completed and approved, please send this form and associated documents to the relevant programme administrator to record on the student information system and to securely store.

Further guidance on ethical issues can be found on the IOE website at http://www.ucl.ac.uk/srs/research-ethics-committee/ioe and www.ethicsguidebook.ac.uk

Appendix 3: Consent Forms

For students that gave permission for their learner autobiographies and learner reports to be used as data:

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Project Title: Context as a Source for Teachers' Professional Learning

Researcher: André Koffeman

Thank you for your interest in taking part in this research. Before you agree to take part, please read the information below.

If you have any questions arising from this Information Sheet or explanation already given to you, please ask the researcher before you to decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Invitation to participate in research into teacher learning context

Your participation would be much appreciated, but it is important that your choice to do so is an informed one. Therefore please first carefully read the introduction and considerations.

Introduction

The proposed research looks into teacher professional learning in the Dutch context. Although the average teacher in the Netherlands engages in CPD-activities regularly, the effects on his pedagogic repertoire seem limited (Veen, Zwart, Meirink & Verloop, 2010). Van de Grift (2007, 2010) claims that the average teacher only accomplishes about 60% of his pedagogic potential, and that saturation point is reached after about 15 years. Engeström & Kerosuo (2007) and Akkerman & Bakker (2011) suggest that teachers' professional learning is strongly context oriented, and that learning is prompted by teachers finding their contexts confronted with alternatives that challenge their own ideas or practices. The proposed research aims to help teachers reflect on that: on the role context plays in their professional learning. Ideally, these reflections should lead to the formulation of intentions that promote professional learning.

To this aim a reflection tool will be developed and for this you are asked to partake in this research, in two ways:

- First of all to allow the researcher to use two pieces of (your) coursework, namely the *learner autobiography* you wrote at the beginning of your studies and the *learner report* after the first semester. The researcher will use (your) reported sources of learning when designing items for the tool. These are the items that were shared with you on 9-2-'17.

-   Second, you were given a first paper version of the tool during a course session (9-2-'17) and wrote feedback on this paper. The researcher would like your consent to use this feedback to adapt the instrument.

Considerations

-   Your choice to participate or not does not have any impact on your marks as a student or participation in the remainder of the programme.
-   The data of both parts of the research will be anonymised. If the results of the research are to be made public at any point, there will be no way to connect the findings to individual respondents.
-   Undersigning now means you choose to participate. It is, however, possible to change your mind along the way. If you have second thoughts either during or after the project, you can inform the researcher. He will then remove your data from the dataset.
-   This research is carried out in the context of the researcher's study at the Institute of Education (University College London) and should lead to a PhD dissertation.
-   The (anonymised) dataset will be kept and archived on the researcher's computer, protected by a password, and only be used by him for. It is possible that – in addition to the dissertation – the data will be used for further publications, in line with the aims clarified in the introduction.
-   The researcher will debrief you at the end of the project. The dissertation for which the research is intended, is likely to be rounded off in or after the year 2018 and all participants will be offered a (digital) copy.
-   Finally: the research study has been approved by the UCL Research Ethics Committee.

Participant's Statement

I agree that:

• I have read the notes written above, and understand what the study involves.

• I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researcher involved and withdraw immediately and all data related to me will be deleted from the research.

• I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

• I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.

Name and signature:
Date:

For students that acted as co-researchers:

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Project Title: Context as a Source for Teachers' Professional Learning

Researcher: André Koffeman

Thank you for your interest in taking part in this research. Before you agree to take part, please read the information below.

If you have any questions arising from this Information Sheet or explanation already given to you, please ask the researcher before you to decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Invitation to participate in research into teacher learning context

Your participation would be much appreciated, but it is important that your choice to do so is an informed one. Therefore please first carefully read the introduction and considerations.

Introduction

The proposed research looks into teacher professional learning in the Dutch context. Although the average teacher in the Netherlands engages in CPD-activities regularly, the effects on his pedagogic repertoire seem limited (Veen, Zwart, Meirink & Verloop, 2010). Van de Grift (2007, 2010) claims that the average teacher only accomplishes about 60% of his pedagogic potential, and that saturation point is reached after about 15 years. Engeström & Kerosuo (2007) and Akkerman & Bakker (2011) suggest that teachers' professional learning is strongly context oriented, and that learning is prompted by teachers finding their contexts confronted with alternatives that challenge their own ideas or practices. The proposed research aims to help teachers reflect on that: on the role context plays in their professional learning. Ideally, these reflections should lead to the formulation of intentions that promote professional learning.

To this aim a reflection tool has been developed and to examine *if* and (if yes) *how* this tool promotes reflection, you are asked to partake in this research, in two ways:

- First of all to use the tool yourself, and reflect on the outcome. The outcome of both the scores filled in, and the reflections on the outcome, will form data to be used by the researcher.
  Second, for you to ask a small group (5-10) of colleagues of yours to partake[20] in the research, by applying the tool in their situations and then by engaging in a dialogue in which you discuss the outcomes with them. The researcher will interview you

---

[20] For them a separate consent form will be issued: the colleagues will be asked to participate in both responding to the tool and discussing the outcomes, and asked consent for the data generated by these two activities to be used for the research project. Only consenting colleagues will participate.

about this dialogue: the data generated by this interview will be used to evaluate the tool and its effectiveness.

Considerations

- Your choice to participate or not does not have any impact on your marks as a student or participation in the remainder of the programme.
- The data of both parts of the research will be anonymised. If the results of the research are to be made public at any point, there will be no way to connect the findings to individual respondents.
- Undersigning now means you choose to participate. It is, however, possible to change your mind along the way. If you have second thoughts either during or after the project, you can inform the researcher. He will then remove your data from the dataset.
- This research is carried out in the context of a study at the Institute of Education (University College London) and should lead to a PhD dissertation.
- The (anonymised) dataset will be kept and archived on the researcher's computer, protected by a password, and only be used by him for. It is possible that – in addition to the dissertation – the data will be used for further publications, in line with the aims clarified in the introduction.
- Data collection will take place between now and December 2017. The researcher will debrief you at the end of the project. The dissertation for which the research is intended, is likely to be rounded off a year later and all participants will be offered a (digital) copy.
- Finally: the research study has been approved by the UCL Research Ethics Committee.

Participant's Statement

I agree that:

• I have read the notes written above and the Information Sheet, and understand what the study involves.

• I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researcher involved and withdraw immediately and data related to me will be destroyed.

• I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

• I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.

