

# Developing Teacher Leadership and its Impact in Schools

Academisch proefschrift

Marco Snoek





# **Developing Teacher Leadership and its Impact in Schools**

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# Developing Teacher Leadership and its Impact in Schools

## ACADEMISCH PROEFSCHRIFT

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Faculteit der Maatschappij- en Gedragwetenschappen

'It means I'm no longer "just a teacher".

I am surprised and humbled to discover that  
I have become a teacher leader  
and have the opportunity  
to be a contributing member of the education profession  
if I'm willing to accept the challenge.

It requires I be informed  
It requires I keep an open mind and a respectful demeanour.  
It requires I assume good intentions and live with compromise.  
It requires I never neglect my students in order to serve my profession.'

*Susan Graham, teacher (in: Katzenmeyer & Moller, 2009, p. 119)*









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## Preface

This doctoral dissertation focuses on teachers and teacher leadership. One might complain, 'Not again! Some outsider who does not belong to the teaching profession, talking about what teachers must be and should do!' This complaint reflects one of the key problems faced by the teaching profession: the debate on teaching appears to be dominated by all types of experts except for the teachers themselves. *'There has been an increase of discourse about teachers (...) but teachers were not the main authors of this discourse, in a sense, they have seen their territory occupied by other groups.'* (Novoa, 2007).

The absence of teachers in debates about teachers is for many a cause for worry, as it threatens to de-professionalize the profession and to reduce the teacher to a mere technician, teaching curricula that have been defined by politicians and using methodologies designed by 'educational specialists'.

However, as a teacher educator, I cannot avoid talking about teachers, as that is a main part of my job: preparing and supporting (student) teachers for their (future) jobs, making curriculum decisions about the essential elements that constitute the teaching profession, and determining how student teachers will best master these elements. In addition, as a teacher educator, I consider myself a teacher, albeit a special type of teacher, which lends me some legitimacy in discussing teachers.

As a teacher educator, I have always felt myself part of a profession—in my case, the profession of teacher educators. This feeling of being part of a profession creates a feeling of power: I am not on my own, and together we can shape our profession and influence policies. I am fortunate that the profession of teacher educators is formally organized, with a professional association of teacher educators (the VELON) which takes responsibility for the development of the knowledge base underlying the education of teachers, defines quality standards for teacher educators, and supports members of the profession in meeting these standards through registration. Through this professional body, teacher educators have a voice and are able to exert their agency. 'Teacher educators matter!', the policy statement that I wrote together with Johan van der Sande and other members of the VELON board in 2006 (VELON, 2006), powerfully verbalizes this ambition and the self-awareness of the profession.

It is my hope that every teacher will feel a similar ambition and self-awareness as part of a powerful profession and that teachers collectively will raise their voice and exert their agency and leadership accordingly. Through my involvement as a teacher educator in the Bachelor's, Honor's,

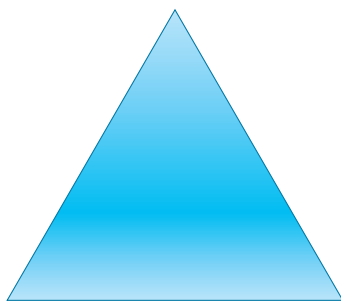
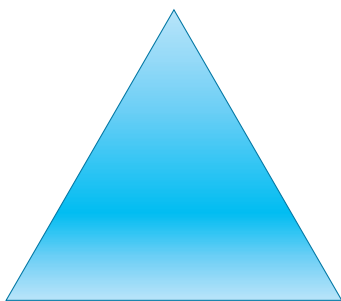
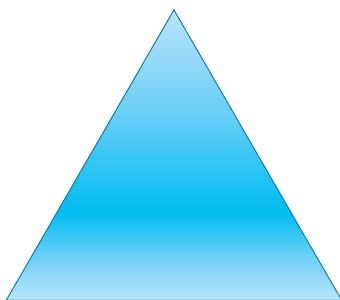
and Master's programs of the University of Applied Sciences Hogeschool van Amsterdam HvA, I am able to support teachers and student teachers in developing knowledge and competences to strengthen their voice, agency, and leadership. As a researcher at the Center for Applied Research in Education (*Kenniscentrum Onderwijs en Opvoeding*) of the HvA, I may contribute by studying how the development of these leadership competences actually contribute to leadership roles within schools and by clarifying conditions within schools that facilitate leadership among teachers.

Through the research project presented in this dissertation, I have been able to combine the two roles of teacher educator and researcher by working with teachers in academic development schools and Master's programs. Through this dissertation, I hope to contribute to teachers' voice and agency. Meanwhile, this dissertation would never have been possible without the inspiration, ambitions, and voices of the teachers involved.

Marco Snoek



# 1





# CHAPTER 1

## Introduction

### 1. The gap between teacher development and teacher practice

For as long as teacher education has existed as a separate program within universities<sup>1</sup>, the relationship between the university and schools has been under debate. This debate reflects not only the constant struggle to bridge the gap between theory and practice but also the variety of views on teacher knowledge (focusing on practical and experiential knowledge or on theoretical and academic knowledge) and on the learning environment in which that knowledge is best acquired (Back, 2012; Darling-Hammond & Lieberman, 2012; Kennedy, Ahn, & Choi, 2008; Menter, Hulme, Elliott, & Lewin, 2010; Snoek & Beishuizen, 2010). The debate also reflects the shifting power relationships that define who is in charge of the education of teachers: schools, universities, or governments (Furlong, 2000; Snoek, 2007; Snoek & Žogla, 2009; Snoek, 2011b).

The gap between theory and practice implies that offering initial and post-initial programs for teachers does not automatically lead to changes in the learning outcomes of pupils and students.

The relationship between the design of learning arrangements for (student) teachers and their actual impact on outcomes in schools is complex. In designing learning arrangements, a connection is assumed between the intended curriculum (the goal, expectations, and ambitions of the teacher educators towards their students); the actual design of the learning arrangement; the teacher's development in terms of knowledge, competences, and skills; their actual performance and behavior in the classroom or school; and the learning outcomes of pupils or students. The effectiveness of the connection between these parts depends on several factors in the actual design of the learning arrangement, such as the coherence of the teacher education program (Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005) and the learning environment at the university and at the school (see, e.g., (Timmermans, 2012; Van Velzen, 2013). Other factors at the school level include the effects of occupational socialization (Brouwer & Korthagen, 2005) and the extent to which the organizational climate stimulates or hinders transfer of learning and thereby influences the impact of learning arrangements on the workplace (Blume, Ford, Baldwin, & Huang, 2010; Bunch, 2007).

---

<sup>1</sup> By universities, we mean both traditional academic universities and universities for applied sciences (*Hogescholen*).

Therefore, if we wish to understand and improve the impact of initial and post-initial teacher education on outcomes in the school, we must examine how variations in the design and context of learning arrangements for teachers influence this impact within the school.

This study aimed to improve our understanding of the relationship between post-initial teacher development and its impact in the workplace by examining different arrangements between universities and schools in the Netherlands. To narrow the scope of our research, we limited our focus to learning related to teacher leadership. Teacher leadership is understood to be the process by which teachers provide direction and exert influence on their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement. Many studies on teacher development focus on development related to the individual pedagogical and subject-focused interactions that teachers have with pupils. In this research study, the focus shifts towards teacher development related to the general professional roles of teachers as innovators and researchers of their practice and as collaborators with and supporters of other teachers. The studies composing this research project examined post-initial teacher development in different contexts and with different relationships between universities and schools. Through these studies, we tried to identify how post-initial learning arrangements contribute both to the development of teacher leadership competences and to school development; we also attempted to identify which factors in the design of the learning arrangement play a role in this development.

In this introduction, we will present the general theoretical and contextual background of this research project. The theoretical background addresses the professionalism of teachers, the leadership of teachers, designs and contexts for teacher development, and the dynamics and boundaries between universities and schools. The contextual background covers recent policies and initiatives on teacher development in the Netherlands, with a focus on teacher inquiry, post-initial Master's programs for teachers and the professional autonomy of teachers.

Based on this theoretical and contextual background, we present the problem statement and the research questions for this research project. We end this introduction with an outline of the overall structure of this book.

## 2. Theoretical background

### 2.1 The primary and secondary roles of teachers

Formal quality descriptions for teachers are primarily focused on basic competences in the teaching and learning process (Finnish Institute for Educational Research, 2009; Onderwijscoöperatie, 2012; Snoek et al., 2009). Within teacher education curricula in Europe, pedagogical competences, subject expertise, and the integration of theory and practice in teaching are

considered to be highly important. Much less importance is given to skills and competences with respect to continuing education and lifelong learning, quality assurance, and leadership (Finnish Institute for Educational Research, 2009, p. 79-80). However, in the debates on the roles of schools and teachers in society, the ambitions and expectations are broader. Teachers are expected to be open and responsive not only to the needs of their pupils/students and parents but also to the needs of future employers, politicians, and society in general. Teachers are expected to translate these needs into educational arrangements and to implement them in their curricula, to collaborate with colleagues, and to engage the wider community in setting objectives and designing teaching and learning arrangements. Teachers are expected to account for the quality and outcomes of their performance, to justify their activities through evidence from educational research, and to be role models for their students with respect to transversal competences such as entrepreneurship, lifelong learning, engagement in civil society, etc. These expectations exceed minimum standards for teacher education programs as they are formulated in many countries, which focus on the primary role of teachers in their classrooms. Teachers are asked to take on a secondary role in the sense of taking responsibility for improving their practice based on a careful analysis of issues and dilemmas, inspired by research on teaching and learning, and in close collaboration with their colleagues and stakeholders outside the school. This broader professional role of teachers is also recognized in the TALIS survey on the professional development arrangements of teachers:

*'This additional emphasis on secondary roles is also promoted as part of the modernisation of the teaching profession. They include teachers as researchers, as receivers of feedback from colleagues, as innovators, as active colleagues, as collaborators of principals, and as manifesting what is sometimes called "teacher leadership".(...) These two dimensions – professional development to stimulate the primary process of teaching and learning and professional development in terms of new secondary roles in schools – provide alternative scenarios for prioritising the content of continuous professional development.'* (Scheerens, 2010, p. 191)

## 2.2 Teacher leadership

Teachers who take on such secondary roles may be considered to be teacher leaders within their schools (Frost & Harris, 2003; Hulsbos, Andersen, Kessels, & Wassink, 2012; Scheerens, 2010) who *'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, pp. 287–288).

Teacher leadership is not a clearly defined concept, and definitions that are used often reflect different stakeholder agendas of policy makers, administrators and teachers themselves. As a result, appeals to strengthen teacher leadership might be based on various ambitions related to the expanding expectations and responsibilities of teachers, growing pressure

for formal and public accountability, the activism expected of teachers, expectations with respect to decentralized school reform, ambitions to increase the status of teachers, or ambitions to change existing hierarchies within schools (Harris, 2007; Little, 2003; Sachs, 2003).

Within this study, the term 'teacher leader' implies an active and responsible role that exceeds the level of the individual teacher acting in his or her classroom, adding activities related to influencing and inspiring colleagues and the school as a whole. The identification of 'leaders' also implies the existence of 'followers' (DeRue & Ashford, 2010) who are influenced or supported by the 'leaders'. The division into the roles of leaders and followers may be fixed through formal leadership positions that are mandated or delegated to particular experienced or accomplished teachers (Harris, 2007; MacBeath, 2009; Yukl, 1999). However, the relationship between 'leaders' and 'followers' may also be dynamic when each teacher is recognized as having the potential to exercise leadership as part of his or her role, when leadership is shared and distributed between all teaching staff, and when the roles of leader and follower may shift over time (Frost, 2012; Kessels, 2012; Lambert, 2002). Spillane (2006) identified this dynamic interaction between leaders, followers and the contextual situation as 'leadership practice'.

Several authors on teacher leadership emphasize the connection between teacher leadership and involvement in research activities in schools (Harris & Muijs, 2005; Lieberman, Saxl, & Miles, 2000; Murphy, 2005). Involvement in research is considered to be one of the crosscutting activities of teacher leaders; it not only leads to a deeper understanding of pupil learning and how to support this learning but also leads to better preparation as agents of change within schools. In publications on teacher professionalism, for this involvement in research a wide variety of terms is used: action research, teacher inquiry, practitioner inquiry, self-study, teacher research, and participation in professional learning communities.

Within this research project, we understand the concept of teacher leadership as *the process by which teachers, individually or collectively, through development, inspiration and research, provide direction and exert influence on their colleagues, school leaders, and other school community members to improve teaching and learning practices that enhance student learning and achievement.*

Teacher leadership demands specific skills and knowledge related to building trust with colleagues, understanding organizational context and dynamics, managing change processes, supporting adult learning, designing curricula, and participating in action research (Katzenmeyer & Moller, 2009; Lieberman et al., 2000). Initial teacher education programs hardly prepare teachers for leadership roles, leaving many teachers ill-prepared to exercise leadership outside of their classrooms. Several studies emphasize the need to build teacher leadership, stressing that its development requires new competencies taught through explicit learning arrangements and a learning process in which

frames of reference are adapted and new mental models of teacher roles and new identities are created (Frost & Harris, 2003; Murphy, 2005; Ross et al., 2011).

### 2.3 Contexts for teacher development

Because teachers are the key to enhancing learning in schools, it is essential that they have access to extensive learning opportunities (Bransford, Brown, & Cocking, 2000). As mentioned above, developing and exercising leadership require a learning process. We define this learning process as *'the process by which, alone or with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching and by which they critically acquire and develop the knowledge, skills, planning and practice to work with children, young people and colleagues through each phase of their teaching lives'* (Day, 1999, p. 4). This definition emphasizes that teacher development may encompass both a moral, attitudinal dimension and a technical, practical dimension. If we want teachers to develop their leadership qualities, it is important to identify which learning arrangements are effective in supporting the development of teacher leadership.

Within initial teacher education, the dominant learning arrangement is one in which the university defines the goals and assessment criteria and designs the learning activities. Schools are used as places for practice, and mentors in school are in some cases considered to be fellow teacher educators. The focus of the curriculum is on developing the basic competences needed to be an effective teacher. The program is primarily the result of rational design. Inspired by socio-constructive notions, program designs aim to stimulate students to develop and construct their teacher identity and teacher competences in interaction with teacher educators and peer-students, building on previous knowledge and experiences and mental models. Inspired by situated and experiential learning notions, program designs aim to challenge students to give meaning to and develop theories and taxonomies in relation to concrete social contexts in schools. Inspired by cognitivist notions, curriculum designs aim to develop and assess a general knowledge base of theories and taxonomies on subject matter and on teaching and learning.

In contrast, the designs for post-initial teacher development are mostly informal. In the Netherlands, post-initial teacher development is considered to be a shared responsibility between the individual teacher and the school leader as the employer. Learning arrangements could be individual or collegial, teacher-driven or school-driven, and formal-accredited or non-formal-non-accredited. Many schools have developed professional development plans in which (mostly non-accredited) school-wide professional development arrangements are planned in connection with the change agenda or quality agenda of the school, using internal or external expertise. Such designs for post-initial teacher development may be characterized as 'school-centered'. These school-based professional development arrangements meet many of the criteria for effective professional development designs (Van Veen, Zwart,

Meirink, & Verloop, 2010). They are characterized by a close relationship to the daily context and daily practice of teachers and to the wider process of school development. They are based on a collective approach through which teachers can collaborate and share experiences, and they create opportunities to build on the experiences of teachers and to involve teachers in defining or influencing the aims of the professional development design.

However, most of these school-based professional development arrangements are limited in their intensity and duration. These arrangements appear to be more focused on skills and competences than on explicit theoretical knowledge and often lack formal criteria and procedures to assess learning outcomes. They have a limited relationship to the subjects teachers are teaching (especially in school-wide professional development arrangements in secondary schools) and have limited input from university experts and from evidence-based methods. It is unclear to what extent these professional development arrangements are based on an explicit theory of improvement or integrate an understanding of how teacher development, improvement of practice, and learning outcomes of pupils are related (Van Veen et al., 2010).

Recently, government policies have stimulated the participation of teachers in formal post-initial qualification programs, e.g., programs leading to a Master's degree. Such programs are more or less similar to initial programs in that the university leads by defining the goals and assessment criteria and by designing the learning activities. The content of the program is primarily focused on academic and evidence-based content, which is often not directly connected to the local context or the change agenda of the school. Instead, schools are used as places to practice the competences and skills that are learned in the Master's program. These programs are of high intensity and have a long duration. There is no collective approach, as mostly individual teachers apply. Such designs for post-initial teacher development can be characterized as 'university-centered'.

#### **2.4 Organizational factors influencing the impact of teacher development**

To evaluate the effectiveness of different arrangements for teacher development, it is not sufficient to examine the competence levels of teachers; evaluations must also examine the extent to which these competences impact the workplace. In other words, research on arrangements for teacher development must consider a complex path connecting different levels of manifestation: the specific design for a learning arrangement; the expected outcomes for teacher knowledge, competences, attitudes and beliefs; the expected impact on teacher roles and performance within the school practice; and the expected changes in learning outcomes for the pupils (or, in the case of teacher leadership, the learning outcomes of colleagues and their pupils) (Desimone, 2009; Kirkpatrick, 1998; Van Veen et al., 2010).

This transfer of learning cannot be considered the transportation of knowledge from one location to another (Cobb & Bowers, 1999). Nor is it a simple linear causal process from learning arrangement to competence improvement to the



application of these competences to improved results. The causal relations between the levels can be questioned, and the intervening variables that affect outcomes must be explicitly considered (Holton III, 1996). In the literature on learning transfer, three negotiating elements are identified that impact learning transfer and thus the effect that learning arrangements have on outcomes for a company or organization (Baldwin & Ford, 1988; Boshuizen, 2003; Gielen, Streumer, & Van der Klink, 2004; Van der Klink, 2012). Not only do the learning design factors (e.g., objectives, methods and opportunities for practice) and trainee characteristics impact the actual application of learned competences or skills at the workplace, but work environment factors also play an essential role in application in the workplace. Work environment factors address the characteristics of the work place and the extent to which the organizational climate invites and supports teachers to apply learned competences and skills. These elements in the social support structure of the work environment are indicated by the term 'organizational transfer climate' (Hatala & Fleming, 2007; Lim & Morris, 2006; Rouiller & Goldstein, 1993).

This understanding of the importance of the organizational transfer climate implies that creating favorable conditions for the effective application of newly developed leadership competences in schools is the responsibility of not only the program designers at the university but also the key stakeholders in the school. Studies in human resources have addressed this issue by emphasizing the 'corporate curriculum', the organization's perspective on a learning design that aims for mutual effects at the individual and organizational behavior levels (Kessels, 1993). Kessels draws attention to 'external curriculum consistency': *'the homogeneity of the notions of parties involved on what the problem is and how it can be solved by means of educational provisions'* (Kessels, 1993, p. 27). Such consistency between the change agenda of the school and the aims of the learning arrangements for teachers can create the conditions for change processes in which learning of individuals and innovation of dynamic systems merge (Boonstra, 2000). In the context of a Master's program in teacher leadership, curriculum consistency implies a shared perception of the curriculum's aims and design among school management and supervisors, participants and university course designers and teachers.