Signature: Date:

For the workplace colleagues of these students, who applied the tool and discussed the results:

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Project Title: Context as a Source for Teachers' Professional Learning

Researcher: André Koffeman[21]

Thank you for your interest in taking part in this research. Before you agree to take part, please read the information below.

If you have any questions arising from this *Information Sheet* or explanation already given to you, please ask the researcher (André Koffeman; email contact**)** before you to decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Invitation to participate in research into teacher learning context

Your participation would be much appreciated, but it is important that your choice to do so is an informed one. Therefor please first carefully read the introduction and considerations.

Introduction

The proposed research looks into teacher professional learning in the Dutch context. Although the average teacher in the Netherlands engages in CPD-activities regularly, the effects on his pedagogic repertoire seem limited (Veen, Zwart, Meirink & Verloop, 2010). Van de Grift (2007, 2010) claims that the average teacher only accomplishes about 60% of his pedagogic potential, and that saturation point is reached after about 15 years. Engeström & Kerosuo (2007) and Akkerman & Bakker (2011) suggest that teachers' professional learning is strongly context oriented, and that learning is prompted by teachers finding their contexts confronted with alternatives that challenge their own ideas or practices. The proposed research aims to help teachers reflect on that: on the role context plays in their professional learning. Ideally, these reflections should lead to the formulation of intentions that promote professional learning.

To this aim a reflection tool has been developed and to examine *if* and (if yes) *how* this tool promotes reflection, you are asked to partake in this research:

First of all, use the tool yourself, and then reflect on the outcome with the colleague who introduced this research to you (who is a student in *Professioneel Meesterschap*). The outcome of both the scores filled in, and the reflections on the outcome, will form data to be used by the researcher. The researcher will interview your colleague about the dialogue you had: the data generated by this interview will be used to evaluate the tool and its effectiveness.

---

[21] Contact information:
Name: André Koffeman
e-mailadress: a.koffeman@uva.nl
tel.no.: 06-36057352

Considerations

-   The data of both parts of the research will be anonymised. If the results of the research are to be made public at any point, there will be no way to connect the findings to individual respondents.
-   Undersigning now means you choose to participate. It is, however, possible to change your mind along the way. If you have second thoughts either during or after the project, you can inform the researcher. He will then remove your data from the dataset.
-   This research is carried out in the context of a study at the Institute of Education (University College London) and should lead to a PhD dissertation.
-   The (anonymised) dataset will be kept and archived on the researcher's computer, protected by a password, and only be used by him for. It is possible that – in addition to the dissertation – the data will be used for further publications, in line with the aims clarified in the introduction.
-   Data collection will take place between now and the summer of '18. The researcher will debrief you at the end of the project. The dissertation for which the research is intended, is likely to be rounded off a year later and all participants will be offered a (digital) copy.
-   Finally: the research study has been approved by the UCL Research Ethics Committee.

Participant's Statement

I agree that:

• I have read the notes written above and the Information Sheet, and understand what the study involves.

• I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researcher involved and withdraw immediately and all data related to me will be deleted.

• I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

• I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.

Signature: Date:

Appendix 4: Component IV –The interpretation framework – as presented in the tool

	how it is	What does your score mean?	how I would like it to be	Possible follow-up activities, should you wish to increase your score
learning from your own experience UNPLANNED	*[here the average score appears]*	A high score here means that you tend to learn-by-doing. You deal with what comes on your path and these experiences are an important source for your learning.	*[here the average score appears]*	It might not sound logical, but it is possible to organise unplanned learning experiences. If you learn from your own experiences, you could actively seek situations in which new experiences are likely to happen. Very drastic: you could decide to teach to another kind of group than normal (or even in another school). Less drastic: use different coursebooks, or try out new things, like organise extra-curricular activities, or look for new duties in school that will bring about new experiences. In short: put yourself in new situations, thereby increasing the chance for new learning experiences.
learning from your own experience PLANNED	*[here the average score appears]*	A high score here means you actively try to maximise the effect of your learning-by-doing. You experiment regularly, you collect feedback, and reflect systematically on your actions and the effects they have.	*[here the average score appears]*	The general idea here is that you become more aware of your practice. One way to do so, is to think even harder about the kinds of results you'd like to have for your pupils. You then design various specific ways to reach those results, and you test your ideas in practice, and finally you evaluate them. Another way is to make more use of existing data (for instance by analysing test results). Additionally, you could systematically reflect on your actions: what were my objectives; what did I do; what happened; what might I have done differently, etc. A powerful way to make yourself more aware of your own actions is recording your lessons (or having them recorded) and watch yourself through the perspective of your pupils. A variation is to have your colleagues observe you and ask them for specific feedback.
Learning from and with your	*[here the average score appears]*	A high score here means that you probably have a great deal of informal contact	*[here the average score appears]*	If you'd like to score higher on this dimension, you could look at the amount of informal contact you have with your colleagues, and at what kind of things

colleagues UNPLANNED		with your colleagues, and that you are inspired by them: you tend to be open to their ideas and to what happens around you.		you discuss with them. Do you drink coffee together, for instance? Do you organise team activities outside of official meetings? What is the topic of the informal talks you have? Are they about education? In many schools there is a taboo on sharing experiences in which you were unsatisfied with yourself or what you did. Putting yourself in a vulnerable position, however, might invite colleagues to share more of their experiences and deliberations, too.
				A different type of activity is coaching student teachers. Talking with student teachers does not only help them, but often also leads to (unplanned) learning outcomes for the coaching teacher. The essence here is: by putting yourself in new - in this case social - positions, in which new (unplanned) things are likely to happen, the chance of accidental learning increases.
Learning from and with your colleagues PLANNED	*[here the average score appears]*	A high score here means that you consciously look for ways to learn with and from your colleagues.	*[here the average score appears]*	We know from research that social learning can be very effective, but it is sometimes difficult to organise, for instance because of varying timetables or lack of time. If you do succeed in observing each other's lessons, agree with what your colleague will focus on. It helps direct the discussions afterwards and prevents them to become a bit like a performance interview, or leads to feedback that is limited to compliments. Of course, compliments are nice, but they tend to confirm what you already do (instead of highlighting development points).
				A more drastic approach: *LeerKRACHT!* is an approach that gets good reviews in many schools, as well as *Lessons Study.* What both these approaches have in common is that teachers don't just meet as such, but rather design educational activities together and learn from one another in the process.
Learning from theory UNPLANNED	*[here the average score appears]*	A high score here means that you keep your eyes and ears open for what happens around you in relation to education: you are receptive to new developments.	*[here the average score appears]*	At a first glance this category might look illogical: can you learn from theory in an unplanned way? You could, if you put yourself in positions where theoretical insights are given the chance to "happen" to you. If you (or your team) are subscribed to professional literature, for instance, then that increases the chance of "happening" to read informative things. There are numerous digital newsletters (and often for free) that you can subscribe to. Regularly reading a

				newsletter increases the chance of accidently learning new things.
Learning from theory PLANNED	*[here the average score appears]*	A high score here means that you actively seek to expand your knowledge base: you're always on the lookout for new insights and new developments.	*[here the average score appears]*	In addition to looking for formal possibilities to learn from (workshops, courses, study programs, conferences), you might actively look for knowledge in publications. Through the Internet a world of knowledge is available. In fact, there is so much there that you might easily lose the overview. It helps if you formulate specific search questions, ideally with and for one another, so in search of information that your team is interested in. It might sound obvious, but it helps not so much to study from the perspective of "What do I think about this theory?", but to turn it around: "What does this theory think about my practice?"