## 2.5 Boundary learning in boundary zones

Creating this shared perception and external curriculum consistency in the context of learning arrangements for teacher leadership demands cooperation between representatives who are part of two separate activity systems (Engeström, 2001), the school and the university, which are separated by boundaries; see figure 1.1 (Engeström, 1987; Tsui & Law, 2007; Wenger, 1998, Yamagata-Lynch & Haudenschild, 2009). These activity systems are characterized by different subjects (school teachers vs. university teachers), different objects (pupils vs. participants in the teacher education program), and intended outcomes (exam results of pupils vs. qualification of teachers). The working relationships within each activity system are characterized by different

mediating tools (lessons and tests vs. research projects, assignments and assessments), rules (school rules, protocols and exam demands vs. university rules, research criteria and qualification demands), and community (teaching staff vs. team of teacher educators). Finally, each activity system features differences with respect to division of labor.

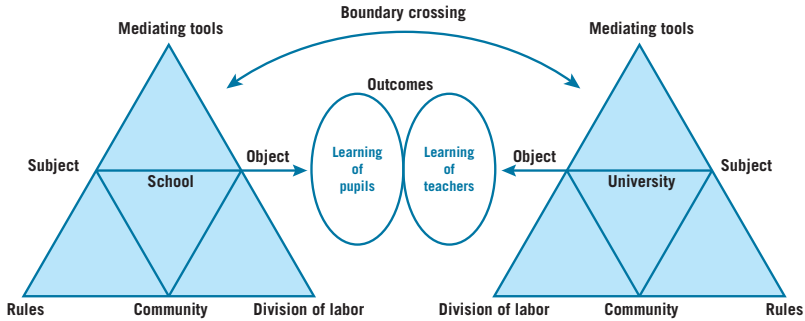


Figure 1.1: School and university as separate activity systems.

In (initial and post-initial) teacher education, these two activity systems must interact. Interaction demands a process of boundary crossing: school teachers and university teachers engage in activities in the other activity system. This notion of boundary crossing may be understood in two ways. A practical and often also physical form of boundary crossing occurs when the school teacher involved in teacher development programs participates in the academic world of the university or when the university teacher engaged in school-based CPD activities crosses the boundaries by engaging in the practical world of the school (Tsui & Law, 2007). A mental form of boundary crossing with respects to concepts and ideas occurs when teachers apply theories or skills learned in academic or training settings within the day-to-day context of the school or when they bring daily issues and dilemmas from school to the university for further analysis or study.

Because both activity systems have a different focus, different concerns and are based on different norms, their permeability may be limited. The process of boundary crossing between these activity systems cannot be taken for granted, as each of *'these multiple contexts demand and afford different, complementary, but also conflicting tools, rules and patterns of social interaction. Criteria of expert knowledge and skills are different in the various contexts. Experts face the challenge of negotiating and combining ingredients from different contexts to achieve hybrid systems.'* (Engeström, Engeström, & Kärkkäinen, 1995, p. 320).

Effective boundary crossing between two activity systems will impact both activity systems (Miedema & Stam, 2008). The space in which both activity systems meet can be considered the 'boundary zone' (Miedema & Stam, 2008; Tsui &

Law, 2007) or ‘third space’ (Gutiérrez, Baquedano-López, & Tejada, 1999), a ‘no man’s land’ (Miedema & Stam, 2008) where subjects, objects, tools, rules, communities and divisions of labor from the two activity systems interact, are reflected upon and are the object of professional dialogue. Examples of such a boundary zone might be a post-initial Master’s program (Tsui & Law, 2007) or a learning community of teachers and researchers, working together on research projects in schools (Gorodetsky & Barak, 2008). Akkerman and Bakker (2011) indicate that within such boundary zones, boundary objects may have a specific function in bridging intersecting activity systems and facilitating boundary learning. Such boundary objects within the context of a Master’s program could be concrete research projects, assignments, or lectures. Akkerman and Bakker showed that the new understandings developed in such boundary zones and through such boundary objects can result in different types of boundary learning with different impacts on the activity systems and participants. However, little is known about the conditions related to the boundary zone and the original activity systems that will influence this boundary learning.

In the context of this research project, we will examine different post-initial learning arrangements focused on teacher leadership and their impact at the workplace and how the organizational transfer climate and boundary activities bridging the activity systems of schools and universities hinder or strengthen this impact.

### 3. Contextual background

#### 3.1 The development of an extended profession in the Netherlands

As indicated, the context of this research project is post-initial teacher development in the Netherlands. The studies are situated in a dynamic policy context in which national and local policies attempt to stimulate teacher quality, teacher development, and teacher leadership.

Starting in 1993, a governmental policy focusing on improving the professional quality and status of teachers and on reducing the professional isolation of teachers has emerged (Commissie Toekomst Leraarschap, 1993; Ministerie van OCW, 2005a; Ministerie van OCW, 2007; Ministerie van OCW, 2011; Rinnooy Kan, 2007). The primary elements of this policy are as follows:

- The development of a new legislative framework for the teaching profession (Ministerie van OCW, 2004), including professional profiles and standards for teachers (Ministerie van OCW, 2005b);
- The development of coherent human resource policies in schools, including the involvement of schools in initial teacher education;
- The introduction of profile levels connected to differentiated salary scales, thus creating career paths for teachers;
- The introduction of a bursary system for teachers to engage in post-initial Master’s programs (*‘Lerarenbeurs’*).

Recent policy initiatives include the following:

- The creation of a professional body to take responsibility for the quality of the profession by developing professional standards and a professional register (*'Onderwijscoöperatie'*);
- The introduction of a professional register for teachers (*'Registerleraar.nl'*) in which teachers can document their ongoing professional development.

In the Dutch policy context, the focus on teacher leadership may be recognized in policy initiatives stimulating teacher inquiry in schools and post-initial master programs and may be seen in debates on the professional autonomy (*'professionele ruimte'*) of teachers.

### 3.2 Teacher inquiry in schools

In 2005, the Dutch Ministry of Education, Culture & Science (OCW) launched a program to support schools that, as partner schools to teacher education institutes (*'opleidingsschool'*), had the ambition to combine their engagement in the initial education of teachers with school development, innovation, and research. These schools could apply for the status of academic development school (*'academische opleidingsschool'*)<sup>2</sup>. An academic development school is more or less similar to the concept of a Professional Development School (PDS) (Holmes Group, 1990) and is defined by the Ministry as *'a school that combines their involvement in the (initial) education of teachers with a practice-oriented research and innovation component'* (Ministerie van OCW, 2005c). In such schools, teachers may develop a research role to improve their teaching practice. Based on a school-wide research plan, teachers and student teachers participate in research projects that aim to improve teaching practice. These research projects are often designed and conducted in close cooperation with teacher education institutes and research institutes (KPMG, 2008). Stimulated by this program, the attention on the role of teachers in practice-oriented research has expanded (Broekkamp & Van Hout-Wolters, 2007; Onderwijsraad, 2011b; Snoek & Van den Herik, 2012; Vrijnsen-de Corte, 2012; Zwart, Van Veen, & Meirink, 2012). Several schools have engaged teachers and school leaders in research projects, strongly supported by teacher education institutes (see, for example, Bruin, 2012; Krüger, 2010; Sengers, Richter, Wilshaus, & Van der Linden, 2009; Snoek & Van den Herik, 2012; Van Riessen, 2010; Van Wijk, 2013).

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<sup>2</sup> In international research publications on developments in teacher education in the Netherlands, the Dutch terms *'opleidingsschool'* and *'academische opleidingsschool'* are translated in various ways. For example, Van Velzen (2013) uses the term 'partner school' within school-university partnerships, Vrijnsen-de Corte (2012) remains with the international term Professional Development School. Hamerness, van Tartwijk and Snoek (2012) use the term 'training school'. Because the term 'training' is nationally and internationally considered to be too narrow to be used within the context of teacher education and the term 'partner school' only indicates a relational aspect and gives no information about the actual focus, we will use the term 'development school', and we differentiate between 'teacher development schools', which combine their focus on pupil learning with a focus on the (initial and post-initial) teacher development (*opleidingsschool*), and 'academic development schools', which combine a focus on teacher development with a focus on school development and research (*academische opleidingsschool*).

### 3.3 Post-initial Master's programs for teachers

The introduction of the Bologna model for higher education has led to several European developments with respect to Master's level teachers (Snoek, 2009a). Within the Netherlands, these developments are reflected in impulses to develop post-initial Master's programs within the education sector. The Ministry (Landelijk Platform Beroepen in het Onderwijs, 2006; Ministerie van OCW, 2005a; Ministerie van OCW, 2007; Ministerie van OCW, 2011), the Dutch Education Council (Onderwijsraad, 2011a; Onderwijsraad, 2013a), higher education institutions (HBO-raad, 2006), and the unions (Algemene Onderwijsbond, 2006) consider Master's programs to be an opportunity to increase the quality and status of teachers.

Next to existing Master's programs preparing teachers to work in upper secondary education or in special needs education, new Master's programs have been developed that focus on extended professionalism and teacher leadership (Snoek, 2009b). These programs have been initiated by universities for applied sciences (HBO-raad, 2006; Snoek & Teune, 2006) and by school boards for secondary schools (NIME, 2008; Snoek & Galjaard, 2011).

To stimulate the participation of teachers in these post-initial Master's programs, the Ministry of Education, Culture & Science initiated a bursary system through which teachers working in school can apply for grants covering course fees and replacement costs. The bursary system has become enormously popular; from 2008 to 2012, 18,000 teachers applied for funding for a Master's program (Ministerie van OCW, 2012).

### 3.4 Professional autonomy of teachers

During 2005-2010, many teachers complained that they had lost a sense of ownership of their daily work. Particularly in secondary and vocational schools, many teachers felt that they were victims of government-initiated curriculum innovation programs or of school leaders who, due to their increased accountability towards educational outcomes, interfered more directly in the teaching and learning process in schools (Onderwijsraad, 2007; Snoek & Krüger, 2007; Verbrugge & Verbrugge-Breeuwsmma, 2006). In response to this feeling of de-professionalization, several initiatives were started to strengthen professional responsibility and sense of ownership of teachers towards the process of teaching and learning (Ministerie van OCW, 2011).

To engage teachers more intensively in school development processes, school leaders are encouraged to involve them more explicitly in decisions concerning curriculum and teaching. In national policy making on teaching and the teaching profession, teachers are more intensively engaged as key stakeholders. To strengthen the voice of teachers, the Ministry has supported the development of a national professional body for the teaching profession (the *Onderwijscoöperatie*). This professional body has a leading role in (re)formulating professional standards for teachers and in establishing a professional register for teachers connected to a minimum required amount of professional development activities. This professional register is intended to be an instrument that accounts for the

professional quality of its members. In addition, both the Ministry and the *Onderwijscoöperatie* stimulate peer review as an instrument of collaborative learning in schools.

This appeal for stronger professional involvement, ownership, and engagement demands a professional culture in schools, where school leaders and teachers share the same goals and work collaboratively to reach these goals (Onderwijsraad, 2007). At the same time, teachers are expected to include extended professionalism (Snoek & Dietze, 2007), leadership (Kessels, 2012), and moral dimensions in their professionalism (Onderwijsraad, 2013b).

These three developments in educational policy in the Netherlands show a strong commitment to (increasing) teacher leadership, in terms of leading innovations in curriculum and teaching, collaborating with and supporting colleagues, and engaging in research. At the same time, these developments create interesting contexts in which teachers' leadership development occurs: in academic development schools and post-initial Master's programs.

#### **4. Research questions and design for this research project**

As described above, there is increased attention on teacher leadership in the Netherlands. The government, school leaders and professional bodies of teachers are aware that strengthening leadership requires learning arrangements that support the development of teacher leadership competences. In the past few years, several of these learning arrangements have been developed that vary in their design: in academic development schools, for instance, the focus is on teacher inquiry, and the activity system of the school dominates the design of the learning arrangements; while in Master's programs in which the primary focus is on teacher leadership, the activity system of the university dominates the design of the learning arrangements.

Little research has been performed on the impact of such learning environments on school development in terms of work and leadership practices in schools. In addition, there is little research on designs that explicitly attempt to bridge the boundaries between the two activity systems and attempt to create external curriculum consistency.

With this research project, we aimed to provide insight into

*the extent to and the way in which post-initial learning arrangements that focus on teacher leadership and vary in their embedding in the work environment contribute to teacher and school development.*

To achieve this aim, we answered four research questions:

1. What trends in society and education influence the design of learning arrangements for teachers and what is their impact on the dynamics between schools and universities?

2. To what extent and in what way do learning arrangements within an academic development school contribute to teacher and school development, and which aspects of school culture and school organization play a role in this contribution?
3. To what extent and in what way does a formal Master's program for teacher leadership contribute to teacher development, to new leadership roles for teachers, and to school development, and which elements within the organizational transfer climate of the school stimulate or hinder these developments?
4. To what extent and in what way can an educational design that focuses on boundary crossing between the activity systems of the school and the university strengthen the impact of a Master's program for teacher leadership on teacher development, on new leadership roles for teachers, and on school development?

The aim of the research project was threefold. The research project aimed to contribute to the knowledge on teacher leadership by producing insights into the process of and conditions for developing and implementing teacher leadership. Second, the research project aimed to contribute to the knowledge on effective arrangements for teacher development by producing insights into the design elements that strengthen the external curriculum consistency of these arrangements and increase the impact in terms of school development. Third, the research project aimed to contribute to the practice of teacher leadership by developing tools that may help to strengthen this leadership. Therefore, this research study focused on concrete contexts in which teacher leadership is being developed and in which teachers try to implement this leadership.

By focusing on the stories and narratives of teachers in these specific contexts, this research project attempted to gain insights into the underlying process of leadership development and implementation in schools (Hulsbos et al., 2012; Muijs & Harris, 2006; Ross et al., 2011) and into the dynamics of individual, relational, and organizational factors (DeRue & Ashford, 2010). Through the focus on stories and narratives, the studies recognized that teachers are not just objects for leadership programs but are active participants that reflect, develop, and give meaning to their leadership practice and who are active, thinking, and knowing subjects (Cochran-Smith & Lytle, 1999).

The empirical studies included in this research project were therefore designed as qualitative case studies, comparing different settings and contexts for developing teacher leadership. Through case studies, we recognized that contexts are unique and dynamic, and we tried to understand them in their holistic complexity (Sturman, 1999). Case studies can help to understand how ideas and abstract principles fit together in concrete contexts (Nisbet & Watt, 1984, pp. 72-73) using analytic rather than statistical generalization. This can result in a better understanding of other similar cases, phenomena, and situations (Robson, 2002).

In our study, we considered the general design of the arrangement for leadership development as a case. However, within each of the three cases we studied, part of the context differs, as the participants within each case came from different schools with different organizational conditions and cultures, or were part of different teams with different supervisors. Through this within-case-variation (Gerring, 2004), we obtained insight into the factors that will impact the process of teacher leadership development and implementation. Because these case studies are particularistic and descriptive, we aimed not for generalization (Merriam, 1998) but aimed to rethink the process of teacher leadership development and implementation; to gain a deeper understanding of the relation between professional development and school development; and to contribute to the development of new designs for leadership development and implementation that are effective for teachers and schools.

The case studies are elaborated through individual interviews with participants in the various arrangements for leadership development, through interviews with their supervisors, through observations of meetings and discussions and through focus group meetings (Morgan, 1988). By using these instruments, we both captured the multivoicedness of the contexts and created triangulation. In this way, we aimed to create a research design that is meaningful, closely connected to the daily practice of teacher leaders, developmental, dynamic, and participative (Hulsbos et al., 2012).

In recent years, I have not only been involved in these cases as a researcher; in the second and third case, I was also a designer of the Master's program curriculum and served as an expert supporting the Master's students and the university teachers; in the third case, I was a participant of the monitoring group. This involvement is part of the strength of the research design because the outcomes of the research within the second case were fed into the redesign process, which created the context for the third case. In addition, my involvement gave me the opportunity to follow the process within these two cases from close by and allowed me easy access to participants, supervisors, and the strategic management of the schools. However, this dual involvement as a designer/teacher educator and as a researcher carries the risk of bias and a lack of objectivity, caused by the wish to prove the value of the design. Therefore, to avoid a possible biased perspective as a researcher, several measures are taken. In the second case study, a member check was used, and three independent experts conducted a check on the analysis of the interviews. In the third case, a separate independent researcher was involved in the analysis of the interviews and the formulation of the conclusions. The focus group sessions at each school functioned as additional member checks.



## 5. Outline of this research project

The above research questions will be answered in the next chapters. Chapters 2, 3, 4, and 5 represent the core of this research project, as each chapter addresses one of the research questions. The research chapters alternate with intermezzos, which reflect on the previous research chapter and introduce the next research chapter.

*Chapter 2* focuses on the trends in society and education that influence the design of learning arrangements for teachers; it also focuses on the possible impact that these trends might have on the dynamics between schools and universities. The research question is answered by analyzing 48 scenario documents on the future of education or on teacher education. Through this analysis, a set of unpredictable key factors is identified that must be considered when addressing the future of teacher education and teacher development. The analysis also revealed the roles of the three key stakeholders: governments, schools, and universities. Based on the interaction between these different stakeholders in each scenario document, four potential prototypical futures emerged for teacher education: a market oriented scenario; a bureaucratic scenario; a scenario dominated by professional groups of teachers and teacher educators; and a scenario dominated by boundary crossing networks. These four scenarios were analyzed using the concepts of activity systems and boundary crossing (see figure 1.2).

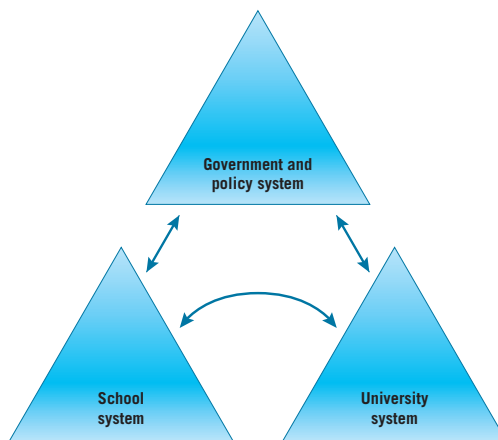


Figure 1.2: Three activity systems involved in learning arrangements for teachers

The analysis of the scenario documents reveals that the future for teacher education is largely defined by two factors: the extent to which activity systems are open to boundary crossing and the willingness of key stakeholders to cross or remove institutional boundaries.

The *first Intermezzo* following Chapter 2, will reflect on the extent to which the four prototypical scenarios may be recognized within the Dutch context for teacher development. Based on this reflection, the three different contexts for developing teacher leadership are described; these will be the focus of the empirical case studies in Chapters 3, 4, and 5.

In *Chapter 3*, the first case study is presented, focusing on the academic development school as a context and arrangement for teacher development. Within the academic development schools that are the context for this study, the design of the learning arrangement for teachers was based on experiential learning and almost entirely arranged within the context of the school, with limited support from the university (see figure 1.3).