Appendix 5: Participants' design rules for the deployment of the tool

Context of application	The intervention could be used to in *Human Development Management*, for instance in the context of the annual appraisal. It could/ should help direct teacher professional learning.
Conditions	The intervention needs a careful explanation. It should be introduced in such a way that people take it seriously. It should take place in a safe, supportive learning environment. There should not be too many people be present. Socially desirable responses should be avoided.
Written Introduction	Explain that it is okay to have your own preference for a specific way to learn, to avoid socially desirable responses. Make sure to mention the word "awareness" in the introduction, as this is what it is what it is all about. Awareness of how you learn, where you can learn, and from whom/ what. It will probably help respondents especially become aware of unplanned learning opportunities. This should be highlighted. This could be added in the text, so people won't only think "here is another thing that I have to do – on top of everything I'm already doing". They should be given the insight that they already learn a lot, also unplanned, and that this unplanned learning could also be optimised. Stress that each respondent sets his or her own ambition; *this is where I would want to go*.
Interpretation framework	Make sure to include the informal learning opportunities. Explain that the advice here is general – it is not completely personalised. Explain how subscriptions to magazines or journals help unplanned learning. Include a section where respondent write down their findings and intentions.

The refection dialogue afterwards	Stress the potential of unplanned learning. Awareness can act as a catalyst for increased unplanned learning. Stress the idea that the tool highlights one's own ambition – it doesn't tell what you should do, but helps you direct your own ambitions and intentions to learn. The respondent should define his/ her own learning points. It should also help identify what goes well. It should be stressed that the dialogue could also lead to collective intentions. Stress the surprises. Avoid vague intentions: be concrete.

Appendix 6: The full instrument in Dutch

Sheet 1:

Welke bronnen zet u in voor uw eigen (professionele) leren?

Op het volgende tabblad vindt u 34 stellingen die u kunnen helpen inventariseren welke bronnen voor leren u zoal inzet: wat leidt (of heeft geleid) tot nieuwe kennis, tot nieuw gedrag, tot nieuwe opvattingen? De stellingen zijn verdeeld in drie blokken. Eerst gaat het over

- *uw eigen ervaring* als bron van leren, dan over
- *leren van en met elkaar*, en tenslotte over
- *leren door theorie.*

De stellingen worden daarbij gepresenteerd als duo: eerst is er steeds een stelling over *ongeplande* actie, en dan eentje over *bewust geplande* actie en activiteiten. Let op: er zijn geen foute antwoorden. Gepland is niet per se beter (of slechter) dan ongepland!

Om in kaart te brengen of uw huidige en uw gewenste situatie van elkaar verschillen, vragen we u bovendien per stelling aan te geven hoe het nu is, én hoe u het nu graag zou willen zien. Het gaat daarbij niet om de verre, maar om de nabije toekomst. Ook hier geldt dat er geen foute scores zijn: het idee is *voor uzelf* in kaart te brengen waar u tevreden mee bent, en waar u het zelf anders zou willen zien.

Na elk van de drie blokken vragen ziet u een gemiddelde verschijnen. Als u klaar bent met invullen vindt u in het volgende tabblad een grafiek van uw scores en nog weer een tabblad verder een tekst die u kan helpen de scores verder te interpreteren.

Invullen duurt ongeveer 10 minuten

Sheet 2:

Vult u aub voor elke stelling een cijfer tussen 1 en 5 in in het gekleurde hokje (1 betekent nooit of heel zelden; 5 betekent heel vaak of altijd). Er zijn 34 vragen.

hoe het is
hoe ik het zou willen

DEEL 1 gaat over uw eigen ervaringen in de klas als bron van leren

1. Ik pas mijn lessen aan op grond van spontane feedback van leerlingen (dingen die ik ze hoor of zie doen)
2. Ik verzamel systematisch feedback van leerlingen om daar van te leren

3. Ik bekijk toetscijfers van mijn leerlingen om ervan te leren
4. Ik analyseer de toetsresultaten van mijn leerlingen heel precies om ervan te leren

5. Ik leer van mijn vergissingen en van dingen die me overkomen in de klas
6. Ik leer door bewust nieuwe dingen uit te proberen in mijn lessen

7. Ik leer door handelingen vaak te herhalen – mijn 'automatische piloot' wordt steeds beter
8. Ik probeer bewust mijn routines steeds te verbeteren

9. Ik laat me leiden door mijn intuïtie
10. Ik reflecteer systematisch op mijn lespraktijk

	GEM.	#DIV/0!	#DIV/0!	leren door eigen ervaring ONGEPLAND
	GEM.	#DIV/0!	#DIV/0!	leren door eigen ervaring GEPLAND

DEEL 2 gaat over leren van en met elkaar

11. Ik leer doordat ik zie of hoor wat mijn collega's om mij heen zoal doen in de klas
12. Ik observeer mijn collega's gericht om zo van hen te leren

13. Ik leer van ongevraagd advies van collega's (of leidinggevende)
14. Ik vraag collega's (of leidinggevende) advies om van te leren

15. Ik leer van ongevraagde feedback van collega's (of leidinggevende)
16. Ik vraag collega's (of leidinggevende) feedback om van te leren

17. Ik steek veel op van toevallige gesprekken met mijn collega's
18. Ik vergader met mijn collega's met als doel' van elkaar te leren

19. Ik bespreek leerlingwerk met mijn collega's in de wandelgangen
20. Ik bespreek leerlingwerk met mijn collega's tijdens vergaderingen

21. Ik ben passief lid van een netwerk (bijv. een professionele leergemeenschap of een community of practice)
22. Ik ben actief lid van een netwerk (bijv. een professionele leergemeenschap of een community of practice)