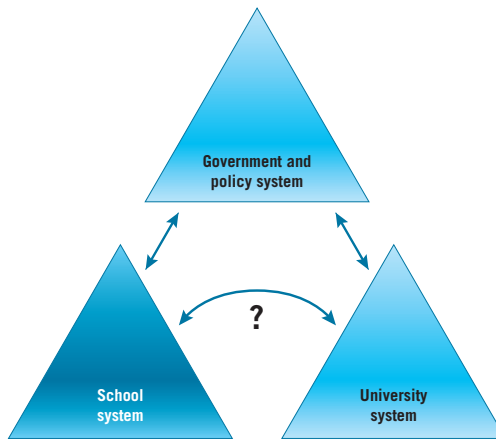


Figure 1.3: The schools as the dominant system in academic development schools: a school-centered learning arrangement

The study showed that the engagement of teachers in research projects within the school can contribute to development at three levels: that of individual teachers, that of teams of teachers and that of the school as a whole. The study also identified important conditions within the school that facilitate effective professional development of teachers and stimulate or hinder opportunities for teachers to exert their leadership within the school.

In the *second Intermezzo* following Chapter 3, the second context for developing teacher leadership will be introduced: accredited designs in terms of formal Master's programs focusing on teacher leadership. The context and the design of the specific Master's program that is the focus of the second and third case study will be elaborated.

The second case study, presented in *Chapter 4*, focused on an accredited

Master's program specializing in teacher leadership. The design of this program was defined by the university and was based on quality criteria defined by the government with limited involvement of the school (see figure 1.4).

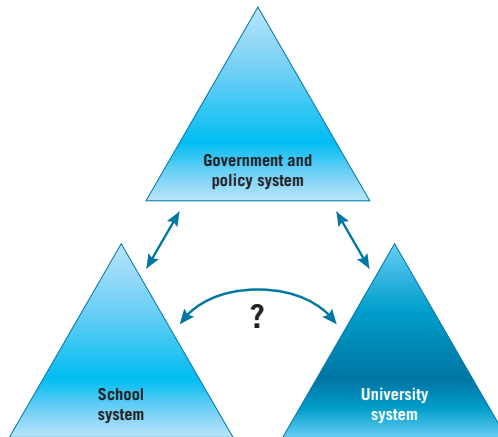


Figure 1.4: The university as the dominant activity system in Master's programs for teachers: A university-centered learning arrangement

The objective of this study was to investigate the extent to which the design of the program supports the development of teacher leadership and the opportunity to assume leadership roles in schools. Because Chapter 3 emphasized the importance of organizational and cultural conditions in schools, special attention was given to the elements of the organizational transfer climate in schools that are considered to be critical for enhancing or hindering the use of teacher leadership competences and their impact on school development.

*The third intermezzo* following Chapter 4 will elaborate how the findings of the second case study stimulated a rethinking of the design of the Master's program. This rethinking resulted in a redesign of the program, focused on strengthening the boundary crossings between university and school, thereby stimulating a stronger external consistency in the learning arrangement that is based on the strategic alignment between the aims of the university and the school. The Master's program is understood to be a catalyst not only at the level of the participants enrolled in the Master's program but also for the school as a whole and for the university.

*Chapter 5* focuses on this redesigned Master's program and the extent to which this design strengthened the impact of a Master's program for teacher leadership. Within the design of this Master's program, the activity systems of both school and university were connected through various forms of boundary crossing (figure 1.5).

This study examined how the arrangements that aim to support boundary crossing between school and university support teacher leaders in assuming leadership roles within the school and explored the extent to which these roles impact school development.

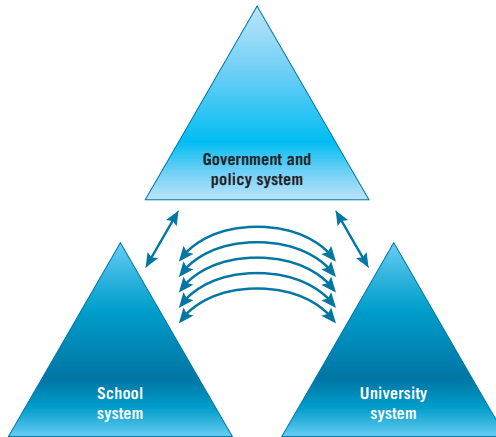


Figure 1.5: A design for teacher development in which school and university are connected through boundary crossing: a partnership-centered learning arrangement

Finally, in *Chapter 6*, conclusions are drawn, connecting the three case studies. Additionally, the implications are discussed for the designs and arrangements of leadership development, for school structures and cultures, for universities, for ministries and for the dynamics between these activity systems.

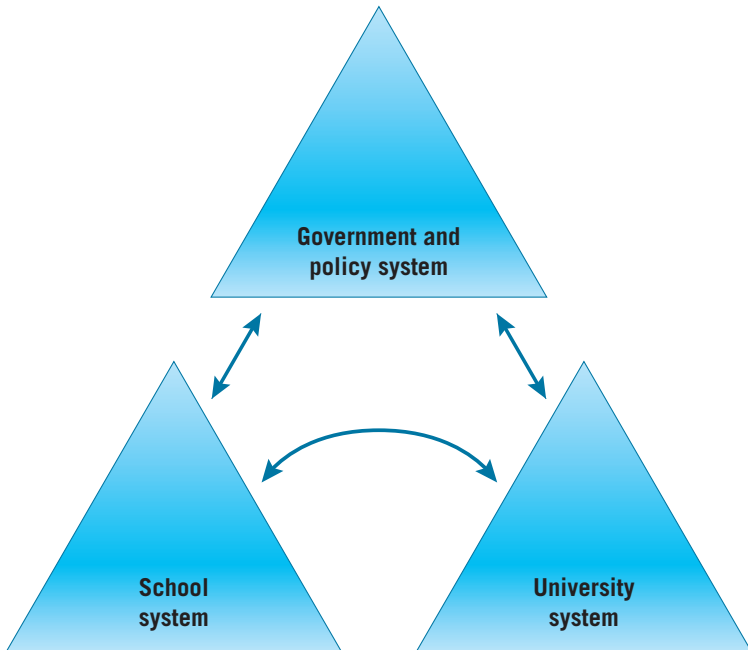
Although the structure of this book might suggest otherwise, the research study has not been a simple linear and neatly planned process, with the timeline of activities directly reflected in the order of the pages and chapters. The studies that make up this research project have been published over time in international peer-reviewed journals and are closely connected to my involvement in teacher education and in national and European debates on the teaching profession over the past years. Therefore, the research project documented in this book may also be considered a portfolio, documenting a personal learning process. As this learning process extended over several years, it is inevitable and necessary that the progression of studies and published papers reflects this learning process.

The theoretical framework that is presented in this chapter has grown over the years. Starting with a general understanding of teacher development and its impact on schools (Chapter 3), a more elaborate notion of teacher leadership and of transfer of learning between the Master's program and the workplace was developed (Chapter 4). The last stage of the research process resulted in a clearer understanding of the boundary crossing processes and their

dynamics, which could be included in the final study (Chapter 5). Although these theoretical notions are touched upon in this first chapter, they will be elaborated more extensively in a step-by-step fashion in the following chapters.



# 2







## CHAPTER 2

# From splendid isolation to crossed boundaries? The futures of teacher education in the light of activity theory.<sup>3</sup>

*Learning arrangements for teachers are the result of a complex interaction between several stakeholders. When we want to study these learning arrangements, their design, their contexts and the way they might develop in the near future, we need to take into account that interaction and its dynamics. Through the analysis of 48 scenario documents on the future of education or teacher education, a set of unpredictable key factors are identified that have to be taken into account when addressing the future of teacher education. From the analysis, four main prototypical future scenarios emerged, defining possible contexts for pre- and in-service teacher development. We analyzed these four scenarios using the concepts of activity systems, boundary objects, and boundary crossing. This revealed that the extent to which activity systems are open to boundary crossing and are willing to remove institutional boundaries, will largely define the future that lies ahead for teacher education. Future scenarios in themselves can play a role as boundary objects that facilitate the dialogue and boundary crossing between these activity systems.*

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<sup>3</sup> This chapter is based on Snoek, M. (2013). From splendid isolation to crossed boundaries? The futures of teacher education in the light of activity theory. *Teacher Development*, 17(3), 307-321.

## 1. Introduction

When we want to study learning arrangements for teachers and the way they might develop, we need to understand which trends in society and education will influence the design of these learning arrangements and how these trends might impact the relation between schools and universities.

In many sectors in society, demands and arrangements regarding professional quality and professional development are negotiated by professional groups, their employers and providers of learning activities. However, when it comes to the teaching profession, there is another dynamics as governments feel a special responsibility towards the preparation of teachers (Snoek & Žogla, 2009). The quality of education is considered a matter of national concern and this quality is strongly related to the quality of the teaching force (Hattie, 2009). As a result, ministries of education in many countries feel a direct responsibility for the quality of the teaching force, which justifies a strong interest in teacher education and the identification of teacher development as a 'policy problem' (Bruner, 1996; Cochran-Smith & Fries, 2005). This responsibility has been translated into numerous policy initiatives and government-initiated innovation programmes focused on improving the quality of (pre-service and in-service) teacher education, through prescriptions regarding outcomes (standards), curriculum, conditions or structures. Examples of such policy initiatives can be found both on a transnational level (see e.g. Snoek, Uzerli and Schratz (2008)) and on a national level, with examples like Poland (Zdybel, Bogucki, & Głodzik, 2011), Sweden (Player-Koro, 2012), the United States (Sedlak, 2008), and the Netherlands (Snoek, 2011b).

Such policy plans for teacher education are often formulated in visionary terms like Obama's 'Our future, our teachers' (US Department of Education, 2011), the Dutch action plan of the teaching profession in 2020 *Actieplan Leraar2020* (Ministerie van OCW, 2011), Teaching Scotland's Future (Donaldson, 2011), and Austria's proposal for the future of the teaching profession and a new design for the teacher education system '*LehrerInnenbildung NEU – die Zukunft der pädagogischen Berufe*' (Härtel et al., 2010). These titles suggest that through these policy plans, governments want to shape new futures for education in their countries. Such policy plans suggest that to create that future, it is essential to develop and improve the education of teachers. If we want to have an indication of how arrangements for teacher development will look like in the coming years, we could take such policy plans (those of either governments or stakeholder groups, like teacher education institutes, teacher educators, teacher unions, etc.) as a starting point. However, the nature of these documents confronts us with two fundamental problems.

The first problem is that such policy documents describe a single desirable future, which leads to the question whether this future is the only and

best future we can imagine. What alternative futures can be imagined and what factors will be decisive in the way that one future will prevail over the other possible futures? This question is fundamental, as short-term thinking seems dominant in the area of education. As the long-term impact of education is fundamental in a society, it is essential to develop future-thinking perspectives to look beyond present problems and constraints, and to develop long-term sustainable policies (OECD, 2007; Snoek, 2003c). In these future-thinking perspectives, the fundamental unpredictability of the future and the possibility of different futures need to be taken into account.

The second problem is that when a desirable future is identified, we are confronted with the question how this future can be realized. The dominant assumption underlying many policy documents is that decision makers can influence the future by measures taken by the government. This rational-central-rule approach (Gunsteren, 1976) is based on the idea that through rational decisions society can be constructed and shaped according to our wishes. This assumption has proven wrong, as illustrated by the long list of ambitious policy plans that follow one upon another in some countries. It disregards the complexity of society and the existence of opposing forces that are striving for different futures. Defining a desired future and taking policy measures toward that future, does not automatically lead to change in complex systems like teacher education. To change teacher education in a specific desired direction, we need to conceptualize how to change current systems in specific, powerful ways (OECD, 2006b).

When we want to study learning arrangements for teachers and the way they might develop, we need to take into account the interaction between different stakeholders, the dynamics that will define this interaction, and its unpredictability. In this chapter we will try to gain a wider understanding of learning arrangements for teachers by looking at trends and development both within education and the wider society, and at the possible impact that these trends might have on the dynamics between schools and universities. In doing so we will have to avoid the problems identified above. We address the first problem by analyzing futures studies in the area of education/ teacher education that take into account the fundamental uncertainty of the future, and present not just one, but several alternative future scenarios. Although several scenario studies address the wider context of education, only a few had a specific focus on teacher education. Through this analysis, we identify key factors that have to be taken into account when shaping the future of teacher education. In this study, scenarios are considered boundary objects that facilitate dialogue between and the change of different activity systems (Bødker & Christiansen, 1997; Lebel, 2010; Pulver & VanDeveer, 2007). Therefore we address the second problem by using the concepts of activity systems, boundary crossing, and boundary objects to reflect on the dynamics of stakeholders and activity systems in shaping the future of teacher education.

## 2. Unpredictable factors and future scenarios

In their analysis of future-focused research, Codd, et al. (2002) conclude that most of the future-oriented research assumes that educational systems might be improved through incremental reforms. According to Codd et al., the studies can generally be characterized by an unquestioning endorsement of the status quo, a lack of imagination, and a lack of critique of current trends. In their analysis, they emphasize the distinction between 'forecasting' leading to future predictions, and 'foresighting' leading to alternative scenarios for the future.

Scenarios are consistent and coherent descriptions of alternative hypothetical futures that reflect different perspectives on past, present, and future developments, and can serve as a basis for action (Van Notten, 2006). They are mostly narrative – in the form of stories that play out in the future – or more descriptive, describing future system characteristics. Alternative scenarios take into account the fact that developments in society are not straightforward.

The scenario method has been widely used in business and the military to plan in situations of high uncertainty (Lebel, 2010) as a tool for strategic decision making or policymaking (OECD, 2006b; Schwartz, 1991; Van der Heijden, 2005). Future scenarios as a tool for strategic thinking in education were first used at the beginning of the 1990s by the Global Business Network (Ogilvy, 1992; Ogilvy, 1995). Their use has since been strongly stimulated by the Schooling for Tomorrow project of the OECD, which resulted in the OECD scenarios (2001) and several follow-up projects (OECD, 2006b). More recently, the scenario method has been considered a powerful tool for awareness raising, dialogue, reflection, and collaborative learning of professionals, like teachers and teacher educators (Benammer, Dale, Poortinga, Schwab, & Snoek, 2006; Laws & McLeod, 2003; OECD, 2007; Snoek, 2005).

As a starting point for developing scenarios, key factors in society are identified that shape the development of society and give meaning to isolated events. These key factors, which in scenario studies are often called 'driving forces', can be found in areas like society, technology, economy, ecology, and politics. These key factors are analyzed and evaluated on their possible impact and their unpredictability (Searce & Fulton, 2004; Snoek, 2003c; Van der Heijden, 2005) using data from the present, for example, through careful analysis of present trends or by Delphi-type studies with panels of experts. Unpredictable key factors with high impact are used to develop alternative futures, which are usually reformulated in terms of a dichotomy or dilemma showing two possible and often opposing directions for the future. One-dimensional scenarios take one unpredictable key factor and present futures in which the impact of that key factor varies in terms of high or low. In most two-dimensional scenarios, two unpredictable key factors are formulated as dilemmas in terms of contrasting or competing values (Quinn & Rohrbaugh, 1983), and are combined in a two-dimensional matrix, typically leading to one or more sets of four quadrants, each representing a scenario. In multi-dimensional scenarios, like the OECD

scenarios, different unpredictable key factors are taken to their extremes and transformed into stories.

As a result, the study of scenarios for the future of teacher education can provide insight into key factors that are important in the area of teacher education today, and into the subjective understanding of the authors of the scenario studies with respect to how these key factors will work out within teacher education tomorrow.

### **3. Activity systems, boundary objects, and boundary crossing**

Scenario studies can show how the future might look like, but they do not conceptualize how systems can be changed or how a most desirable future can be realized. For this we need to understand the dynamics between stakeholders and the systems of which they are part. According to Bødker and Christiansen (1997), Pulver and VanDeveer (2007) and Lebel (2010), the notion of boundary objects provides a useful starting point for examining the role that future scenarios can play in the dynamics of change. Here, boundaries are understood as a social cultural difference between systems, practices, or social worlds, leading to a discontinuity in action or interaction between these systems. Boundary objects are artifacts that support the crossing of those boundaries by fulfilling a bridging function (Akkerman & Bakker, 2011; Star, 1989). In the literature on climate research, future scenarios are considered boundary objects, as their construction process requires bringing together people with different backgrounds, viewpoints, and knowledge to discuss implications in a heterogeneous group of experts, policymakers, and other stakeholders, thus bridging boundaries between systems (Lebel, 2010). In this way, scenarios provide a sheltered context for the usual confusing, contesting, or conflicting debate between science, practice (in our case, education) and policy (Pulver & VanDeveer, 2007).

The concepts of boundary crossing and boundary objects are integrated in Engeström's cultural historical activity theory on expansive learning (Engeström, 2001). In this theory, learning has a very broad meaning, including new understandings, identity development, change of practices, and institutional development (Akkerman & Bakker, 2011). Contrary to traditional learning theories, which focus on learning within the boundaries of a specific practice, Engeström's activity theory takes into account interactions between actors from different cultures, contexts, and activity systems. In the context of teacher education, this notion of different interacting activity systems is relevant, as the education of teachers connects several activity systems: different faculties within a teacher education institute, the school system as a context for teaching practice of student teachers or experienced teachers (Gorodetsky & Barak, 2008; Tsui & Law, 2007), or the policy system of the national ministry or local administration. Each of these activity systems represents different stakeholders, responsibilities, mechanisms, roles, etc.

The activity theory and the concept of boundary objects can help to understand the dynamics between different activity systems that are involved in teacher education and will have a role in shaping its future, and to understand how scenarios can support that dynamics as boundary objects, facilitating boundary crossing between different activity systems today.

## 4. Methodology

To understand the trends in society and education that will influence the design of learning arrangements for teachers and their impact on the dynamics and boundary crossing between schools and universities, we analyzed documents that present alternative scenarios for the future of education or teacher education, and reflected on these using the concepts of activity systems, boundary objects, and boundary crossing. In our analysis, we used four sub questions to draw conclusions from the scenario documents:

1. What dominant futures do the scenario documents present?
2. What unpredictable key factors are identified by scenario authors as relevant to the future of teacher education?
3. What are the implications of these possible futures for the dynamics and boundaries between the different activity systems?
4. What role can scenarios play in stimulating boundary crossing between activity systems?

### 4.1 Selection

The first step of the analysis process was to find published scenarios for the future of education or teacher education. As the focus of our study was on future scenarios as tools for strategic thinking and policy making, and less on academic debates, we chose to use Google and Google Scholar as search engines instead of the traditional academic research databases. In our search we used the terms “scenarios” or “futures”, combined with “teacher education”, “teacher training”, “teaching”, “teaching profession”, “teachers”, “education”, “schooling”, and “learning.” The decision to extend the search to such terms as “education”, “learning”, “teaching”, and “schooling” was grounded on two assumptions. First, we expected that general future scenarios for schooling, education, or learning would make little distinction between separate education sectors, and could therefore also be applied to teacher education. Second, we expected that future scenarios for education, learning, teaching, and schooling would have implications for the way in which teacher education unfolds within these scenarios.

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Table 2.1: Overview of the scenario publications

In the final selection of documents, we used two criteria: Based on our definition of scenarios as presentations of multiple possible futures, only those publications were selected that presented two or more alternative descriptions of futures for



education/teacher education. Second, only original scenario documents were selected. We decided not to restrict the timeframe of our study in order to see to what extent the key factors that were considered relevant to the future of teacher education changed over the years taking the first GBN scenario on education as a starting point (Ogilvy, 1992). This selection process resulted in 48 texts that met both criteria presenting a broad overview of scenarios for the future of education/teacher education published in the period 1992–2011, covering scenario studies published by national or international governmental organizations<sup>4</sup>, stakeholder organizations or other non-governmental organizations and think-tanks, and academic papers where scenarios were used to categorize and present data with respect to trends in society and their possible impact on education, or to underline arguments.

## 4.2 Analysis

Each publication was analyzed qualitatively using a framework derived from Van Notten et al.'s classification framework for scenarios (2003). In our analysis, we used their distinction between characteristics of the *scenario process* and those of the *scenario content*. With respect to the process, we looked at the interactivity of the process of scenario development, in terms of the interaction and involvement between different stakeholders that participated in drawing the scenarios, and at the type of stakeholders that were involved. As for the content of the scenarios, we used a framework that distinguishes between the 'actors' and the 'factors' (Van Notten et al., 2003). Our analysis of actors focused on the key stakeholders in the scenarios and their roles, relations, and responsibilities. The factors are the unpredictable driving forces that the authors used to differentiate between the scenarios. We made a distinction between internal factors – which were part of the education system – and external factors, which were part of the wider societal system.

Classification aspect		Characteristics
Scenario process		Interactivity
		Type of stakeholders involved
Scenario content	Actors	Roles, relations, responsibilities
	Factors	Internal factors
		External factors

Table 2.2: Framework for analysis of the scenarios

## 4.3 Discussion

Based on the analysis of actors and factors, we identified four futures that largely summarized the set of scenario documents. To understand the implications of these possible futures for the dynamics and boundaries between the different activity systems, we rephrased the scenarios in terms of activity systems, focusing on the activity systems of teacher education institutes and schools, and the dynamics between the two.

<sup>4</sup> For brevity, scenario publications published by national agencies or ministries are referred to by using the country or state name. The full reference can be found in the list of references.

## 5. Results: Unpredictable key factors for the future of teacher education

In this section, we summarize the outcomes of the analysis of the scenario publications on education/teacher education, focusing on the scenario process and the scenario content, and identifying the actors and factors that are emphasized in the documents.

### 5.1 The scenario process: participation of stakeholders

Most two-dimensional or multi-dimensional scenario publications derived their power to initiate dialogue and change from the process by which a wide group of stakeholders were involved in developing the scenarios or discussing the outcomes (or both). These scenario processes were participatory in nature and involved various stakeholders, supporting a stronger validation and starting a wider dialogue between stakeholders. In several scenario projects, the process was limited to one type of stakeholder: teachers (Berry, 2011; Cachia, 2011; Snoek, 2011a; Song, 2008) or teacher educators (ATEERDC19, 2003; Snoek, 2003b) or VET-experts (Sellin, 2002; Van Wieringen, Sellin, & Schmidt, 2003). Especially the scenario projects that were part of the OECD Schooling for Tomorrow project are based on a wider consultation and involvement of a variety of stakeholder groups, often in multiple regional sessions with parents, teachers, school leaders, business representatives, and policymakers, involving several rounds of consulting, writing, validating, and rewriting. Most of these scenario projects were initiated by governmental organizations or think-tanks. Most of the documents that present one-dimensional scenarios are not the result of such a participatory process, as they were developed by a single expert or a small group of experts. These scenario studies derive their authority to initiate dialogue and change from the academic expert status of the author(s) or from the organization they work for, like the OECD, World Bank, or Futurelab.

A distinction can be made between scenario publications that are normative, have a particular agenda for the future, and advocate a specific most desirable future, and scenario publications that use an open approach, presenting a set of scenarios without an explicit preset preference with respect to a most desirable future. This distinction shows that scenarios can be both entry points for debate, or instruments for marketing and persuasion (Lebel, 2010). In general, the one-dimensional scenarios are normative – presenting a worst-case and a most desirable scenario – while the two-dimensional and multi-dimensional scenarios are open ended, as the authors of the scenario stories have tried to write each scenario from a neutral or positive perspective (except for the ‘meltdown’ and ‘schools as bureaucratic institutes’ scenarios from the OECD Schooling for Tomorrow project). These scenarios thus do not provide a specific direction toward the future and invite readers to engage in an open dialogue about alternatives and uncertainties.

## 5.2 The scenario content: Actors and factors

### 5.2.1 Actors: who takes the lead?

The various scenarios identify different leading actors: governments, local communities, parents, schools, teacher education institutes, and teacher educators. Several scenarios focus on the key issue of who should take the lead in setting directions, providing guidelines, and defining structures for education/teacher education.

A first set of scenarios describe a future in which teacher education is dominated by the customers – those who have to benefit from the outcomes of learning processes. This might be the parents, pupils, or students, who wish to have maximum freedom of choice with respect to learning arrangements according to their specific needs or preferences (Norwich & Lunt, 2005; Victoria Office of Learning and Teaching, 2006), or the labor market as the future employers of graduates. In futures where the employers of graduates are leading, schools are focused learning organizations (New Zealand Ministry of Education, 2006; OECD, 2001; Ontario Ministry of Education, 2006b; South Australia DECS, 2006; Victoria Office of Learning and Teaching, 2006) that define their needs and expect teacher education institutes to adapt their curricula according to those needs (ATEERDC19, 2003).

Scenarios in which the customers are leading fit within a neoliberal market model scenario, in which education is dominated by market forces, and traditional education institutes and commercial companies compete to enroll as many pupils or students as possible and to gain a maximum market share. In such a scenario, education is a commodity and education institutes will commercialize and compete in educational entrepreneurship (Freeman & Watson, 2008; Miller, 2003; New Zealand Ministry of Education, 2006; Newby, 2005; OECD, 2001; OECD, 2006a; Ogilvy, 1992; Ontario Ministry of Education, 2006a; Ontario Ministry of Education, 2006b).

As education is an essential provision within a society, several scenarios envision a future in which not so much market forces dominate, but in which the government plays a decisive role in defining the guidelines, content, and structure for schools, the teaching profession, and teacher education. The justification for a decisive role of the government can lie in the need for a coherent and transparent system (ATEERDC19, 2003; Johnston, 2000; Norwich & Lunt, 2005), the need for international competition and cooperation (Willumsen, 1999), the need to safeguard the quality of the educational system (Lefkowitz & Urquhart, 2005; OECD, 2006a; Seed, 2008; Snoek, 2003b), or the need to align education with economic development (Harris, 2006; Johnston, 2000).

Other scenarios foresee a future in which education is seen as an essential responsibility of the society, but where the driving force within the education system is not a national government, but a local community. These future

scenarios emphasize the role of schools as social centers where teachers and parents work in close cooperation with a focus on inclusion, citizenship, local coherence, or parental choice (Craig & Fieschi, 2007; Harris, 2006; New Zealand Ministry of Education, 2006; Newby, 2005; Norwich & Lunt, 2005; OECD, 2001; OECD, 2006a; Ogilvy, 1992; Ogilvy, 1995; Ontario Ministry of Education, 2006a; Ontario Ministry of Education, 2006b; Scottish Enterprise Glasgow, 2006; South Australia DECS, 2006; Victoria Office of Learning and Teaching, 2006).

A different future is foreseen in scenarios in which teachers or teacher educators take the lead as professionals, setting directions based on an extended professionalism through strong professional networks or councils (Berry, 2011; KnowledgeWorks, 2011; Niemi, 2000; Saussois, 2006; Schmelkes, 2008; Seed, 2008; Snoek, 2003b; Snoek, 2011a).

A last set of scenarios describes a possible future that is not dominated by one specific dominant stakeholder in terms of national or local governments, the customers, the educational providers, or the teaching profession, but is characterized by networking in flexible and decentralized communities without formal hierarchies. Such scenarios are inspired by network and complexity theories (Cachia, 2011; New Zealand Ministry of Education, 2006; Newby, 2005; OECD, 2001; OECD, 2006a; Ogilvy, 1992; Ontario Ministry of Education, 2006a; Ontario Ministry of Education, 2006b; Saussois, 2006; Victoria Office of Learning and Teaching, 2006).

Looking at these scenario sets, we can identify four typical and dominant scenarios, namely scenarios focusing on a market model (with parents/students or employers as customers and commercialized institutes), on bureaucracy (dominated by national governments or local communities), on the professionalism of teachers/teacher educators (based on collective self-steering by teachers or teacher educators), or on decentralized networks (characterized by flexibility and crossing of institutional borders).

### **5.2.2 Factors: internal structures**

All scenario documents take one or more internal factors or driving forces with high impact and high unpredictability, to create the fundamental differences between the alternative scenarios. In most scenarios, these factors are formulated in terms of dichotomies or dilemmas, either explicitly in terms of axes in the scenario matrix, or more implicitly in contrasting scenario stories.

In the analysis of the internal factors, we made a distinction between factors relating to the central aims within the education system (e.g., focusing on economic development, on individual opportunities, or on social cohesion), factors regarding the curriculum content (e.g., with respect to narrow or wide interpretations of learning aims, or a reproductive or productive focus on knowledge), factors relating to the pedagogy of teaching and learning (e.g., concerning the recognition of informal learning, the room for individual

learning paths, the role of virtual learning environments, and the recognition of collaborative learning), and factors relating to organizational structures (e.g., the room for choice of parents or students, the amount of trust or control and its relation to detailed regulations and testing, the role of formalized hierarchical organization structures, the permeability of institutional boundaries, or the institutional adaptivity and openness to change) (see table 2.3).

Internal factor	Scenario publication
<b>Aims</b>	
Economy	(Harris, 2006; Miller, 2003; Moynagh & Worsley, 2003; Van Wieringen et al., 2003)
Individual, elitist	(ATEERDC19, 2003; Facer, 2009; Lefkowitz & Urquhart, 2005; New Zealand Ministry of Education, 2006; Norwich & Lunt, 2005; Schmelkes, 2008; Scottish Enterprise Glasgow, 2006; Victoria Office of Learning and Teaching, 2006)
Communal, inclusive	(ATEERDC19, 2003; Facer, 2009; KnowledgeWorks, 2011; Lefkowitz & Urquhart, 2005; New Zealand Ministry of Education, 2006; OECD, 2001; Ogilvy, 1995; Ontario Ministry of Education, 2006b; Schmelkes, 2008; Scottish Enterprise Glasgow, 2006; Van Wieringen et al., 2003; Victoria Office of Learning and Teaching, 2006)
<b>Curriculum</b>	
Narrow (knowledge) vs. wide (including attitudes and values)	(Kirk, 2009; Schmelkes, 2008)
Reproductive (focus on testing) vs. productive learning (pupil/student as prosumer)	(Seed, 2008; Snoek, 2011a)
<b>Pedagogy</b>	
Restricted to formal learning vs. recognition of informal learning	(KnowledgeWorks, 2011; New Zealand Ministry of Education, 2006; Newby, 2005; South Australia DECS, 2006)
Standardized (closed) vs. individual tailor-made learning (open)	(ATEERDC19, 2003; Kirk, 2009; Lefkowitz & Urquhart, 2005; Saussois, 2006; Snoek, 2011a)
Face-to-face vs. virtual and online learning	(Berry, 2011; Bigum & Kenway, 1998; Cachia, 2011; Daanen & Facer, 2007; Moon, Leach, & Stevens, 2005; Schuck & Aubusson, 2010; Volman, 2005)
Individual, isolated learning vs. collaborative learning in communities	(Berry, 2011; Business Educa, 2011; Cachia, 2011; KnowledgeWorks, 2011; New Zealand Ministry of Education, 2006; Newby, 2005; OECD, 2001; Ontario Ministry of Education, 2006a; Ontario Ministry of Education, 2006b; Volman, 2005)
<b>Organizational structure</b>	
Standardized vs. diversified with individual choice	(ATEERDC19, 2003; Lefkowitz & Urquhart, 2005; New Zealand Ministry of Education, 2006; Newby, 2005; Norwich & Lunt, 2005; Ogilvy, 1995; Sellin, 2002; Victoria Office of Learning and Teaching, 2006; Willumsen, 1999)

Controlled through prescriptions, regulations, and tests vs. trusted with freedom for teachers	(Goodwin, Lefkowitz, Woempner, & Hubbell, 2011; Johnston, 2000; Lefkowitz & Urquhart, 2005; Leicester, Bloomer, & Stewart, 2009; Saussois, 2006; Seed, 2008)
Hierarchical structures based on formal roles and credentials vs. informal structures based on personal merits and informal teacher leadership	(Business Educa, 2011; Miller, 2003; Saussois, 2006)
Compartmentalized and institutionalized structures characterized by boundaries vs. fluid, integrated, and intertwined structures	(Geake & Cooper, 2003; Niemi, 2000; South Australia DECS, 2006; Young & Muller, 2010)
Adaptivity and openness to change	(Facer, 2009; Goodwin et al., 2011; Kirk, 2009; Leicester et al., 2009; Moon et al., 2005; Taylor, Fleisch, & Shindler, 2007)

Table 2.3: Internal factors influencing the future of education/teacher education

### 5.2.3 Factors: external context

Several scenarios focus on external factors that will influence the future of education/teacher education: Scenarios vary in how they foresee the abundance vs. scarcity of teachers, the status of teachers, the willingness of governments to invest in education/teacher education, the speed of technological development and implementation in education, the competitiveness of the work sector, the extent of globalization, and the development of the economy and resources. Although these factors cannot easily be influenced by stakeholders in the area of education, scenario authors foresee that they might have a large impact on the future of education/teacher education (see table 2.4).

External factor	Scenario publication
Abundance vs. scarcity of teachers	(Bennell, 2004; OECD, 2001)
High vs. low status of teachers	(OECD, 2001)
High vs. low willingness of governments to invest in education/teacher education	(Moynagh & Worsley, 2003; OECD, 2001)
High vs. low speed of technological development and implementation in education	(Daanen & Facer, 2007; Lefkowitz & Urquhart, 2005; Ogilvy, 1992)
High vs. low competitiveness of the work sector	(Van Wieringen et al., 2003)
High vs. low extent of globalization	(Johnston, 2000; Scottish Enterprise Glasgow, 2006; Victoria Office of Learning and Teaching, 2006)
Growth vs. decline of economy, high vs. low resources	(Freeman & Watson, 2008; Hume, 2007; Lefkowitz & Urquhart, 2005; Moon et al., 2005; Schmelkes, 2008; Taylor et al., 2007; Van Wieringen et al., 2003)

Table 2.4: External factors influencing the future of education/teacher education

## 6. Discussion

Here, we summarize our findings and, using the concepts of activity system, boundary crossing, and boundary objects, draw conclusions with respect to the possible futures for teacher education and the dynamics between the activity systems in each of these futures.

### 6.1 Focus on the future of teacher education

In the search process to select scenario documents, we included such terms as education, schooling, and teachers. Of the 48 documents, only seven documents addressed teacher education directly, four documents addressed the future of higher education in general, and four documents explicitly addressed teachers' professional development, for example through networking (Cachia, 2011) and teacher professionalism (Craig & Fieschi, 2007; Snoek, 2011a). Most of the other texts address the education system or the teaching profession in general. However, as teacher education is part of the same system as schools, it is influenced by the same key factors. Snoek and Wielenga (2003) showed, for example, how all six OECD scenarios on education systems in general can be recognized in developments in teacher education in the Netherlands.

But at the same time, teacher education contributes to maintaining or changing the system by educating the teachers who are part of that system. Future development in the education system and in the teaching profession will therefore have an impact on what is expected from the teacher education curriculum. This implies that redesigning the future of schools and the education system, entails redesigning teacher education.

### 6.2 Scenarios as boundary objects

If scenario studies are to function as boundary objects helping to bridge intersecting practices – such as the activity systems of teacher education institutes, schools, and policy agencies – it is essential that they support communication by creating a shared understanding of driving forces and by supporting dialogue. The majority of the scenario projects, especially those within the context of the OECD Schooling for Tomorrow project, were characterized by intensive interactive dialogues between various stakeholders during the development or validation of the scenarios, or by discussions on the most desirable future. Other projects aimed at engaging a specific group of stakeholders - e.g., teachers - who have traditionally had marginalized voices in the policy debate. As such, these scenario projects functioned as boundary objects, bringing together stakeholders, bridging their activity systems, and supporting the dialogue in search of shared values. However, given the scope of our analysis, we cannot assess how successful these scenario projects were in facilitating this boundary crossing.

In a quarter of the documents, the scenarios were developed by academics for academic publications, without involving other stakeholders. The extent to which such scenarios act as boundary objects, facilitating boundary crossing

and dialogue between different stakeholders, is limited, especially when publication is restricted to academic journals.

### **6.3 Actors and their activity system: four dominant scenarios**

Based on our analysis of the actors and their roles, responsibilities, and interactions in the various scenario documents, we identified four dominant types of interaction, namely interaction based on a market model, on bureaucratic hierarchies, on professional self-steering, or on boundary crossing networks. Each of these can be translated into a typical future scenario for teacher education, with differences in the way in which the three activity systems that are involved in the education of teachers - the activity system of schools, the activity system of teacher education institutes, and the activity system of policymaking - interact with each other.

In a market-oriented future for teacher education, the activity system of the school is the most dominant and the least likely to change. The demands for teacher quality and for professional development are defined within that system. The activity system of teacher education institutes needs to adapt to those demands, as survival requires flexibility in the provision of courses and curricula. The activity system of policymaking is limited to creating the conditions for the interaction between the other two activity systems.

In a bureaucratic future, the activity system of policymaking is the most dominant and the most unlikely to change, as it sets the context for the other two activity systems, influencing the artifacts and rules of these two systems. The interaction between the activity systems of school and teacher education institutes will be limited, as they are addressed separately by the activity system of policymaking. Boundary activities are mostly shaped in terms of imposed regulations and negotiations between policymakers and pressure groups from the other two activity systems.

In a future that is dominated by the professionalism of teacher educators, the interactions between the three activity systems depend on how this professionalism is defined. If it is based on a narrow definition of professionalism, the activity system of teacher education institutes will focus on its autonomy with respect to the other activity systems. In that case, the boundary crossings between the three activity systems will be limited.

In these three possible futures, the most important boundary crossing between the activity system of the teacher education institute and that of the school will be done by teachers, educated (either pre-service or in-service) within one system with rules and artifacts that are focused on innovative didactics, professional development through learning and reflection, and research, while they are expected to perform within another system with other rules and artifacts that are governed by timetables and focused on exam results and collegial consensus. This boundary crossing will not be without tensions.



Whether this boundary crossing will lead to a change of activity systems can be doubted. The most likely is that the boundary crossers – whether student teachers, novice teachers, or experienced teachers engaged in in-service programs – will quickly adapt themselves to the rules and values of the activity system they are in. Despite many attempts in the past to bridge these two activity systems and to create intense partnerships, in many cases schools merely serve as ‘practice fields’ for pre-service teachers, without establishing shared cultural norms between teacher education institutes and schools (Gorodetsky & Barak, 2008). Niemi (2000) identifies as one of the main challenges for the future of teacher education, the fact that the current system is based on a rationalization process that has created social structures that keep teaching and learning cultures as unchangeable, leading to new teachers who continue to follow old traditions.

The dominance of institutional structures is taken for granted and reinforced in each of the three futures described above. Each activity system is focused on the primary output of its own system (graduated student teachers, exam results of pupils, or the efficiency and quality of the system as a whole), and communities in each of the activity systems are exclusive with little or no overlap.