	GEM.	#DIV/0!	#DIV/0!	leren van en met elkaar ONGEPLAND
	GEM.	#DIV/0!	#DIV/0!	leren van en met elkaar GEPLAND

DEEL 3 gaat over leren door theorie

23. Ik leer van cursussen (workshops, opleidingen) die de school organiseert
24. Ik leer van cursussen die ik zelf uitkies

25. Het gebeurt dat ik toevallig iets lees of hoor wat bevestigt wat ik instinctief al wist
26. Ik ga actief op zoek naar literatuur om na te gaan of dat wat ik ervaar klopt

27. Het gebeurt dat ik toevallig iets lees waardoor ik tot nieuwe inzichten kom
28. Ik houd literatuur bij om nieuwe inzichten te krijgen

29. Het gebeurt dat ik toevallig iets lees waardoor ik nieuwsgierig word naar meer
30. Ik houd literatuur bij om mijn nieuwsgierigheid te prikkelen

31. Als ik een conferentie (of een andere netwerkbijeenkomst) bezoek, leer ik van de gesprekken met andere bezoekers
32. Als ik een conferentie (of een andere netwerkbijeenkomst) bezoek, leer ik van de sprekers en workshops

33. Ik leer van wat ik lees in de krant over maatschappelijke en politieke discussies over het onderwijs
34. Ik volg maatschappelijke en politieke discussies over het onderwijs heel gericht

	GEM.	#DIV/0!	#DIV/0!	leren door theorie ONGEPLAND
	GEM.	#DIV/0!	#DIV/0!	leren door theorie GEPLAND

Dank, dit waren alle vragen. Ik het tabblad "Grafiek" (zie onderaan) kunt u zien hoe u gescoord heeft.

Sheet 3:

De stellingen waren verdeeld in drie blokken. Eerst ging het over uw eigen ervaring als bron van leren, toen over leren van en met elkaar, en tenslotte over leren door theorie. De stellingen werden daarbij steeds gepresenteerd als duo: eerst was er steeds een stelling over ongeplande actie, en dan eentje over bewust geplande actie en activiteiten.

Dat levert 3 maal 2 = 6 categorieën op. Hieronder ziet u ze in een tabel, en daarnaast in een grafiek.

TABEL

	hoe het is	hoe ik het zou willen	verschil
leren door eigen ervaring *ongepland*	#DIV/0!	#DIV/0!	#DIV/0!
leren door eigen ervaring *gepland*	#DIV/0!	#DIV/0!	#DIV/0!
leren van en met elkaar *ongepland*	#DIV/0!	#DIV/0!	#DIV/0!
leren van en met elkaar *gepland*	#DIV/0!	#DIV/0!	#DIV/0!
leren door theorie *ongepland*	#DIV/0!	#DIV/0!	#DIV/0!
leren door theorie *gepland*	#DIV/0!	#DIV/0!	#DIV/0!

Reflectievraag: wat is voor u de belangrijkste betekenis van deze resultaten? In het volgende tabblad kunt u kijken hoe u uw scores kunt interpreteren of beïnvloeden

GRAFIEK

visuele weergave
hoe het is — hoe ik het zou willen

Toelichting grafiek: u ziet twee figuren. In het blauw hoe u het nu ziet; in het groen hoe het zou willen zien. Onderaan vindt u ongepland leren; bovenin gepland leren. De buitenste zeshoek is de maximumscore. Waar zijn de verschillen het grootst: blauw/ groen? Ongepland/ gepland? En: vindt u daar wat van?

Sheet 4:

	Hoe het is	Wat betekent uw score?	Hoe ik het zou willen	Hoe te verhogen (mocht u dat willen!)
leren door eigen ervaring *ongepland*	#DIV/0!	Een hoge score hier betekent dat u leert door te doen, door zelf te ervaren, en dat overkomt u: u dealt met wat op uw pad komt en dat levert leerervaringen op.	#DIV/0!	Het klinkt misschien onlogisch, maar het is mogelijk ongeplande ervaringen te organiseren: als u leert door te ervaren, kunt u op zoek gaan naar situaties waarin de kans groot is dat u nieuwe ervaringen opdoet. Heel drastisch: les geven aan een ander soort groep dan gebruikelijk (of zelfs op een andere locatie/school). Iets minder drastisch: nieuwe dingen gaan doen, zoals buitenschoolse activiteiten gaan organiseren, of nieuwe taken op u nemen, kortom: uzelf in nieuwe situaties plaatsen.
leren door eigen ervaring *gepland*	#DIV/0!	Een hoge score hier betekent dat u probeert het effect van uw leren-door-doen te maximaliseren, door actief te experimenteren, door feedback te verzamelen, en door systematisch te reflecteren op uw handelen en het effect ervan.	#DIV/0!	Het gaat er hier vooral om, dat u nog bewuster omgaat met uw praktijk. Dat kan bijvoorbeeld door goed na te denken over wat voor resultaten u wilt bereiken in de klas. Vervolgens bedenkt u verschillende manieren om die resultaten te bereiken en u test en evalueert die. Een andere manier is het gebruik maken van bestaande data (het analyseren van toetsen, bijvoorbeeld) of het verzamelen van aanvullende data. U kunt dan denken aan leerlingfeedback: vragenlijsten, interviews, klassengesprekken (gericht op het aanpassen van uw handelen). Verder kunt u denken aan het regelmatig systematisch reflecteren op uw handelen: wat wilde ik, wat deed ik, wat gebeurde er, hoe had het anders gekund, etc.
leren van en met elkaar *ongepland*	#DIV/0!	Een hoge score hier betekent dat u waarschijnlijk veel informeel contact heeft met uw collega's en u daardoor laat inspireren – dat u openstaat voor wat er om u heen gebeurt.	#DIV/0!	Als u hoger wilt scoren op deze dimensie, zou u kunnen kijken naar *hoeveel* informeel contact u heeft met uw collega's, en naar *waar u het met elkaar zoal over heeft*. Wordt er veel samen koffie gedronken, bijvoorbeeld? Doen jullie wel eens dingen met het team, ook buiten officiële vergaderingen? Waar gaan informele gesprekken over? Over onderwijs? Er is op veel scholen een beetje taboe op het delen van ervaringen. Uzelf kwetsbaar opstellen kan voor collega's uitnodigend zijn ook meer te delen van wat ze overkomt en bezighoudt. Een wat ander type manier is bijvoorbeeld het gaan begeleiden van stagiaires. De gesprekken met stagiaires blijken vaak niet alleen te leiden tot (geplande) leeropbrengst voor de stagiaires, maar ook tot (vaak ongeplande) opbrengsten voor de stagedocent. De kern is ook hier: ongepland leren neemt toe waar u uzelf in nieuwe - in dit geval sociale - posities plaatst.
leren van en met elkaar *gepland*	#DIV/0!	Een hoge score hier betekent dat u bewust op zoek bent naar manieren om van en met elkaar te leren.	#DIV/0!	Uit onderzoek blijkt dat sociaal leren heel effectief kan zijn, maar het is soms lastig te organiseren, bijvoorbeeld door roosterproblemen of tijdsdruk. Als het toch lukt om af en toe bij elkaar op lesbezoek te gaan, bespreek dan vooraf waar uw collega op gaat letten. Dat helpt het gesprek achteraf te sturen en voorkomt dat het in de sfeer van beoordelen terecht komt. U kunt het ook nog wat drastischer aanpakken: *Leerkracht!* is een methodiek die het goed doet op veel scholen, en ook *Lesson Study*. Wat die methodes gemeenschappelijk hebben is dat docenten niet zozeer vergaderen met elkaar, maar samen onderwijs ontwerpen en zo al doende van elkaar leren.
leren door theorie *ongepland*	#DIV/0!	Een hoge score hier betekent dat u uw ogen en oren open hebt voor wat er om u heen gebeurt op het gebied van onderwijs: er komt veel op uw pad.	#DIV/0!	Deze categorie lijkt in eerste instantie wat onlogisch: kun je ongepland leren van theorie? Dat lukt als u uzelf in posities plaats waarin theoretische inzichten u kunnen "overkomen". Als u (of uw team) een abonnement hebt op vakliteratuur vergroot dat de kans dat u min of meer toevallig leerzame dingen leest, bijvoorbeeld. Er zijn allerlei digitale nieuwsbrieven (vaak gratis) waarop u zich kunt abonneren. Elke week een nieuwsbrief lezen vergroot de kans dat u toevallig iets interessants tegenkomt.
leren door theorie *gepland*	#DIV/0!	Een hoge score op deze dimensie betekent dat u werk maakt van het uitbreiden van uw kennisbasis: u bent steeds op zoek naar nieuwe inzichten en ontwikkelingen.	#DIV/0!	Naast het zoeken van allerlei formele leermogelijkheden (workshops, cursussen, opleidingen, conferenties), kunt u denken aan het actief kennis nemen van allerlei publicaties. Via internet is er een wereld aan informatie beschikbaar. Om door de bomen het bos te zien, helpt het daarbij gericht te zoeken, en – in een ideale wereld – dat voor en met elkaar te doen, bijvoorbeeld als antwoord op vragen waar het team voor staat. Het ligt een beetje voor de hand, maar het helpt daarbij niet zozeer te studeren vanuit de vraag "wat vind ik van die literatuur?", maar liever: "wat vindt de literatuur van mij(n praktijk)?"

sheet 5:

Wat ziet u als voornaamste opbrengst(en) van het inzetten van dit instrument (dus wat het u bijv. heeft opgeleverd aan inzicht)?	Welke vervolgacties formuleert u voor uzelf? Als u geen vervolgacties ziet, wilt u dan aangeven wat daarvoor de reden is?

Appendix 7: The full instrument in English

Sheet 1:

What sources do you use for your professional learning?

In front of you is a reflection tool, meant to help you think about your professional learning. On the next page you will find 34 statements that can help you become aware which sources for learning you use: what leads (or has lead) to new knowledge, new behaviour, or new ideas for you? The statements are divided into the following three categories:

* Your own experiences as a source of learning;
* Learning from and with your colleagues;
* Learning from theory.

Each of the statements is presented as part of a pair: first there is a statement on an *unplanned* action, followed by a related *planned* action or activity. Please note that there are no wrong answers. Planned is not better (or worse) than unplanned! The idea is that you become more aware of your sources for learning.

To help you assess whether your present and desired situation differ from one another, we also ask you to indicate for each of the statements how you experience it right now, and how you would like it to be in the near future. Again: there are no wrong answers here; the idea is that you yourself assess what you are happy with, and what you would like to see different.

After each of the three blocks of questions, you will find the averages of your scores. Once you have finished, please turn to the next page to find a graph of your scores. On the last page, you can find a text that can help you further interpret your scores. Again: there are no wrong outcomes: you yourself determine where you stand, and where you would like to be. The instrument assist you in mapping the two and helps you become more aware of possible sources for learning.

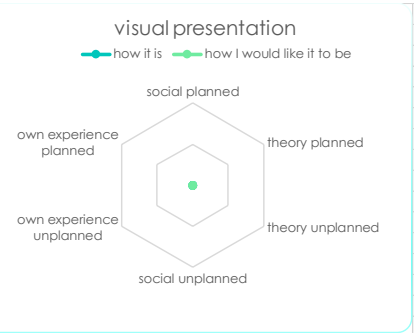**It takes about 10 minutes to fill out the questions.**

Sheet 2:

Please rate every statement with a mark between 1 (=never) and 5 (=always or very often). There are 34 statements.	how it is	how I would like it to be	
PART 1 is about using your own experiences as a source for learning			
1. I adapt my teaching based on spontaneous pupil feedback (the things I hear or see them do).			
2. I systematically collect pupil feedback to learn from			
3. I look at pupil test results to learn from.			
4. I carefully *analyse* pupil test results to learn from.			
5. I learn from my mistakes and things that happen to me whilst teaching.			
6. I learn by *consciously* trying new things in my lessons.			
7. I learn by repeating the things that work – my "automatic pilot" gets better and better.			
8. I *consciously* try to improve my routines.			
9. My intuition is my guide.			
10. I *systematically* reflect on my teaching.			
Average	#DIV/0!	#DIV/0!	learn from your own experience UNPLANNED
Average	#DIV/0!	#DIV/0!	learn from your own experience PLANNED
PART 2 is about learning from and with others.			
11. I learn from what I see and hear what my colleagues do in their classrooms.			
12. I observe my colleagues *with the specific aim* of learning from them.			
13. I learn from uninvited advice by colleagues (or head master).			
14. I *ask* my colleagues (or head master) for advice to learn from.			
15. I learn from uninvited feedback by colleagues (or head master).			
16. I *ask* my colleagues (or head master) for feedback to learn from.			
17. I learn much from accidental talks with my colleagues.			
18. I meet with my colleagues with *the specific aim* to learn from them.			
19. I informally discuss pupil work with my colleagues.			
20. I discuss pupil work with my colleagues *during meetings*.			
21. I am a passive member of a network (for instance a professional learning community or community of practice)			
22. I am an *active* member of a network (for instance a professional learning community or community of practice)			
Average	#DIV/0!	#DIV/0!	Learning from and with your colleagues UNPLANNED
Average	#DIV/0!	#DIV/0!	Learning from and with your colleagues PLANNED
PART 3 is about learning from theory			
23. I learn from courses (workshops, training) organised by the school.			
24. I learn from courses *I choose myself*.			
25. I happens that I hear or read things that confirm what I already knew instinctively.			
26. I *actively* look for literature to test if my findings are correct.			
27. It happens that I accidentally read something which gives me new insights.			
28. I *keep up with literature* to get new insights.			
29. It happens that I accidentally read something that makes me curious for more.			
30. I *keep up with literature* to stimulate my curiosity.			
31. If I visit a conference (or another network meeting), I learn from talks with other visitors.			
32. If I visit a conference (or another network meeting), I learn from the presenters and workshops.			
33. when I read in the newspapers about the political and social discussions on education, I learn from that.			
34. I'm focussed on the political and social discussions on education.			
Average	#DIV/0!	#DIV/0!	Learning from theory UNPLANNED
Average	#DIV/0!	#DIV/0!	Learning from theory PLANNED