In the fourth possible future for teacher education, these institutional structures are replaced by a network structure in which the activity systems of teacher education institutes and schools are integrated in a new activity system that focuses not on institutional boundaries, but on the process of teacher development. In this activity system, teacher educators, student teachers, and experienced teachers cooperate - with the support of school leaders and heads of department - in mixed communities of practice. These communities of practice are characterized by rules and values supporting curiosity, innovation, and development, while mediating artifacts support the bridge between teaching practice and research. Examples of such structures can be found in various places, such as ‘edge communities’ (Gorodetsky & Barak, 2008), academic development schools in the Netherlands (Snoek & Moens, 2011) and school-embedded Master’s programs (Cornelissen, 2011), supported by cross-institutional learning communities as mediating artifacts (Samaras, Freese, & Kosnik, 2008).

#### 6.4 Key factors and dilemmas

The key factors that we found in our analysis seem to have remained rather constant over the last 20 years: We found similar factors in both older and newer scenario documents. Through the selection of a limited number of key factors, the scenario publications reduce the complexity of reality to one or two key factors that are presented as dichotomies in terms of either/or. This is both their strength – highlighting topics and uncertainties – and their weakness, disregarding the complexity of reality, which might include a third option or a complex mixture of both. At the same time, by making

the underlying assumptions explicit, the scenarios sometimes show a new option. In discussions on teacher education, the emphasis is often on a market perspective of providers and customers in terms of schools or students, on the responsibility of the government to guarantee that all teacher graduates meet the minimum standards for teachers, or on the autonomy of universities. These three perspectives coincide with the first three scenarios, reflecting the logics of the free market, the bureaucracy, and the professional, as identified by Freidson (2001). However, several scenario texts suggest that in the future there might be a fourth logic, namely one that is characterized by interactive and dynamic multidisciplinary networks crossing institutional boundaries, based on network and complexity theory.

Most of these key factors are formulated in terms of a dilemma, whereby a choice has to be made. Which choice is considered the most desirable will depend on the perspective of the stakeholder and the values the stakeholder endorses. As in the four scenarios different stakeholders will have a leading position, the future direction regarding the key factors will be imposed differently on the other stakeholders. A lack of ongoing dialogue that crosses the boundaries between the activity systems will create ongoing tensions in the first three scenarios.

## 6.5 Limitations

Our analysis has a major limitation in that we looked only at scenario publications or references that were available online and could be connected to English search terms. Less than a quarter of the scenario documents are translations from scenario studies in other languages, or are focused on a non-Anglo-Saxon context (ATEERDC19, 2003; Bennell, 2004; Moon et al., 2005; Ontario Ministry of Education, 2006b; Schmelkes, 2008; Snoek, 2011a; Song, 2008; Taylor et al., 2007; Volman, 2005; Willumsen, 1999). As a result, the analysis was dominated by issues originating from an Anglo-Saxon culture and context.

A second limitation is that not all of the documents provided a full insight into the process of scenario development, and in some cases we had to deal with what little information could be extracted from the documents.

The third limitation is that our main focus was on the unpredictable key factors that defined the differences between the presented futures. The focus of the analysis was on the resulting scenarios, and not on the full process of developing the scenarios. As a consequence, other factors that were taken into consideration during the scenario process, but were not considered unpredictable or were not selected as key factors, were not included in the analysis. Also, the follow-up to the scenario process was also not part of the analysis. The outcomes of dialogues and the impact of the scenario process on policies and new directions, and therefore the impact of future scenarios as boundary objects, are interesting in themselves, but were not part of the analysis.

## 7. Conclusion

The analysis of future scenarios led to four main futures defining the contexts for teacher development and designs for learning arrangements for teachers, namely futures dominated by a market focus of schools and teacher education institutes, by a bureaucratic government, by self-steering professionals, or by a network approach unhindered by institutional boundaries. These possible futures will have different impact on the possible relations between schools and universities in (pre- and in-service) teacher education. The first two futures have the closest resemblance to today's situation, in which higher education is increasingly dominated by market approaches, and in which teacher education is confronted with an ongoing list of reform measures from governments,. The third future might be an attractive one from the perspective of teachers and teacher educators, but a condition is that teachers and teacher educators develop a collective identity, which does not seem the case yet (Snoek, Swennen, & Van der Klink, 2011; Swennen, 2012).

In all three scenarios, the activity systems of schools and universities continue to exist in isolation. The fourth future – the one based on networks – seems the most imaginative, transformative, and powerful when it comes to crossing boundaries, but it is also the most rigorous as it rearranges and transforms the existing boundaries and activity systems. In this last scenario, boundaries are intensively crossed, or even removed. Whether such a future lies ahead, depends on the strength of new and existing pilot projects and their power to survive and grow in a system that is still dominated by institutional boundaries and interests, and on the courage of all stakeholders in the area of teacher education to take the lifelong and holistic process of teacher development as a focal point.



# INTERMEZZO 1

## From scenarios to contexts for research

### 1. Future scenarios for teacher development in the Netherlands

The review study presented in Chapter 2 indicates that the contexts and arrangements for teacher development vary according to the roles of different stakeholders and the extent to which the boundaries between the stakeholders' activity systems are crossed. Based on the 48 scenario documents, four typical scenarios for the future of teacher education can be identified in which schools, universities, and governments assume different positions towards each other. Each of these scenarios may be considered a realistic possible future for teacher education in the Netherlands, as the characteristics of each scenario may be recognized in the present arrangements and in recent policy measurements in the area of initial and post-initial teacher education.

#### The market-oriented scenario in the Netherlands

In a market-oriented future for teacher education, the activity system of the school is dominant. In a customer-provider relationship, universities must be responsive to the needs and demands of schools. In the Dutch context, this scenario may be recognized in the present arrangements regarding post-initial teacher development. In 1993, the government transferred the budgets for teacher development to schools. From that moment, schools could make their own decisions on how to spend their professional development budgets. The post-initial education of teachers became a competitive market in which universities could offer their services in terms of modules, courses, programs, advice, etc., and the universities were forced to compete with commercial training providers (Vermeulen & De Wolf, 2001). As a result, universities were required to be flexible and responsive and became largely dependent on the demands of schools.

From 2001, government policies defined schools as the core of the educational infrastructure, whereas teacher education institutes, educational research institutes, and post-initial providers were considered supportive institutions that would respond to the needs of schools (Ministerie van OCW, 2002; Onderwijsraad, 2001). These supportive institutions needed to develop their responsiveness and their flexibility towards schools, whereas schools were supported while formulating their needs. In many grant programs (such as those for the academic development schools), the schools are the key institutions that apply for grants, whereas universities must join with schools in partnership agreements.

The initiative of a group of school boards who created the Netherlands Institute for Masters in Education, NIME, also fits in the market-oriented scenario, as they literally turned the tables, inviting teacher education institutes to offer their proposals for Master's programs to the schools in a tender procedure in which the schools selected the best programs to draw up long-term contracts (NIME, 2008) (see also Intermezzo 2).

These developments have led to competitiveness between universities and to strategic partnerships to become the 'preferred supplier' to schools.

### **The bureaucratic scenario in the Netherlands**

In the bureaucratic scenario, the activity system of the government and policymakers dominates the activity systems of schools and universities. This scenario may be recognized in the Dutch policy context in which the present dynamics between the Ministry, schools, and universities is based on bilateral performance agreements between the minister and the national councils of school leaders in primary, secondary, and vocational education (*PO-raad, VO-raad and MBO-raad*) and between the minister and the national councils for the universities (*VSNU and Vereniging van Hogescholen*). This structure leads to a strict separation between policies regarding initial teacher education (regulated through agreements between the minister and universities) and policies regarding post-initial teacher education (regulated through agreements between the minister, the schools and the teachers' unions). Even in contexts where the boundaries between schools and universities may be crossed, e.g., in academic development schools, where practice-based research may be considered an arrangement for initial- and post-initial teacher development, such a separation is dominant. One example of this strict separation is the set of criteria used by the evaluation committee judging project applications for the prolongation of academic development schools. These criteria focused on the contribution of the academic development school to the learning context for student teachers, ignoring the schools' ambitions to connect practice-based research to teacher development and school improvement.

Another example is the revision process for the teacher standards (*'bekwaamheidseisen'*), which are the formal minimum quality criteria that all teachers in the Netherlands must be able to meet (Ministerie van OCW, 2005b). In this process, the minister invited the new professional body of teachers, the *Onderwijscoöperatie*, to propose a revised set of teacher standards. The new set reflects the professional self-understanding of many teachers but, according to the teacher education institutes, does not consider sufficiently that these standards must also function as the guiding frame of reference for initial teacher education qualifications (VELON, 2012b; Onderwijsraad, 2014).

### **The professionalism scenario in the Netherlands**

In the professionalism scenario, professional groups play a key role. Elements of this scenario may be recognized in recent developments in teacher policy in the Netherlands. Through the installment of a new professional body for

teachers, the *Onderwijscoöperatie*, the teaching profession may take a more prominent role in regulating professional development. The teacher register '*Registerleraar.nl*' will play a important role in this process. Teachers are expected to document their professional development activities in the register. The *Onderwijscoöperatie* has installed 'register committees', that have the task of assessing and accrediting the professional development activities offered by universities and other commercial or non-commercial providers of post-initial teacher education (*Onderwijscoöperatie*, 2013).

This role of the *Onderwijscoöperatie* could in time be extended to initial teacher education programs, similar to the Irish Teaching Council, which has a formal role in the accreditation of initial teacher education programs in Ireland. However, the active involvement of the profession in regulating teachers' professional development remains in an initial stage.

### The network scenario in the Netherlands

In the network scenario, the boundaries between schools and universities are crossed at an institutional or an individual level. In such scenarios, a boundary zone between both activity systems is created. Within the Dutch context, several possible boundary objects are suggested that may facilitate boundary crossing, e.g., communities of practice focusing on joint curriculum development or research (*Onderwijsraad*, 2011b). Within some academic development school partnerships, elements of this scenario may be recognized when schools and universities succeed in creating a partnership that transcends a customer-client relationship. In such partnerships, the school is more than a high-quality practice site for student teachers; the university offerings expand beyond support for schools in developing research competences, and the shared workspace may lead to changes in both activity systems (*Van Riessen*, 2010).

## 2. Teacher development and its impact in different contexts.

To study the impact of learning arrangements that focus on the post-initial development of teacher leadership, this research project will examine different contexts and arrangements, which vary in the activity system that is dominant. Because teachers as a professional group do not yet have an explicit role in teacher professional development, we will focus on arrangements that relate to three of the four possible scenarios:

- a (market) arrangement in which the school is the dominant stakeholder,
- a (bureaucratic) arrangement in which the university is the dominant stakeholder, responding to formal criteria provided by the government, and
- a (network) arrangement in which schools and university focus on external curriculum consistency through boundary-crossing activities.

### The school as the dominant stakeholder: The academic development school

Since the transfer of the budgets for post-initial teacher development to schools, the dominant arrangement for post-initial teacher development is a

design in which schools take the lead in defining their needs –in connection to their local school agenda - and in selecting a university or other institution as a provider.

An example of this model is the Academic Development School Amsterdam, AcOA, a network of three secondary schools. Although the academic development school could potentially develop towards the network scenario, the initial stage of AcOA (2006-2008) may be characterized as an example of the market-orientated scenario. The schools that participated in the AcOA focused their research activities on creating a group of teacher researchers who, through their research activities, would stimulate and support school development (Van Riessen, 2010). Although two universities were formal partners in the AcOA, the focus of the activities was on the development of the secondary schools, and the role of the universities in the research activities was restricted to supporting the teacher researchers and safeguarding the academic quality of the research projects in the schools. Within this context, the activity system of the school remained dominant. This context for teacher leadership development fits within the market-oriented scenario and will be addressed in Chapter 3.

### **The university as the dominant stakeholder: A Master's program on teacher leadership**

Although schools have become dominant in most arrangements for in-service teacher development, universities remain dominant in learning arrangements that are based on formal courses leading to (internationally) recognized qualifications. These arrangements may be characterized as bureaucratic because they are dominated by formal accreditation requirements established by the government that universities must meet. These requirements often direct the design of programs, and the role of schools is primarily limited to an advisory role. This is especially the case in programs in which participants come from a variety of schools.

This arrangement for teacher leadership development will be addressed in Chapter 4. The context of the study is the NIME Master's program Professional Mastery '*Professioneel Meesterschap*', focusing on teacher leadership and teacher research. Although the specific context of the NIME (based on demands and criteria from the schools) might suggest that the arrangement would fit in a market model, the study presented in Chapter 4 will show that the actual involvement of the school was almost non-existent.

### **A partnership focused on external curriculum consistency through boundary crossing**

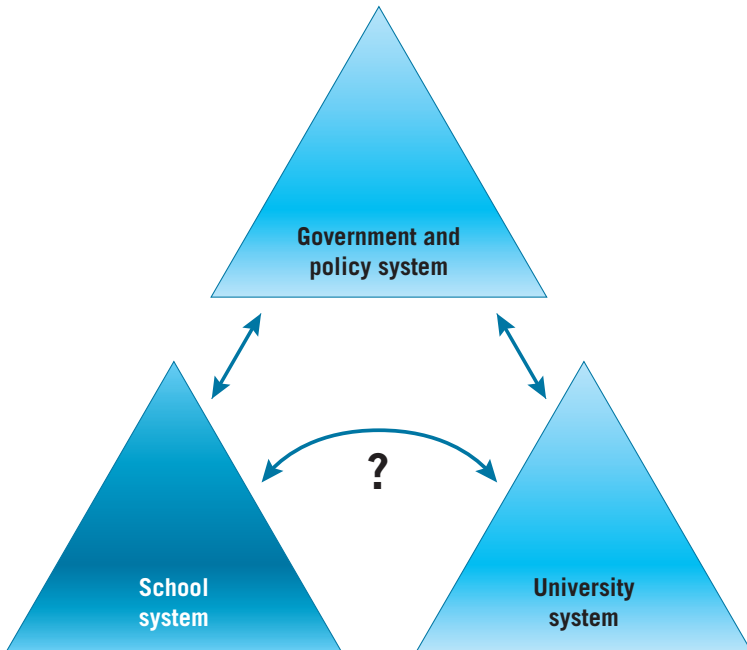
In the final context for teacher leadership development studied in this project, a network model was elaborated by establishing a partnership between three colleges for vocational education in the Netherlands and a university consortium around the Master's program *Professioneel Meesterschap*. Because the partnership was exclusively focused on these four partners, there were



opportunities to cross the boundaries between the two activity systems of the university and schools. For this elaboration, the Master's program discussed in Chapter 4 was adapted, based on the preliminary outcomes of the study reported in Chapter 4. The outcomes of this redesigned program in terms of the impact on teacher development and school development will be addressed in Chapter 5.



# 3





## CHAPTER 3

# The impact of teacher research on teacher development and school development in academic development schools in the Netherlands<sup>5</sup>

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*As part of a government initiated programme based on the concept of Professional Development Schools, three secondary schools in Amsterdam decided to facilitate teachers in their schools to engage in practice research. This was based on the assumption that research conducted by teachers contributes both to the development of the teacher researcher and to the development of the school as a whole. Based on this assumption, a study was conducted looking at the extent and way in which learning arrangements within an academic development school contribute to teacher development and school development and which aspects of school culture and school organization play a role in this.*

*In this article, we report on the results of this study. The outcomes show that engagement in research contributed to both individual learning and team learning amongst the teacher researchers. The teacher researchers developed both their knowledge on their research topics and their skills with respect to research. At the same time they developed a greater sensitivity towards the organizational context, the role of the school management and their own role in school development, strengthening their leadership potential. The impact of their research on school development varied, depending on the commitment of the management of the school to give the teacher researchers a key role in initiating change within the school.*

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<sup>5</sup> This chapter is based on 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.

## 1. Research conducted by teachers

### 1.1 Four strategies to bridge the gap

For many years, there has been criticism on the gap between educational research and educational practice (Broekkamp & Van Hout-Wolters, 2007; Commissie Nationaal Plan Toekomst Onderwijswetenschappen, 2011; Lagemann, 1997; Lagemann, 2002; Levin, 2004). Many teachers do not believe that educational research is something that can contribute to the quality of their performance (Fleming, 1988; Gore & Gitlin, 2004; National Research Council, 1999).

This perceived gap has resulted in a range of different attempts to bridge or eradicate this gap. Broekkamp and Van Hout-Wolters (2007) draw a distinction between four strategies for bringing research and education closer together. The first of these is the RDD model: Research-development-diffusion (Burkman, 1987; Saettler, 1968). This strategy is based on the assumption that in controlled situations fundamental academic research can result in useful insights on which educational designs and teaching materials can be based. These designs and materials can subsequently be implemented and teachers trained in the use of the new materials. This model has been criticised for being based on deterministic and linear assumptions and - through strictly separated roles between researchers and practitioners - for failing to take account of teachers' concerns (Bulterman-Bos, 2008; Pieters & Jochems, 2003). As a result, this approach risks reducing teachers to mere facilitators of education designed by others.

The second strategy, evidence-based practice, also involves a significant role for fundamental academic research, but in this case the research is conducted in realistic contexts. The assumption is that because of the direct relationship with educational practice, the results of this type of research can be applied by teachers in the classroom. The teachers are expected to use the results of the research as a basis for their classroom performance (Levin & O'Donnell, 1999; Slavin, 2002). In this model, it is important that the academic knowledge is made accessible to teachers, for example by means of 'what works' websites and books. This strategy has been criticised on the basis that evidence-based research in education is not feasible or affordable and is too generalising and also has a delaying and conservative effect (Gravemeijer & Kirschner, 2007). In addition, Biesta argues that research into what is effective is insufficient for teachers who must continually make valued-based decisions and are concerned not only with what works, but also with what is desirable (for individual, unique pupils) (Biesta, 2007; Biesta, 2009).

In the third strategy cited by Broekkamp and Van Hout-Wolters, a key role is played by practices that transcend boundaries. Within such practices, researchers from different disciplines work together with teachers on practice-focused research, innovation and professional development. As a result, the distinctive roles of education and research become more blurred: teachers are involved in research activities and researchers formulate their research questions based on

concerns encountered in practice. This strategy is closely aligned to the model of Professional Development Schools (PDS) which are characterized by partnerships between schools and universities through collaborative research by the partnering institutions (Darling-Hammond, 1994; Holmes Group, 1990).

The fourth strategy is based on knowledge communities: groups of people who share the same passions and interests, benefit from each other's expertise and develop knowledge together. Models along these lines include professional learning communities (Fullan, 2002; Hord, 2004; McLaughlin & Talbert, 2006) and forms of practitioner inquiry, such as action research (Anderson & Herr, 1999; Carr & Kemmis, 1986; Cochran-Smith & Lytle, 2009; Ponte, 2005) and self-study (Loughran, Hamilton, LaBoskey, & Russell, 2004). This model is closely aligned with the Research Engaged Schools as developed by the FLARE project in Essex (Handscomb & MacBeath, 2003).