Thank you. These were the questions. Now go to the next pages to see how you've scored.

Sheet 3:

The statements were divided into three categories. The first set was about *your own experiences* as a source for learning, the second one about *social learning* and the third one about *learning through theory*. The statements were presented as pairs: first there was a statement on an *unplanned* action, followed by a related *planned* action or activity. And so there are 3 times 2 categories. Below you find them in a table, and in a graph.

visual presentation

●— how it is ●— how I would like it to be

TABLE

	how it is	how I would like it to be	difference
learn from your own experience UNPLANNED	#DIV/0!	#DIV/0!	#DIV/0!
learn from your own experience PLANNED	#DIV/0!	#DIV/0!	#DIV/0!
Learning from and with your colleagues UNPLANNED	#DIV/0!	#DIV/0!	#DIV/0!
Learning from and with your colleagues PLANNED	#DIV/0!	#DIV/0!	#DIV/0!
Learning from theory UNPLANNED	#DIV/0!	#DIV/0!	#DIV/0!
Learning from theory PLANNED	#DIV/0!	#DIV/0!	#DIV/0!

social planned

own experience planned   theory planned

own experience unplanned   theory unplanned

social unplanned

A question to reflect on: *what do these results tell you?* On the next page you some more information is given on how to interpret your scores and a number of possible follow-up activities

Explanation of the graph: you see two diamond shaped figures. The blue one represents how you perceive things now; the green one how you would like to see them. The outside diamond is the maximum score. Where are the biggest differences: blue/ green? Unplanned/ planned? And: what do you make of that?

Sheet 4:

	how it is	What does your score mean?	how I would like it to be	Possible follow-up activities
learning from your own experience UNPLANNED	#DIV/0!	A high score here means that you learn-by-doing. You deal with what comes on your path and these experiences are the source of your learning.	#DIV/0!	It might not sound logical, but it is possible to organise unplanned learning experiences. If you learn from your own experiences, you could actively seek situations in which new experiences are likely to happen. Very drastic: you could decide to teach to another kind of group than normal (or even in another school). Less drastic: use different coursebooks, or try out new things, like organise extra-curricular activities, or look for new duties in school that will bring about new experiences. In short: put yourself in new situations, thereby increasing the chance for new learning experiences.
learning from your own experience PLANNED	#DIV/0!	A high score here means you actively try to maximise the effect of your learning-by-doing. You experiment regularly, you collect feedback, and reflect systematically on your actions and the effects they have.	#DIV/0!	The general idea here is that you become more aware of your practice. One way to do so, is to think even harder about the kinds of results you'd like to have for your pupils. You then design various specific ways to reach those results, and you test your ideas in practice, and finally you evaluate them. Another way is to make more use of existing data (for instance by analysing test results). Additionally, you could systematically reflect on your actions: what were my objectives; what did I do; what happened; what might I have done differently, etc. A powerful way to make yourself more aware of your own actions is recording your lessons (or having them recorded) and watch yourself through the perspective of your pupils. A variation is to have your colleagues observe you and ask them for specific feedback.
Learning from and with your colleagues UNPLANNED	#DIV/0!	A high score here means that you have a great deal of informal contact with your colleagues and that you are inspired by them: you are open to their ideas.	#DIV/0!	If you'd like to score higher on this dimension, you could look at the amount of informal contact you have with your colleagues, and at what kind of things you discuss with them. Do you drink coffee together, for instance? Do you organise team activities outside of official meetings? What is the topic of the informal talks you have? Are they about education? In many schools there is a taboo on sharing experiences in which you were unsatisfied with yourself or what you did. Putting yourself in a vulnerable position, however, might invite colleagues to share more of their experiences and deliberations, too.
				A different type of activity is coaching student teachers. Talking with student teachers does not only help them, but often also leads to (unplanned) learning outcomes for the coaching teacher. The essence here is: by putting yourself in new - in this case social - positions, in which new (unplanned) things are likely to happen, the chance of accidental learning increases.
Learning from and with your colleagues PLANNED	#DIV/0!	A high score here means that you consciously look for ways to learn with and from your colleagues.	#DIV/0!	We know from research that social learning can be very effective, but it is sometimes difficult to organise, for instance because of varying timetables or lack of time. If you do succeed in observing each other's lessons, agree with what your colleague will focus on. It helps direct the discussions afterwards and prevents them to become a bit like a performance interview, or leads to feedback that is limited to compliments. Of course, compliments are nice, but they tend to confirm what you already do (instead of highlighting development points).
				A more drastic approach: LeerKRACHT! is an approach that gets good reviews in many schools, as well as Lessons Study. What both these approaches have in common is that teachers don't just meet as such, but rather design educational activities together and learn from one another in the process.
Learning from theory UNPLANNED	#DIV/0!	A high score here means that you keep your eyes and ears open for what happens around you in relation to education: you are receptive to new developments.	#DIV/0!	At a first glance this category might look illogical: can you learn from theory in an unplanned way? You could, if you put yourself in positions where theoretical insights are given the chance to "happen" to you. If you (or your team) are subscribed to professional literature, for instance, then that increases the chance of "happening" to read informative things. There are numerous digital newsletters (and often for free) that you can subscribe to. Regularly reading a newsletter increases the chance of accidently learning new things.
Learning from theory PLANNED	#DIV/0!	A high score here means that you actively seek to expand your knowledge base: you're always on the lookout for new insights and new developments.	#DIV/0!	In addition to looking for formal possibilities to learn from (workshops, courses, study programs, conferences), you might actively look for knowledge in publications. Through the Internet a world of knowledge is available. In fact, there is so much there that you might easily lose the overview. It helps if you formulate specific search questions, ideally with and for one another, so in search of information that your team is interested in. It might sound obvious, but it helps not so much to study from the perspective of "What do I think about this theory?", but to turn it around: "What does this theory think about my practice?"