These last two strategies, involving teachers in schools actively in research activities, have increased significantly in popularity in recent years. In the United States, the concept of 'scholarship' was introduced for teachers in order to stress that education and research should increasingly be combined (Boyer, 1990), in which scholarship stands for teacher work that is informed, intentional, impermanent and inheritable (Coppola, 2007). In the wake of international literature (Cochran-Smith & Lytle, 2009; Loughran et al., 2004), various different Dutch authors have emphasized the importance of teachers' involvement in practice-based research (Bolhuis, 2012; Lunenberg, Ponte, & Van de Ven, 2007; Ponte, 2002; Snoek, 2012; Vrijnsen-De Corte, Den Brok, Kamp, & Bergen, 2009; Vrijnsen-de Corte, 2012). This reflects high expectations with regard to the benefits of teachers' involvement in research, both in terms of the impact on teachers' professional development and the improvement of the quality of everyday classroom performance.

## 1.2 The impact of research conducted by teachers in schools

Zwart, Van Veen and Meirink (2012) indicate that there is little evidence that involvement of teachers in academic research activities in itself - as an academic activity focused on development of theories - leads to better performing teachers (Grossman, 2005). However, there is evidence that teacher research as inquiry based method for professional development can lead to improved teacher performance and increased learning outcomes of pupils (Van Veen et al., 2010). This impact on teacher performance is supported by experiences from teachers themselves, as reported in the TALIS study, where teachers from 23 countries indicate that they see research as one of the forms of professional development that have the greatest impact (OECD, 2009).

Several studies have been conducted to investigate whether these high expectations are justified. Within the Dutch context, Meijer, Meirink, Lockhorst and Oolbakkink-Marchand (2010) examined the learning results of teachers conducting research in three schools, based on the validity criteria of Anderson

and Herr (1999): outcome validity (quality of the outcomes for the teacher and the school), process validity (the proper use of appropriate research methodologies), democratic validity (the quality of the involvement of different parties in the research: teachers, school students and parents), catalytic validity (the extent to which the research leads to actual changes and transformations in school-based practice) and dialogic validity (the extent to which peer review is used in order to guarantee the quality of the research). The teacher researchers in their study indicated that the main areas in which they have developed are those of conducting research and developing of a more critical attitude with regard to their own actions and the school organization (outcome validity). The study primarily involved fellow teachers and school students (democratic validity). The effect on school-based practice (catalytic validity) remained difficult to measure and mainly took the form of new materials or adaptations at an individual level. The extent to which the results were formally or informally shared within the school (dialogic validity) ultimately depended on the schools' organizational structures. Various authors emphasize the point that research conducted by teachers is inextricably linked with the school organization as a whole and cannot therefore be seen in isolation. Efforts to systematically incorporate these elements within a school places demands on the school culture and the role of the school management in promoting a culture of inquiry (Earl & Katz, 2006; Krüger, 2010; National Council for Accreditation of Teacher Education, 2001; Vrijnsen-de Corte, 2012).

By making a connection between involvement of teachers in research activities and the improvement of the quality of everyday classroom performance, and by emphasizing the catalytic validity and the democratic validity of practitioners research, teacher research is understood as 'a concerted action to bring about change', 'reinventing communities of practice' (Cochran-Smith & Lytle, 2009). This links teacher research closely to conceptions as the 'teacher as change agent' (Fullan, 1993) and 'teacher leadership' as *'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, pp. 287–288).

### 1.3 Common characteristics

In research and publications on teacher research, a wide variety of terms is used to describe research conducted by teachers: action research, teacher research, teacher inquiry, practitioner inquiry, self-study, professional learning communities. These concepts share a number of common characteristics (Cochran-Smith & Lytle, 2009):

- The professional context (the classroom, the school) as the place of research
- The teacher as a researcher and a learner
- The practice of working in communities, either by means of professional learning communities (Eraut, 1994; Hord, 1997; Wenger, 1998), or through involvement of 'critical friends' (Ponté, 2005; Wenger, 1998)



- The absence of clearly-defined boundaries between research and practice: The primary purpose of teacher research is to improve practice rather than to develop a theory that is generally applicable
- New interpretations of validity and generalizability
- The role of data collection
- The practice of sharing knowledge

Because opinions on research by teachers vary within academic development schools and cannot be directly linked to a specific concept, in this chapter we use the term generic term 'research by teachers'.

## 2. The Dutch context

### 2.1 Academic development schools in the Netherlands

In 2006, the Dutch Ministry of Education, Culture & Science (OCW) invited schools in primary and secondary education to apply for participation in a pilot programme as a 'teacher development school' (*opleidingsschool*) or as an 'academic development school' (*academische opleidingsschool*). Teacher development schools are schools which cooperate closely with teacher education institutes and which are strongly involved in the education of student teachers. A considerable part of the curriculum of initial teacher education takes place within the teacher development schools, involving both teacher educators from the university and mentors in the school. The academic development schools involved an expansion of the concept of 'teacher development school' since it explicitly adds a research component. This academic development school was defined as '*a school that combines its teacher education function with a component consisting of highly practice-oriented research and innovation*' (Ministerie van OCW, 2005c). Based on this definition, the academic development school has much in common with the concept of the Professional Development School (Darling-Hammond, 1994; Holmes Group, 1990) and the Research Engaged School (Handscomb & MacBeath, 2003; Sharp, Eames, Sanders, & Tomlinson, 2005).

From the applications received, eight pilot programmes were selected within primary education and eight within secondary education. The programmes were allocated funding for a three-year period and an extension was granted after 2008. When the pilots were first launched, no concrete guidelines were given on how the concept of the academic development school should be put into practice, which meant that the schools were free to flesh this out for themselves. Since research was a new activity for most schools, schools needed to provide answers to such questions as:

- What is the purpose of the research to be conducted in the school?
- Who will conduct the research in the school?
- What is the relationship between initial teacher education, research, innovation and post-initial professional development?
- What will be the consequences for the culture and structure of the school and for the qualities that teachers require?

In developing the concept of the 'academic development school', the focus in the Netherlands has primarily been on 'knowledge communities' and 'practices that transcend knowledge barriers' as identified by Broekkamp and Van Hout-Wolters (2007). The academic development school always involves a partnership between one or more schools and one or more teacher education institutes. Research is conducted by experienced researchers, students, teachers within the school or a combination of these.

## 2.2 Stimulating teachers' involvement in research

The active involvement of teachers in the research conducted within schools fits in a wider movement to strengthen the research involvement of teachers in the Netherlands, as can be recognized in attempts to strengthen the research tracks within Bachelor's programmes in teacher education, in the number of workshops and presentations relating to research by teachers and prospective teachers held at national educational conferences, in the increasing number of Master's programmes for teachers in the Netherlands and in the numerous Dutch-language books on school-based research published in the last years (Gerritsma, De Haan, Den Hollander, Mitzschke, & Van der Veen, 2010; Harinck & Vos, 2010; Kallenberg, Koster, Onstenk, & Scheepsmma, 2007; Ponte, 2012; Van der Donk & Van Lanen, 2012). This raises the question of how realistic the aim it is to extend the professional identity of the teacher to include the concept of 'the teacher as researcher'. At the same time, it raises the question whether the experiences acquired in the academic development schools with regard to research conducted by teachers have actually strengthened practical knowledge within schools and contributed to professional development of teachers.

## 2.3 The Academic Development School Amsterdam AcOA

The *Academische Opleidingschool Amsterdam* (AcOA) was one of the pilot programmes. AcOA consisted of three secondary schools in the city of Amsterdam: *Open Schoolgemeenschap Bijlmer* (OSB) and two schools of the *Montessori Scholengroep Amsterdam* MSA (with participation by *Montessori College Oost* MCO and *Montessori Lyceum Amsterdam* MLA). One of the key underlying visions of AcOA was the notion '*that everyone in our organizations who learns – whether they be pupils, trainee teachers, experienced teachers engaged in professional development or even head teachers – learns through professional development, through school development and by conducting research.*' (MSA/OSB, 2005, p. 5). The project's overall objective was: '*The creation of a long-term culture of professional development, school development and research in the schools. We aim to improve the teaching offered to pupils and the development of student teachers in our schools by combining innovation in teaching and school development with research.*' (MSA/OSB, 2005, p. 5). In order to achieve this, each of the schools allocated a group of teachers approximately one day a week for conducting research on research questions of practical relevance for the school. The research subjects were linked to central themes decided at school level. This approach reflected

the fourth strategy of knowledge communities, as highlighted by Broekkamp & Van Hout-Wolters.

In most cases, the teacher researchers worked in teams and were assisted by experienced researchers. In two of the schools, a distinction was drawn between teacher researchers and teacher developers. The role of the teachers developers was to use the outcomes of the research to develop concrete approaches to be used in the classroom. The overall aim of the pilot programme was to connect the three elements of teaching, development and research and to embed them in the schools' practice in such a way as to increase capacity for innovation. It was assumed that – by connecting the processes of teaching, innovation in teaching and school development with research – the quality of learning of the pupils and the professional development of teachers and prospective teachers would be enhanced. The idea was that the research conducted by the teachers within the school would contribute to the creation of a professional learning community. In this way, research was viewed as a driver for professional development and development of teaching or, in other words, as a driver for individual, collective and organizational learning and development. To investigate the extent in which teacher research in this academic development school indeed contributed to individual and team learning and to school development, a research study was designed looking at the actual impact of the teachers' research activities and outcomes and at the factors encouraging or inhibiting this.

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### 3. Research design

The study focused on the following research question:

*To what extent and in what way does research by teachers, as a learning arrangement for teachers within an academic development school, contribute to teacher development and school development, and which aspects of school culture and school organization play a role in this?*

Within the research design, we defined school development by the metaphor of collective learning, both on the level of organizational development by the school as a whole, but also on the level of collective learning by the team of teacher researchers (Teurlings, Vermeulen, & de Vries, 2004). According to Senge (1990) team learning is of essential importance because '*teams, not individuals, are the fundamental learning units in modern organizations*' (p. 10). It is within groups that changes take shape. Only when teams are able to learn, the organization can develop. In terms of operational implementation, a decision was made to focus on the teacher researchers. This was motivated by the fact that for the schools involved, research is a new element in their development from teacher development school to academic development schools. The teacher researchers were the pioneers who were given the task of shaping this new element.

Given these new grounds both for schools and teacher researchers, we chose a qualitative explorative research design to identify concerns, issues and negotiating factors which, according to the teacher researchers, play a key role in introducing a research role for teachers in schools. By using interviews focusing on stories and narratives, the study tries to gain insight in underlying processes. Choosing a qualitative study had the additional advantage of allowing the teacher researchers' own voices to be heard. This is in line with the need in the Netherlands to provide teachers with a more explicit and central role in educational innovation (Commissie Parlementair Onderzoek Onderwijsvernieuwingen, 2008; Onderwijsraad, 2007; Rinnooy Kan, 2007).

The research question was divided into four sub-questions.

1. What do the teacher researchers learn from conducting research?
2. What and how do they learn as a team?
3. What contribution do they make in their own view to development of the school as a whole?
4. What factors in the organizational and cultural conditions of the school support or inhibit these processes of individual learning, collective learning and school development?

At the level of the individual, learning can be translated into increased competence of the teacher researcher, which can be manifested at a number of different levels: that of knowledge, skills, attitudes, involvement and identity. Moreover, individual learning can focus on coming to grips with the role of teacher researcher and the process of research or on the subject of the research itself. With regard to team learning, the focus was on examining the extent to which there was a feeling within the team of teacher researchers that participants had developed shared knowledge and understanding. With regard to organizational development, the primary focus was on the interaction and exchanges between teacher researchers and school management, teams within the school (subsidiary school teams or sections), student teachers and teacher education institutes. In addition, attention was paid to positive and inhibitive factors in the structure and culture of the schools.

Answers to these questions were provided by means of a qualitative study of the teacher researchers' perceptions based on semi-structured interviews with eleven teacher researchers and conducted in groups in each school, supplemented by other sources: content analyses of key documents, participatory observation and reports on consultations with teacher researchers. The decision to opt for a qualitative study into the teacher researchers' perceptions created a restriction as there was no formal measurement of the actual learning benefits and no account taken of the perceptions of other stakeholders such as the school management. On the other hand this qualitative and narrative focus did make it possible to assess the outcomes experienced by the teachers, ensuring that the views of the teacher researchers played a central role. In this way two-third of the teacher researchers that were

involved in the pilot programme were interviewed. The interviews with the teacher researchers were transcribed and labelled on the basis of the research questions. The study covered the period September 2006 – April 2008.

## 4. General outcomes

In this section, we outline the global results. In this, no distinction is drawn between the different schools. The conclusions are illustrated by typical quotations from the interviews.

### 4.1 Individual learning

In the questions posed to the teacher researchers, a distinction is drawn between what they have learned from **doing** research and what they have learned from the **content** of the research itself. With regard to the first question, none of the teacher researchers had experience with educational research at the outset. Most of the teacher researchers who had conducted some research as part of their studies had largely forgotten any research skills they might have acquired. As a result, the teacher researchers indicated that they had learned a lot from conducting research. They referred not just to knowledge and skills relating to research methodologies, but also to changes in attitude, involvement and identity.

*You learn that your own behaviour is not self-evident, but rather something you can question.*

*My attitude has changed and I have a much firmer basis for what I do. In the classroom I am more aware of the different variables at play, I reflect on these more and have adopted a more investigative approach to my class, for example with regard to the variable of disruption.*

*For me, it was a real eye-opener to realise how closely connected research is to classroom practice, and I gradually noticed this more and more. You can take a question, wondering how it will work in practice, and then study it. It helps you focus on your everyday practice – you need to be prepared to really question yourself to see whether what you're doing is effective.*

*Research enhances the work you do, shows that it matters what you do and that you can improve the quality.*

*What I really enjoy is looking at things from a slight distance. As a teacher, you focus on the lessons. As a researcher, you look at things from the outside and can ask questions. People use me as a source of information and I enjoy that detachment.*

*It actually gives me a lot of pleasure. I simply enjoy dealing with people and finding out how people experience things; this is something I liked doing anyway. And the feeling that you can contribute something that will be*

*beneficial to the school, and that I feel as if I'm doing something that will have a lasting effect... that I have done my bit to create something for the future that may even last... that it is something I can be a little proud of.*

*I have learned a lot about the research process itself. In the past, I would notice something in the lesson that I wanted to change and then come up with something new. Now I start by thinking about why you do something and the reasoning behind it, what research it is based on, whether you just improvise or genuinely try to change something. That awareness is something completely new for me.*

Another part of the learning outcomes relate to the content of the specific research theme on which the teacher researchers focused themselves. Various teacher researchers indicated that their research gave them the feeling that they had achieved a certain level of expertise with regard to the research theme and a new understanding of their pupils and/or lessons. For example, they had seen new ways of teaching used by colleagues or they had learned more about rules concerning lesson design. Several teachers also provided examples of what had changed in their behaviour:

*You discover that you have become something of an expert in the area...*

*I now focus on different things in the classroom, and I am much more conscious when applying principles. Telling the children in advance what they will be learning. Evaluating things afterwards. Offering as many different working methods as possible. I teach English, which a lot of the children quite like anyway. But I have become much more aware of what I'm doing. Also, I see other colleagues teaching and think 'those learning activities look great too'.*

*Preparing and evaluating this type of themed lesson really helps me understand the standards it needs to meet.*

*Talking to the pupils and listening to their ideas about the mentoring scheme helps you to see the bigger picture from their perspective, it helps you improve your capacity for seeing things from a different perspective.*

Finally, a number of teacher researchers said that conducting research had also had an impact on the way they view the school organization and their role within it.

*Maybe I have also learned to be clearer in my approach to the school management when I want to get something done. It's because I feel more self-assured and really feel I have developed. Not just presenting a problem and expecting it to be solved. But actually thinking about problems and thinking about what I want. And proposing solutions.*

What stands out is that teachers primarily highlighted generic learning outcomes. The teacher researchers said that they:

- had gained a more realistic impression of and more understanding for fellow teachers, school management and themselves, through a deeper knowledge and understanding of the school as a whole and of the role played by management;
- learned to work with others in a different way and to make use of the various skills within the team;
- gained an interest in research because they had begun to understand its practical usefulness, e.g. in enabling them to raise and discuss issues;
- realised that many themes are much more complex than they had first thought;
- learned to approach things with a greater professional detachment and to see them from different perspectives.

## 4.2 Team learning

In two of the three schools, the teacher researchers indicate that a real process of team formation had taken place: Teacher researchers supported each other and contributed ideas on each other's research subjects.

*We form a close team in which we complement each other. Recently someone dropped out and we quickly noticed how we missed that person's specific knowledge and input as a result. We give each other feedback and act as a sounding board for each other when we're not sure how to proceed. It takes time to gain confidence in each other in order to agree on a plan. Things went from good to even better and there is a real sense of connection now.*

*We are certainly a team. Our different personalities have really come to the forefront, which is great to see, and is extremely useful when sharing our tasks. For example, one person might be really effective at arranging things quickly. Another might excel at writing and looking at things analytically. It's a really good combination. I feel as though we complement each other.*

*Yes, I would certainly call it a team, because I get a lot of support from them... They are a group that I can turn to. I depend on them.*

*Yes it is certainly a team, to the extent that, I was really struggling just now, and you walk into the corridor and see X standing there and Y walking past and there's a look of recognition. The feeling of, hey, we belong to the same team: that type of feeling.*

Based on the responses of the teacher researchers, this process of team formation led to several effects:

- the group developed a shared knowledge and understanding about research and the school
- the group developed a shared sense of purpose because its members are all enthusiastic about changing things in the school
- the team members considered themselves part of the team

- the teacher researchers provided mutual support and acted as a sounding board for each other
- the team members gained confidence in each other and developed bonds of friendship.

The fact that the school management of one school also approached the teacher researchers as a group to contribute ideas about innovation and internal teacher development, helped to strengthen the process of team formation. The interviews showed that team learning was considered most successful if a small group of teachers can work on the same research project, with each of them devoting approximately the same number of hours and without a distinction being drawn between teacher researchers and teachers responsible for design tasks.

*If the research and design components were separated here as they are in other schools, I would stop doing it... It would be like a child with two mothers... one who looks after it and the other who raises it... the two are too closely related and 80% of the time would be wasted.*

*I am glad that at our school design and research are done by one and the same person, because one leads on naturally from the other.*

*I'd like to work with a group on the same research project. By working together, we can share the benefits, keep each other on our toes, complement each other and take advantage of each other's strengths. I also feel that by working together we achieve much more.*

In two schools, a distinction was made between designers (who were given only a limited number of hours) and the researchers (who were given many more hours), but this did not lead to productive cooperation. At the outset, the teacher researchers had to formulate their research question, which meant that the teacher designers could not be deployed until a later stage. The same applies to the involvement of student teachers.

*It definitely takes a while for things to become clear and it was actually only in the last year that the penny really dropped. This is because you gain a greater understanding of conducting research and of what is going on in the school in the process. It is only when you fully understand this yourself, that you can communicate it to student teachers and involve the student teachers in something that is useful to the school.*

In addition, the fact that the teacher researchers had to provide direction to a group of teacher developers did not always fit well within the informal culture that exists among colleagues at many schools.

*The task description of the development team laid a certain level of emphasis on the fact that the teacher researcher was in charge of the design team. At the start, I was not even sure what it all involved but I still had to provide direction to a team. At times I had no idea myself, so how could I provide leadership to others? I found it really difficult.*



*I think that it might have been this informal character that caused the design team to break up. It may also have been because at that point I was not really ready or capable of taking on a leadership role. It all remained quite informal. There wasn't really any set procedure for meetings.*

### 4.3 Contribution to organizational development within the school

The teacher researchers' views on the contribution made by their research to organizational development vary significantly among the schools. In only one of the schools the teacher researchers are positive about their research's contribution to wider school development.

*The school development days are now much more active. A real exchange of ideas takes place now, something which has gradually grown. These days have helped to make clear to the rest of the school what the innovation team is doing and the general response has been positive. Some people also contribute suggestions themselves.*

*There is now more discussion about teaching. In the past, we had study days. These involved a speaker and were sometimes interesting, sometimes less so. And after the study days it was business as usual. Now, it feels like each new study day is related to the previous one. There is actually a sense of development, which people appreciate. They enjoy taking part and attendance has improved. There is clearly more involvement than there used to be.*

In achieving this learning effect, it was important that key figures in the school (school management and team leaders) adopted the research projects and involved teacher researchers in processes of school innovation. It sometimes proved difficult to achieve a connection with other teams within the school. In only one of the schools the role of the teacher researchers was positioned in a truly effective way: the school management made them responsible for coordinating eight internal development days. During these days, the teachers responsible for research and innovation were able to share their knowledge and gain feedback from colleagues. This proved to be effective: everyone within the school was aware of what the teacher researchers were doing and the teacher researchers felt that gradually people were starting to discuss classroom innovation more intensively within the school. At the other schools, the teacher researchers felt that their channels of communication with the school as a whole were limited and that they had too few possibilities to communicate the relevance of their research for classroom innovation widely.

The interviews revealed that for organizational development to happen, there needed to be close interaction between the school management and the teacher researchers. In the course of the project there was evidence in all three schools that both teacher researchers and school management struggled to identify their own role and to define their power and responsibilities.

*I actually invested an awful lot of time in the whole process of change within*

*the school and I was very uncertain about the whole thing. I was unsure of what position I really had in the school. I really found it quite difficult.*

When the management of the school structured the research activities too rigid, it became difficult for the teacher researchers to develop a sense of ownership of their research or design. On the other hand, too much freedom hindered the teachers in carrying out their task and disseminating the results to the rest of the organization because of the lack of a clear structure and framework for the research. According to the teacher researchers, the most effective structure was a situation in which school management devised a clear plan and framework in advance and ensured that a number of themes are formulated but subsequently showed a willingness to step back in order to enable teachers to develop a sense of ownership of their research/design and formulate their own questions. This created space for the teacher researchers and prevented them from feeling isolated within the school.

*We gradually began to discover our own role and take control of things. We make recommendations which are taken seriously by the school management. The school management also needed to get used to this kind of process. Our role is now much clearer and I'm happy about that. Everyone is now aware of their own responsibility.*

Various teacher researchers indicated that they would like to make a contribution to school development rather than focusing their research on an individual interest of their own. In order to ensure that the research theme is effectively linked to school development, it was important for the school to have a clear vision that provides direction in the choice of research ultimately conducted.

## 5. Discussion

### 5.1 The contribution of teacher research to professional development and school development

In the context of the *Academische Opleidingsschool Amsterdam*, the teacher researchers believed their involvement in conducting research actually led to increased professional development at a range of levels. One thing that stands out is that learning was achieved not only in relation to the specific theme of their research studies, but also with regard to professional detachment, awareness of the school's overall vision and the school organization, insights into conducting research, the understanding of colleagues, and awareness of one's own passions and potential. In this respect, the research at the *Academische Opleidingsschool Amsterdam* led to a more professional attitude on the part of teachers and helped counteract a sense of 'us and them' within schools. The fact that various teacher researchers were working in the schools also led to processes of teambuilding and the development of shared knowledge both in terms of conducting research and of the specific subjects covered by the research. The teacher researchers felt that they had a shared mission and

could act as support and a sounding board for each other. Team formation was reinforced when the school management addressed the teacher researchers as a group and involved them in discussions and decision-making about innovation and education within the school. In those schools, where a distinction was drawn between the teacher researchers and those responsible for classroom innovation under the direction of the teacher researchers, the teacher researchers often felt that this did not fit in with the informal culture within the school and therefore this model proved not to be effective in the two schools in which it was applied. The contribution the teachers' research made to organizational development as a whole varied among the different schools. This appeared to be highly dependent on the extent to which the research subject was being made relevant to the school as a whole. Improvements can be achieved in this area by means of combined action by the school management and teacher researchers in determining the ultimate research question and in disseminating the results of the research at study days within the school.

## 5.2 Key conditions for successful academic development schools

The interviews revealed a number of key preconditions with regard to the organizational culture and organizational structure within the school that the teacher researchers believed were necessary in order for an academic development school to be successful.

### *The importance of ownership and involvement*

As highlighted above, a balance needs to be struck in terms of the space and direction provided with regard to the content of the research. The school management and teacher researchers must be able to feel that they both have ownership of the research themes. The shared intention is that the research contributes to school development. This calls for the school management to formulate and monitor the frameworks and structural links within the school by means of the following:

1. allocating a position to the researchers and acting as a 'commissioning party';
2. monitoring, supporting and supervising the research as a whole;
3. remaining in dialogue, translating ideas into structure and arriving at decisions if necessary;
4. creating channels of communication within the school as a whole;
5. making use of the results.

This also contributes to the feeling of acknowledgement and pride that teachers can derive from conducting research and to the permanent embedding of educational development within the school as a whole.

### *The importance of teamwork*

All the teacher researchers in this study indicate that motivation and inspiration are highest when they are working with other people, preferably on the same research theme. They indicate that learning is more effective if it occurs in a

group in which teachers develop things together, can take advantage of each other's skills and feel that they really need each other.

#### *Room for variety*

There are many differences in school culture, personal preferences, and the phases of development in the schools, but also in type of research questions. This means that there needs to be room for variety in research design and structure. It is important to avoid a rigid structure and to carefully consider what suits the particular school at that time.

#### *Focus on research, design and implementation*

In the schools studied, combining the research and design roles in a single task and in an individual teacher researcher, proved to be the most effective method. The teachers who carried out these two tasks together considered them as two facets in the innovation process. However, for the dissemination and implementation of research results, it can be useful for teacher researchers to work together with a group of teachers and students who they involve in the formulation of the research question and in conducting the research, and who attempt to implement the results of the research in their teaching. This enables a research strategy which corresponds to the second strategy highlighted by Broekkamp & Van Hout-Wolters. It can generate a snowball effect in the implementation of the research results since colleagues (and prospective colleagues) can benefit from the competence developed by the teacher researcher. Timing is an important aspect in all this. This proved to be a problem in the schools that drew a distinction between teacher researchers and teachers-as-innovators.

#### *Impact on the school culture*

The case studies showed the importance of connecting with the prevailing school culture when designing the structure of an academic development school. For example, an informal culture is not conducive to a structure in which teacher researchers must supervise their fellow teachers. On the other hand, research within the school can also play a role in changing the culture. Several teachers indicated in the study that the research had reinvigorated discussions on teaching and learning within the school. All the schools highlighted that conducting research in the school provides a counterbalance to the dominant culture of ad hoc action and of 'doing' in which little time is taken to reflect.

#### *Bringing teacher researchers into position*

One thing that emerged in this study was that, in order to achieve a connection with the whole school, it is important to give teacher researchers a position in the school. The school management plays a crucial role in this. The experiences of the teacher researchers in this case study show that it is important to consider in advance what possibilities there are for communicating with the whole school about what is being achieved within the framework of the academic development school.

### *Room for a new dynamic*

Conducting research and teaching pupils call for a completely different dynamics. This means that creating an academic development school demands self-discipline within the school at a range of levels. Research involves a different dynamic from the dynamics of teaching and educational innovation. School management must not expect to see concrete and usable results too quickly. Research calls for a long-term approach and can be at odds with more ad hoc forms of organization at schools. Especially in cases where the teacher researchers still need to develop their own competencies in terms of conducting research, the process of formulating effective research questions and research designs can be time-consuming. If no account is taken of this different dynamic, research is likely to remain a kind of 'foreign body' within the bustle of school life, which can easily produce feelings of irritation.

### *Room for concentration*

In general, the teacher researchers felt that the time allocated for research (one day per week) was sufficient, but could be organized more efficiently. They said they would prefer to have one whole day without other duties, rather than the hours being spread across the week. This is because other urgent priorities can easily eat into the research time. The teacher researchers at all the schools also highlighted the benefits of occasionally working one or two days away from the school and the fact that a designated workplace would be more conducive to the concentration, communication and teamwork required.

## **6. Conclusion**

### **6.1 Limitations of the case study**

The study took place within one of the sixteen academic development schools in the Netherlands during the initial phase of the project. This means that its results are limited in scope: it is a snapshot within a specific local context. In addition, the research question was answered from the perspective of the teacher researchers. The research question concerning the contribution of teacher research to individual learning by teacher researchers, to team learning and to organizational development was not answered by means of a measurement of the absolute increase in knowledge or concrete improvements at these three levels, but by asking the key individuals responsible for shaping a new process within the school about their perceptions with regard to the outcomes and problems experienced.

The actual research projects conducted within the academic development school were not a subject of this study. This means that we are not in a position to make any assessment of the process validity of the research conducted in the schools. In view of the duration of the study, it was also not possible to make any assessment of the impact of this research on innovation within the schools (catalytic validity).

## 6.2 Four types of outcomes

With regard to the outcome validity of the research conducted within the schools, the interviews with the teacher researchers showed that the academic development school can result in four different types of outcomes:

1. Learning outcomes that are based on concrete research results and which contribute to achieving greater depth, understanding and variation in the knowledge of the teacher researchers and others with regard to the theme of the research. These learning outcomes also contribute to a deeper insight into the effectiveness of new classroom innovations or contribute to the clarification of the school's overall vision. This opens up opportunities for improvement and further classroom innovation and school development.
2. The development of a broader sense of professionalism and leadership among the teacher researchers involved. The teacher researchers interviewed said that they had developed in the following areas:
  - professional detachment and the ability to see things from different perspectives;
  - awareness of the school vision and educational concept;
  - awareness of the school as a complex organization and the role played by management;
  - awareness of the potential added value of research and its benefits for classroom innovation;
  - a more realistic impression and a greater understanding of colleagues and of their own actions;
  - new ways for cooperation and increased awareness of the qualities of colleagues;
  - increased understanding of their own passions, competencies and potential.
3. The development of closely-knit innovation teams in the school, with shared knowledge and involvement in the school and an understanding of the school as a whole. In addition, it also increases awareness of a shared objective, that of working together to improve teaching at the school
4. Bridging the 'us and them' relations between teachers and management in the school. In all of the schools, the teacher researchers said that they now had a greater understanding of and in some cases more trust in school management. In at least one of the cases, this led to a different attitude on the part of teachers towards school management, which enabled both groups to act as equal partners in dialogue with a shared objective and allowed each to take on their own tasks and responsibilities for school development.

The last three outcomes in the list above are probably just as important as the first because openness, understanding and teamwork between teachers and between teachers and school management create the basis for the development of a professional culture and teacher leadership that focuses on improving quality. It is clear that this kind of learning process requires investment. All the teacher researchers were allocated approximately one day in their weekly schedule for conducting research. This shows that research is not something

that the teacher can simply do in his or her spare time. Although this is a significant time investment, it can be compared with a Master's degree programme, which also requires around one day a week and might result in similar learning outcomes.

The comments made by the teacher researchers with regard to team learning provide an indication of the dialogic validity, showing how the teacher researchers support each other as peers. The support offered by research experts from the University of Amsterdam Graduate School of Teaching and Learning also contributed to increasing the dialogic validity. It is not possible to make any pronouncements about the democratic validity of the research conducted in the school because none of the interviews referred to the extent to which the various stakeholders were actively involved in the research.

### 6.3 Relation with other studies

The results of our study are comparable with the results of other studies. Research by Darling-Hammond shows that research conducted by teachers not only leads to a deeper understanding on the part of teachers of how they can involve pupils in active learning processes but also ensures that they are better equipped to act as teacher leaders and agents of change within schools (Darling-Hammond, 1994). The types of outcome highlighted above (especially the development of a broader professional approach by teachers and the bridging of 'us and them' relationships) correspond with the results of research conducted by Loughran. He points out that practice-oriented research conducted by teachers can lead to a change in perspectives (Loughran, 2002).

The study by Meijer et al. was conducted in a similar context: an academic development school in the Netherlands (Meijer et al., 2010). Because of the pilot character of the academic development schools, the various pilot programmes differ in terms of context and structure. As a result, our study also leads to additional recommendations. In their recommendations, Meijer et al. highlight the importance of teamwork, providing access to research outcomes, a focus on the different forms of validity (Anderson & Herr, 1999), and the need for teachers to reassess their professional identity and begin to consider themselves more as producers of knowledge. Our research also shows the importance of teamwork and the need for equality within this process. Following on from Meijer et al, the teacher researchers in our study stress the importance of the culture and structure within the school for optimising the learning impact of the research conducted by teachers at the school level. Commitment on the part of school management is essential in this. Teacher researchers are not content to pursue their own individual preferences; what they want is to contribute to school development. In order to achieve this, teacher researchers need to be given a clear position and status within the school. The school management can also help to ensure that the results of the research projects are actually used within the school by giving the teacher researchers a leading role in team meetings and study days. This can help intensify the link between

professional development, educational innovation and school development achieved by means of research.

On the provision that these preconditions are met as much as possible, virtually all the teacher researchers believed the academic development school to be an effective structure, as the following statement by one of them shows:

*I think it is a highly effective way of enabling things to develop from the inside-out. Of course, that is not the whole picture, as there is also some direction from above. But in my experience, when things are imposed on teachers they are not very effective. This is a nice combined approach which I believe shows great promise for the years to come.*



## INTERMEZZO 2

# Master's programs for teachers in the Netherlands

### 1. School-centered versus university-centered development programs

In the previous chapter, we examined learning arrangements within an academic development school and how such learning arrangements contributed to the leadership development of teachers. In our study, we identified conditions in the organizational culture and structure that would influence the impact of such learning arrangements on work and leadership practices. When these conditions are met, individual teacher development may have a catalytic impact on the school organization as a whole, as the research activities of teachers may impact their colleagues. Teachers' involvement in research activities within the school also contributed to a broader sense of professionalism, strengthening the ability of teachers to become change agents and leaders within the school.

The learning environment that was the focus of this case study was dominated by the activity system of the school. Within the academic development school, the university was involved by supporting teacher researchers in developing their research skills. However, the initiative was with school management, as the aims, goals, conditions, and criteria for teacher research were defined by school management. The university played the role of advisor, whereas the management of the school had the overall responsibility for design and outcomes of the teacher researchers' development process. Consequently, the design may be characterized as 'school-centered'. Academic development schools aim to connect teacher research, the professional development of teachers, and school development. However, in this case, the focus on the professional development of teachers remained implicit, as no explicit learning goals or outcome criteria were formulated for the teachers involved, nor was there any explicit assessment. Therefore, the focus was on the teachers' informal and implicit learning.

In this respect, the learning arrangement within this academic development school differs from a Master's program. In a Master's program, explicit outcomes are defined, and participants are assessed against these outcomes.

Universities have an explicit responsibility to set quality criteria based on formal accreditation frameworks. Given that responsibility, universities have a leading role in designing the curriculum and in assessing participants in Master's programs. Therefore, Master's programs may be considered 'university-centered' (Cornelissen, 2011).

University centered learning arrangements are characterized by interaction between two activity systems: university and school. As indicated in Chapters 1 and 2, tension might result from this interaction of two activity systems with different responsibilities and different perspectives. The interaction and shared understanding between these two activity systems cannot be taken for granted. A gap may result between the individual development that is stimulated within a Master's program and the daily reality at the school, limiting the impact of a Master's program.

The issue of the impact of Master's programs on teachers and schools is relevant because there is an increasing focus in Dutch and European teacher policies on Master's programs as a key professional development activity for teachers in schools, as indicated in Chapter 1.

## **2. Recent developments in Master's programs in the Netherlands**

The Bologna process has created a European higher education area with qualifications at the Bachelor's and Master's levels. This process has led to a growing variation in Master's-level programs in all higher education sectors, including teacher education. Because many member states believe that a higher qualification may contribute to an increase in teacher quality, several European member states have developed policies on Master's programs for teachers to raise the overall qualification level of teachers. However, the strategies used by member states differ.

In a response to the European Commission's and European Council's communications 'Improving the Quality of Teacher Education' (European Commission, 2007; European Council, 2007), several member states have decided to raise the minimum qualification level for teachers to the Master's level. In other countries, the initial qualification level for (part of the) teachers remains at the Bachelor's level, whereas new post-initial courses are developed to create in-service opportunities for teachers to raise their qualification levels. Although this second strategy, focusing on post-initial Master's qualification programs, might appear to be less ambitious than the first strategy aiming at ensuring a Master's qualification for all new teachers, the second strategy is important because it focuses on the vast number of teachers who already work in schools.

Not only national or European governments express the ambition to raise the qualification level of teachers to the Master's level. Teacher organizations

also express this ambition. The European teachers' unions state that the qualification level for all teacher education programs should be raised to the Master's level (European Trade Union Committee for Education, 2008), whereas the Dutch teachers' union AOb emphasized in a manifest published in 2006 that every teacher in school should have the right and opportunity to follow a qualification course at the Master's level during his/her career (Algemene Onderwijsbond, 2006). Although there is no clear evidence connecting teacher qualifications to the quality of teaching in schools (Snoek, 2013b; Van Veen, Van Driel, & Veldman, 2011), teachers themselves indicate that they consider 'qualification programs' and 'involvement in individual and collaborative research' as the professional development activities with the highest impact on their development as a teacher (OECD, 2009).

In response to the Bologna agreement, Dutch universities for applied sciences transformed several post-initial programs for teachers into Master's programs (HBO-raad, 2006). In addition to existing programs focusing on special needs education, school management, and teaching in upper secondary schools, the universities for applied sciences developed a new Master's program focusing on teacher leadership in all educational sectors (Snoek & Teune, 2006). This program focused on three key elements: being an expert on teaching and learning while contributing to the development of knowledge on teaching and learning, being an initiator of curriculum development in relation to developments in the wider local context, and being supportive of colleagues (Snoek & Teune, 2006, p. 114-115).

This Master's program 'Learning & Innovation' started in 2007 at the Hogeschool van Amsterdam and similar programs are now offered at 10 universities, with an annual enrollment of approximately 600 teachers (data from [www.hbo-raad.nl](http://www.hbo-raad.nl)).

To increase the number of teachers with a Master's level qualification, the Ministry of Education, Culture & Science initiated in 2008 a bursary system – the '*Lerarenbeurs*' – , where teachers working in schools could apply for grants for post-initial Master's programs. These grants may be used for programs with a maximum duration of three years, and they cover the study fee as well as replacement costs for a half-day per week. The bursary system has become enormously popular; from 2008 to 2012, 18,000 teachers applied for funding (Ministerie van OCW, 2012). In 2013, the national budget for the grants was 100 million Euro.

In national policy documents, the Master's programs are expected to contribute to a wide variety of teacher qualities, covering pedagogical and methodological qualities of the teacher at the classroom level, subject expertise, school development, research, and general professionalism. In addition, Master's programs are expected to contribute to career possibilities, status and the attractiveness of the profession (Snoek, 2013a).