Sheet 5:

What would consider as the most important outcome of having applied this tool (so for instance what insights did it give you)?	What intentions for follow-up actions would you formulate for yourself? If none, can you briefly indicate the reason?

Understanding the role of context in teacher learning - DATA

DEEL 1 gaat over uw eigen ervaringen in de klas als bron van leren	present	(SD)	ambition	(SD)	diff. expressed in Cohen's d
2. Ik verzamel *systematisch* feedback van leerlingen om daar van te leren	2,68	1,03	3,93	0,73	**1,42**
10. Ik reflecteer *systematisch* op mijn lespraktijk	3,00	1,03	4,07	0,67	**1,26**
6. Ik leer door *bewust nieuwe dingen uit te proberen* in mijn lessen	3,40	0,82	4,34	0,69	**1,24**
4. Ik *analyseer* de toetsresultaten van mijn leerlingen heel precies om ervan te leren	2,88	1,16	4,03	1,05	**1,04**
5. Ik leer van mijn vergissingen en van dingen die me overkomen in de klas	4,22	0,72	4,68	0,54	**0,72**
3. Ik bekijk toetscijfers van mijn leerlingen om ervan te leren	3,49	1,09	4,12	0,94	**0,62**
1. Ik pas mijn lessen aan op grond van spontane feedback van leerlingen (dingen die ik ze hoor of zie doen)	3,68	0,77	4,13	0,74	**0,60**
8. Ik probeer *bewust* mijn routines steeds te verbeteren	3,21	1,02	3,75	0,97	**0,54**
7. Ik leer door handelingen vaak te herhalen – mijn 'automatische piloot' wordt steeds beter	3,56	0,87	3,53	0,95	**-0,03**
9. Ik laat me leiden door mijn intuïtie	3,75	0,84	3,69	0,97	**-0,06**

DEEL 2 gaat over leren van en met elkaar	present	(SD)	ambition	(SD)	diff. expressed in Cohen's d
12. Ik observeer mijn collega's *gericht* om zo van hen te leren	2,29	1,16	3,96	0,78	**1,71**
18. Ik vergader met mijn collega's *met als doel* van elkaar te leren	2,71	1,20	3,97	0,92	**1,19**
11. Ik leer doordat ik zie of hoor wat mijn collega's om mij heen zoal doen in de klas	3,06	1,06	4,09	0,77	**1,13**
16. Ik *vraag* collega's (of leidinggevende) feedback om van te leren	2,90	1,00	3,91	0,83	**1,10**
14. Ik *vraag* collega's (of leidinggevende) advies om van te leren	3,04	1,02	3,96	0,84	**0,98**
20. Ik bespreek leerlingwerk met mijn collega's tijdens vergaderingen	3,01	1,17	3,94	1,00	**0,85**
22. Ik ben *actief* lid van een netwerk (bijv. een professionele leergemeenschap of een *community of practice*)	2,91	1,46	3,82	1,05	**0,72**
13. Ik leer van ongevraagd advies van collega's (of leidinggevende)	3,10	1,08	3,74	0,94	**0,63**
15. Ik leer van ongevraagde feedback van collega's (of leidinggevende)	3,12	1,06	3,72	0,90	**0,62**
21. Ik ben passief lid van een netwerk (bijv. een professionele leergemeenschap of een *community of practice*)	2,34	1,41	2,96	1,44	**0,43**
17. Ik steek veel op van toevallige gesprekken met mijn collega's	3,72	0,91	4,07	0,86	**0,40**
19. Ik bespreek leerlingwerk met mijn collega's in de wandelgangen	3,31	1,02	3,31	1,12	**0,00**

DEEL 3 gaat over leren door theorie	present	(SD	ambition	(SD)	diff. expressed in Cohen's d
23. Ik leer van cursussen (workshops, opleidingen) die de school organiseert	2,87	1,02	4,06	0,86	**1,27**
28. Ik houd literatuur bij om nieuwe inzichten te krijgen	3,00	1,19	4,06	0,87	**1,03**
26. Ik ga *actief* op zoek naar literatuur om na te gaan of dat wat ik ervaar klopt	2,99	1,12	3,90	0,94	**0,88**
30. Ik houd literatuur bij om mijn nieuwsgierigheid te prikkelen	2,87	1,23	3,81	1,01	**0,84**
24. Ik leer van cursussen die ik zelf uitkies	3,78	1,02	4,43	0,69	**0,77**
32. Als ik een conferentie (of een andere netwerkbijeenkomst) bezoek, leer ik van de sprekers en workshops	3,46	0,93	4,07	0,84	**0,70**
34. Ik volg maatschappelijke en politieke discussies over het onderwijs heel gericht	3,10	1,17	3,84	1,02	**0,67**
31. Als ik een conferentie (of een andere netwerkbijeenkomst) bezoek, leer ik van de gesprekken met andere bez	3,37	1,02	3,93	0,89	**0,58**
27. Het gebeurt dat ik toevallig iets lees waardoor ik tot nieuwe inzichten kom	3,57	0,83	3,93	0,85	**0,42**
29. Het gebeurt dat ik toevallig iets lees waardoor ik nieuwsgierig word naar meer	3,69	0,91	4,03	0,85	**0,39**
33. Ik leer van wat ik lees in de krant over maatschappelijke en politieke discussies over het onderwijs	3,54	1,19	3,93	1,14	**0,33**
25. Het gebeurt dat ik toevallig iets lees of hoor wat bevestigt wat ik instinctief al wist	3,62	0,84	3,85	0,88	**0,27**

Collective reflections: insights

NODES			Typical examples
Practice: personal experience	planned	24	What I noticed in my graph is that I learn a lot from my own experience and that I could benefit from reflecting on my students' evaluations. I find that I can learn by seizing new opportunities. And then I read this in the interpretation framework: *the advice to try new things.* And then I think: hey, that's funny! It's exactly how it works for me. What struck me was my low scores in the graph on planned learning from my own experiences. I mean, I do learn from my experiences, but it isn't planned. It makes me think: maybe I should try out some new things… move away from the beaten track.
	unplanned	26	My results show – and this is something I know about myself – that I learn more unplanned than planned. […] I like to improvise; act on what happens during a lesson. I'm just not a lesson plan person. What I notice is that I'm especially focussed on the experience itself. So not planning but experiencing. Also, because new course books really give me new energy. New, new materials. I scored high, but especially – I know this about myself – I just love to try out new things. It gives me energy. I'm not too keen on theory. I think – this is really my thing: experiencing things, letting things happen. We can design what we want, but at the end of the day it's all about the students: what you bring to them and how they respond. That can only be done by trying, experiencing.
social	planned	38	The most notable outcome for me seems that planned social learning happens too little. Ideally, we should have more of that, because exchanges can be very productive and instructive. I notice that I would like to learn more from others, but it doesn't happen very often. For instance, visiting lessons: I think this is

|			something I could benefit from. I think it is a pity I'm not more inspired by others. This might not so much be an action point for me, but perhaps more for the team: to share successes with one another. I'm wondering whether you should plan these things, so to speak. Should we leave it at unplanned, or should we create moments of… well, let's do this together.
	unplanned	24	And about informal conversations, well, we have plenty of those. More with one colleague than with the other, though. I think that… it really helps me. Yes, yes. Mine [the graph] is a bit flatter here. More social unplanned – not too much of that going on. I think it comes with the job: you go it alone. And I think I agree with what T. says, that this is something we could do better as a team. We talk about lots of things […] but mostly at the coffee table, so more unplanned that planned.
theory	planned	24	The most important remark that I would like to make is that planned learning – from theory – is something I don't really do, but at the same time it is something that I would like to do. My lowest scores are learning through theory unplanned and planned. We could do much better there. It has to do with what I see here as advice: a subscription, professional literature, digital newsletters. I'm thinking: we could all do these things, but we'd need to make the time for it – and get the time for it. I find that I do feel the need to follow courses – I find that really helps, and then especially if it is a course I pick myself. And then there will be theory, but that would be less stressful than look up things in books on my own, about for instance differentiation or something.
	unplanned	12	I am not someone who uses theory, who reads a lot, and definitely not in my spare time. And so, I depend on unplanned input.

			I don't really read newspapers or watch the news. And so, I don't find it very important to be busy with education outside of the school. When I was still studying, I subscribed to all of those things, and I still get weekly e-mails. About the latest lesson forms and newest this-and-that. And so, I still get quite a lot of theoretical input, and I read it as well. So, I guess I'm still in there. And I watch the news and read the paper. So, theory unplanned and using current events to prepare my lessons is as high as would want it to be.
INSIGHT TOTAL	**planned**	**86**	
	unplanned	**62**	

Collective reflections: intentions

Practice; personal experience	planned	33	And I want to plan more moments to try out new things in my lessons and discuss these with my students. Another thing is […] gaining insight into student results. I'm doing that, but could do better, by beginning to establish the initial situation, and to then determine – per student – where to go from there. So, mapping that out. As far as evaluating tests is concerned, for instance: this is something I hardly do. So, see what kinds of mistakes are made, and analyse these, and – on that basis – adapt the tests or the way I teach. And I find this… I think this is very important. So, this is an action point.
	unplanned	7	I'd like to create new learning opportunities. It's time for new challenges, for instance by teaching OWO. Look for variations in my lessons. My intention: teach to another group either inside or outside of XXX.

social	planned	57	That would be great: if we would sit together more often to develop something together […] this is a good focus point – let's give it more attention: spend more time together.
			Visiting each other's lessons? You know, we've been saying for a long time that we should do it, and I notice it just doesn't happen. I'm including myself. This is really an action point - let's just go and plan it!
			What I was thinking: what is missing in our school is intervision. And then not in the sense of dropping a case and discuss it, but intervision in the sense of learning from and with each other.
	unplanned	7	I hope that next year we can use the Wednesdays to learn unplanned together.
			A nice thing, something I really like is… well, the informal circuit, you know. I need to look for new situations to remain in contact with direct or internship colleagues.
			As far as collaboration is concerned: remember that project week? I worked with H. then, and with C. Maybe we could do more of that. I mean: have more teachers working with one group and collaborate […] then you see each other's ins and outs.
theory	planned	23	And yes, what I liked [in the tool results] was that I could benefit from *leerKRACHT* or lesson study. So maybe I should attend one of their sessions.
			I'm looking here and there for courses to help me find new ways to explain theory. This is what I find the most interesting part. [follow courses?] Yes, or look up things myself.
			I intend to more often visit interesting conferences by myself, instead of waiting what our school has on offer.
	unplanned	3	[I intend] to read education magazines

			And I thought; if we would organise intervision, it would be great if people could then bring articles with them, to discuss. I would like to learn more from theory without having planned it. And I hope that we can facilitate that next year.
INTENTIONS TOTAL	planned	113	
	unplanned	17	
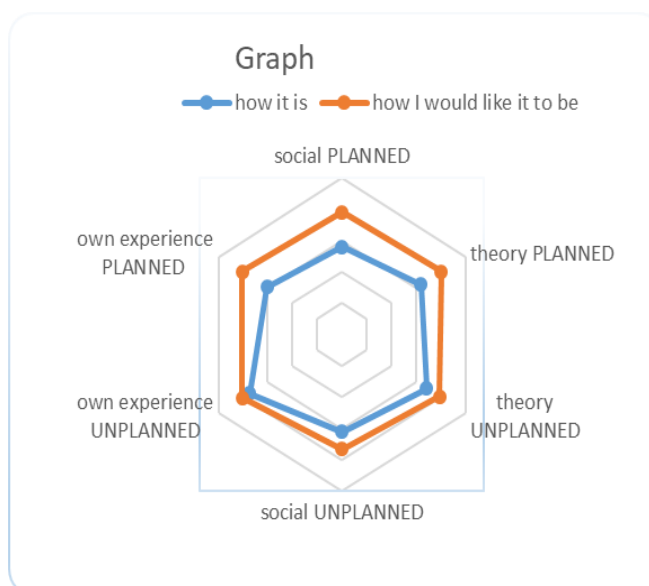
	how it is	how I would like it to be	difference
own experience UNPLANNED	**3,74**	**4,03**	*0,29*
own experience PLANNED	**3,03**	**4,02**	*0,99*
social UNPLANNED	**3,10**	**3,65**	*0,54*
social PLANNED	**2,81**	**3,92**	*1,11*
theory UNPLANNED	**3,44**	**3,95**	*0,51*
theory PLANNED	**3,20**	**4,02**	*0,82*