### 3. A Master's program in co-operation with schools

In 2008, a group of secondary schools challenged the teacher education institutes to develop Master's programs that would fit with their ambitions concerning school development and in which the professional development of teachers was in direct relation to the change agenda of the school. Graduates of the Master's programs were expected to be able to act as change agents and teacher leaders within their schools.

The programs were intended to focus on educational design and innovation, on the pedagogical role of the teacher in relation to diversity, on performing research and collecting evidence on the level of the classroom and the school, and on (subject related) teaching methodologies. Because the programs should take the school of the participant as the central learning environment, part of the Master's program should be focused on developing knowledge about and sensitivity to organizational and change processes and on supporting colleagues (NIME, 2008).

With the support of the national Council for Secondary Schools, the Netherlands Institute for Masters in Education (NIME) was created. The NIME started a tender procedure in which universities could offer their proposals for Master's programs. From these proposals, three consortia were selected to offer one Master of Education program and three Master of Science programs. The first of these programs started in Amsterdam in 2009 (Snoek & Galjaard, 2011).

Because the aim of these Master's programs was to connect the Master's program to the change agenda of the school, the explicit ambition was to connect the activity system of the school and the university. Nevertheless, the programs may be characterized as university-centered because they were designed by the university. Although the program was initiated by a tender procedure, the involvement of the schools was limited, and the program was dominated by general criteria set by the government. This process implies that the NIME Master's programs fit in the bureaucratic scenario.

For the next case study in this research project, we take one of these Master's programs – '*Professioneel Meesterschap*' – as a context in which to investigate the extent to which and the way in which a formal university driven Master's program for teacher leadership contributes to teacher development, to new leadership roles for teachers and to school development.

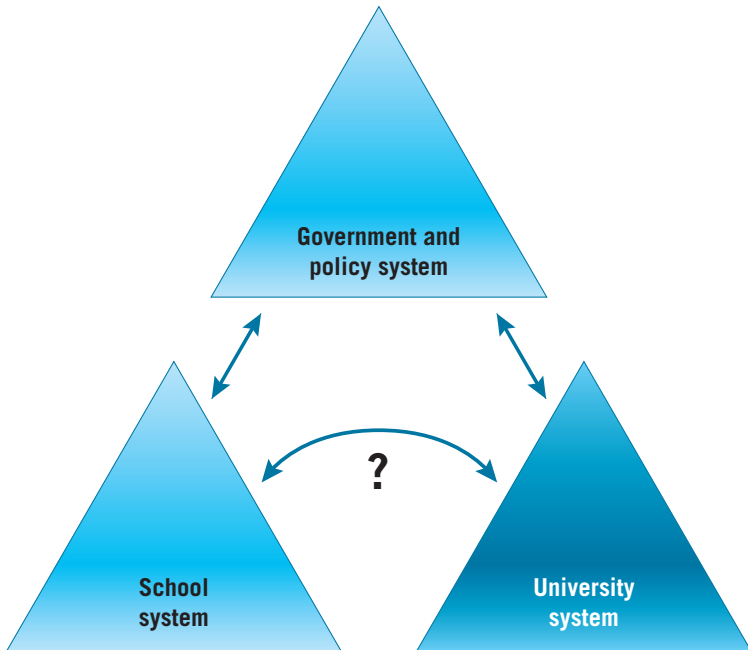
The Master's program *Professioneel Meesterschap* is a two-year part-time program leading to a Master of Education (MEd) qualification. The program was designed by a consortium of three universities and validated by the NIME. The content of the program focused on theories on learning and pedagogy and on school organization and innovation. The participants were challenged to connect the theories presented in lectures to their own local context through a variety of assignments. Their thesis research focused on a specific issue within their local context and was designed as a red thread running through the program. This red thread began with a careful theoretical and practical analysis in the

first year, followed by the design and evaluation of an intervention in the second year. Given the background of the NIME master, the assumption was that school management and the direct supervisor of the participant would be closely involved in the Master's program, would act as closely involved stakeholders in the thesis research, and would create the conditions for applying the developed leadership competences in the school.

The first cohort of 9 participants started in February 2009 and graduated in February 2011, the second cohort started with 15 participants in September 2009 and graduated in September 2011.



# 4







## CHAPTER 4

# The impact of the organizational transfer climate on the use of teacher leadership competences developed in a post-initial Master's program<sup>6</sup>

*In this Chapter, the focus is on teacher leadership development in the context of a formal Master's program. The transfer of learning outcomes of Master's programs for teachers is not self-evident. The extent to which leadership competences that are developed during a Master's program are applied at the workplace, depends on several factors. One of these factors is the organizational transfer climate of the school. In this case study, 18 recently graduated teachers and their supervisors were interviewed on the transfer of newly developed leadership competences and on how the organizational transfer climate of the school supported or hindered this transfer. In schools with high levels of transfer, strategic partnerships between Master's-level teachers and formal leaders were observed, which facilitated a two-way process in which the application of new competences led to changes in the workplace. In these contexts, the Master's program contributed to both professional development and school improvement.*

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<sup>6</sup> This chapter is based on 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(1), 91-100.

## 1. Introduction

### 1.1 The effectiveness of Master's programs as a strategy for professional learning

As teachers are the key to enhancing learning in schools, it is essential that they themselves have access to extensive learning opportunities (Bransford, Brown, & Cocking, 2000). Thus, it is important to establish which learning opportunities are effective in helping teachers provide their students with the best possible education. Research on in-service professional development suggests that effective program designs are characterized by situated learning in the workplace, collective and collaborative learning within a team of teachers, and the involvement of teachers in the goals, content, and design of learning activities (Borko, Jacobs, & Koellner, 2010; Kennedy, 1998; Knapp, 2003; Little, 2006). Such characteristics are in contrast with the characteristics of many traditional qualification courses, which are often characterized by off-site activities (e.g., lectures and workshops), individual subscriptions, and fixed curricula.

Nevertheless, in policies on teacher quality and career requirements, qualification courses like Master's programs are considered important tools for teacher development and improving student outcomes. Such programs are thought to contribute to Master's-level teachers assuming leadership roles within their schools (Blackwell & Diez, 1998). Teachers themselves also consider formal qualification courses to be effective professional development activities, as shown by the Teaching and Learning International Survey (TALIS) (OECD, 2009).

As there appears to be tension between the design criteria for effective in-service professional development activities and the actual design of many Master's programs, there is sufficient cause to investigate the actual impact of Master's programs. Qualification courses, such as Master's programs, are expected to have a strong impact on teachers in terms of their professional learning. However, the main goal of such programs is that they lead to changes in teacher behavior in the classroom and to contributions to school development. Therefore, studies on the actual impact of Master's programs must determine how these programs contribute to the transfer of learning to the workplace (De Rijdt, Stes, Van der Vleuten, & Dochy, 2012). In this paper, we consider the impact of a post-initial Master's program that is focused on the development of teacher leadership by analyzing the extent in which leadership competences are used at the workplace and the conditions within the school that influence this during and after an in-service Master's program.

In research into 'transfer of learning' to the workplace, transfer is usually defined as the effective and continuing workplace application of the knowledge, skills, and conceptions gained during professional development programs (De Rijdt et al., 2012). In this paper, we build on this body of research, since it

has identified important elements in organizations that enhance or hamper the use in the workplace of competences learned in courses or programs outside the workplace. However, we adopt a different notion of transfer than is implied in this research. We do not conceptualize 'transfer' as carrying over discrete entities of knowledge and skills to a new situation, but rather as a process of boundary crossing between activity systems which involves a reinterpretation of the work situation and an adaptation of the competences learned in – in this case - the Master's program (e.g., Tuomi-Grohn & Engestrom, 2003). From this perspective, 'application' or 'transfer' of competences implies an active process of adapting the learned competences for use in the work situation, thereby changing the work situation as well.

### 1.2 Developing non-positional teacher leadership

In their review of teacher leadership research, York-Barr and Duke (2004) define teacher leadership as *'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'* (pp. 287–288). This leadership can be distributed in different ways (MacBeath, 2009): e.g., through formally mandated leadership, based on strategic positions or roles in the organizational hierarchy of the school, or through non-formal and culturally embedded leadership, recognizing the potential of all teachers to exercise leadership as part of their role as teachers (Frost, 2012; Kessels, 2012; Lambert, 2002). In a review of recent literature on teacher leadership, Poekert (2012) concludes that studies on teacher leadership are more focused on defining the concept than on how teacher leadership is developed, is exercised, and impacts teaching and learning. Moreover, these studies mainly focus on the role of the principal and less on the teacher's role in teacher leadership. The literature mainly describes schools in which teacher leadership is evident and established, whereas few studies have considered schools that are only beginning to recognize teacher leadership or are engaged in a process in which teachers are encouraged to develop their leadership competences (Muijs & Harris, 2006). Few studies look at schools in which the frames of reference that are taken for granted are transformed and new habits of thinking are developed (Ross et al., 2011).

### 1.3 Transfer of learning and boundary crossing

A Master's program focused on teacher leadership aims to support and strengthen the development of leadership qualities such that the participants are able to exert their leadership through initiating new developments, supporting decisions through the use of inquiry-based information, and influencing and inspiring their colleagues, principals, and other members of the school community. Such an exertion of leadership requires the transfer of qualities developed in the Master's program to daily practice in the school environment. As the key actors in this transfer process are experienced teachers, we need to refer to theories on adult learning *'which, rather than seeing learning principally as an individual, cognitive phenomenon, takes*

*into account the interrelationship of many factors in the learning situation, while placing the learner's contexts, purposes and practices at the centre'* (Tusting & Barton, 2003, p. 7). Thus, the metaphor of transfer has been criticized as being too simple, based on replicative conceptions of learning, and as being disconnected from complex contextual factors that influence the dynamics of the transition between the activity systems involved (Engeström, 2001): the university (the learning context) and the school (the work context). Boundary crossing must take place between these two activity systems (Hager & Hodkinson, 2009) while the transition between learning context and work context must be understood as dynamic and complex (Tuomi-Grohn & Engeström, 2003). The two contexts influence each other and both contribute to the learning process of the participant, who acts as the bridge between the two settings (Beach, 1999).

This perspective implies that creating favorable conditions for effective application of newly developed leadership competences in schools is the responsibility of not only the program designers at the university but also of the key stakeholders in the school.

Theories on transfer that have been developed in the context of the human resource development sector can help to understand the dynamics of leadership development for teachers. In addition to program design factors—such as objectives, methods, and opportunities for practice—and learner characteristics—such as ability, skills, personality and motivation to apply the learned competences and skills in their daily work—, recent studies on the transfer of learning have emphasized contextual factors which are related to the work environment as important elements that have an impact on the transfer of learning (Blume et al., 2010). Work environment factors are characteristics of the workplace that influence the extent to which the organizational context invites and supports learners to use their learned competences and skills. Such factors recognize certain entrenched values, beliefs, and assumptions at the workplace that can prevent effective transfer (Bunch, 2007). Arthur, Bennett, Edens and Bell (2003) emphasize 'environmental favorability' as *'the extent to which the work environment is supportive of the application of new skills and behaviors learned or acquired'* (p. 242).

#### **1.4 Organizational transfer climate and teacher leadership**

Successful transfer requires an organizational context that effectively supports transfer (Hatala & Fleming, 2007; Lim & Morris, 2006; Rouiller & Goldstein, 1993). This context is referred to as the organizational transfer climate: the social support structure for learning that exists within an organization (Cheng & Ho, 2001; Hatala & Fleming, 2007). The literature on organizational transfer climate identifies a number of elements in the work environment that are considered predictive factors for the transfer of learning in the workplace. Burke and Hutchins (2007) emphasize the importance of alignment between the aims of the learning program and the strategic direction and human resource policies of the organization. Broad and Newstrom (1992) suggest a partnership between

learners, program supervisors, and work supervisors to facilitate this alignment. Rouiller and Goldstein (1993) and Baldwin and Ford (1988) indicate the importance of situational factors that stimulate the application of newly developed competences in the workplace. These factors include recognition, reward systems, and accountability systems, as well as the extent to which learning and professional development are perceived as an integral part of work performance, a useful investment, or a costly and time-consuming burden (Bunch, 2007; Clarke, 2002; Tracey & Tews, 2005). Several studies note the practical conditions in daily work routines that support application in the workplace, such as a reduced workload to allow the practicing of new skills, a short time interval between learning and application, a match between program content and work roles, and the availability of the equipment and autonomy necessary to adapt working procedures (Baldwin & Ford, 1988; Blume et al., 2010; Clarke, 2002; Lim & Morris, 2006; Mikkelsen & Grønhaug, 1999). Supervisors and colleagues in the workplace play a crucial role through the support and feedback that they provide, the expectations that they have, and the involvement that they demonstrate (Baldwin & Ford, 1988; Clarke, 2002; Tracey & Tews, 2005).

When we consider transfer of learning as a dynamic and complex process, where the two activity systems of school and university influence each other, we cannot consider the organizational learning climate as static. Especially in the context of a Master's program focused on teacher leadership, we expect participants in the Master's program not only to develop their leadership qualities, but also to apply those leadership qualities in the school, and thus to influence the organizational transfer climate within the school. In that context, a two-way process takes place in which not only the competences of Master's students are developed but the application of these newly developed competences in the workplace leads to workplace changes by creating favorable conditions for teacher leadership and contributing to a climate that is focused on organizational learning.

How organizational transfer climate and the application of teacher leadership competences affect each other is relevant from not only an academic perspective but also the perspective of individual participants in Master's programs. If the organizational transfer climate within a school does not support and encourage the transfer of developed competences to the workplace and does not allow room for teacher leadership, and if teacher leaders are not able to change that organizational transfer climate, teachers are likely to become frustrated. Alexandrou and Swaffield (2012) state that when teacher leaders experience a lack of collaboration and acceptance of their work by colleagues, they can become disillusioned and frustrated. This observation implies that the dynamics between the organizational transfer climate and the teacher leader will affect not only the opportunities and motivation for teacher leadership but also the job satisfaction of the participants and their intention to remain in or leave their current job (turnover intention) (Egan, Yang, & Bartlett, 2004; Noe, 1986; Tett & Meyer, 1993).

### 1.5 Objective and context of this study

The objective of this study was to investigate which elements of the organizational transfer climate in schools are critical to enhancing or hindering the use of the teacher leadership competences that are developed during a post-initial Master's program and to what extent participants were able to influence these.

The context of the study is a post-initial two-year part-time Master's program in teacher leadership competences that has been offered by teacher education institutes in Amsterdam since 2009. The post-initial character of the program implies that participants are experienced teachers who have completed their initial teacher education, have been teaching for several years, and take the 60 credit program while continuing to teach. The curriculum is focused on developing the knowledge, skills, and attitudes required for teacher leadership, as elaborated in three key competences: entrepreneurship towards innovating teaching and learning, practice-oriented school-based research, and inspiration and support of colleagues. The curriculum's design is intended to connect the participant's learning process with the school's change agenda. School leaders are expected to select accomplished teachers to enroll in the Master's program and to participate in choosing the theme of the teachers' research projects. Assignments are designed such that the participants are encouraged to make a connection with their school context, resulting in an essay or other product that can be shared with their supervisors (e.g., team or department head) and colleagues.

The authors of this study are involved in the Master's program as external advisors to the teaching staff, supporting the quality improvement of the program.

We divided our main research question into three sub-questions:

1. What impact does the Master's program have on the development of participants' leadership competences and on their motivation to apply these competences in the workplace?
2. To what extent are the newly developed leadership competences actually used in the workplace in terms of new teacher roles and contributions to school development, and what impact does this application of new competences have on teachers' job satisfaction?
3. To what extent can the use, or lack thereof, of leadership competences be explained by the dynamics between the school's organizational transfer climate and the participant in the Master's program?

## 2. Focus and methodology

### 2.1 Research design

We chose a descriptive research design based on interviews with graduates of the program and their supervisors. As the context for our research study (a

two-year Master's program focused on the development of teacher leadership) differed from the contexts in which the transfer of learning is typically studied within the human resource development sector (short training-oriented course designs focused on skills in commercial sector organizations) (Blume et al., 2010; Clarke, 2002), it was necessary to be open to new elements that might influence transfer within educational contexts. Thus, we used semi-structured interviews. As the participants had been immersed in the program and their perceptions about competence development and transfer opportunities might only be '*evidence that they had learned to talk the talk*' (Ross et al., 2011, p. 1217), we utilized their supervisors as an additional source of information.

## 2.2 Respondents

All graduates in the first two cohorts of the Master's program were asked to participate and be interviewed. All seven graduates in the first cohort and 11 of the 14 graduates in the second cohort agreed. Each graduate was asked to provide the name of the supervisor at their school who was most relevant to his or her Master's studies. In most cases, this individual was their direct supervisor (team or department head), though in some cases, he or she was the school leader. In one case, two supervisors were interviewed. In total, 37 interviews with 38 respondents from 17 schools were available for analysis. After being informed of the interviews' aims and guaranteed anonymity, all respondents gave their consent for the use of their interview data.

The majority (14) of the participants worked as subject area teachers in secondary schools; three worked in vocational colleges, and one worked in an institute that provides in-service education for teachers. Most participants had been teaching for many years, and only three had less than five years of teaching experience when they started the Master's program. Half of the participants and two thirds of the supervisors were male. In the analysis of the data, no significant differences were observed among these subgroups.

## 2.3 Variables and instruments

To answer the three research questions, the variables were translated into indicators and codes using the theory on the transfer of learning and teacher leadership (see table 4.1).

We used two indicators to answer research question 1: the development of leadership competences (as experienced by participants and recognized by supervisors) and the motivation for transfer (at the start of and after completing the program).

To answer research question 2, the transfer of developed competences to the workplace was measured as the extent to which participants gained new formal or informal roles within the school, their concrete contributions to school development, and their job satisfaction.

Finally, we used indicators derived from the literature on transfer to measure (change in) the transfer conditions that were provided by the organizational transfer climate (research question 3).

Variables	Indicators	Codes
<b>Competences and motivation (Q1)</b>	Leadership competences	<ul style="list-style-type: none"> <li>• Sense of self-efficacy of the participants with respect to the key competences of the program.</li> <li>• Use of new competences as recognized by the supervisors</li> </ul>
	Motivation for transfer	<ul style="list-style-type: none"> <li>• Initial motivation to use competences in the workplace</li> <li>• Final motivation to use competences in the workplace</li> </ul>
<b>Transfer of competences developed in the Master's program to the workplace (Q2)</b>	Impact of the Master's program	<ul style="list-style-type: none"> <li>• New roles in school</li> <li>• Impact on school development*</li> </ul>
	Satisfaction of participants	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Turnover intention</li> </ul>
<b>(Change in the) Organizational transfer climate (Q3)</b>	Strategic alignment of the Master's program with the school's agenda	<ul style="list-style-type: none"> <li>• Who took the initiative?</li> <li>• General expectations</li> <li>• Arguments in the decision to facilitate the participant*</li> </ul>
	Situational cues	<ul style="list-style-type: none"> <li>• Relation to wider HR policies</li> <li>• Existence of a learning culture*</li> <li>• Compulsiveness of CPD activities*</li> <li>• Recognition within the school</li> <li>• Accountability for using leadership competences</li> </ul>
	Opportunities to use or constraints on using	<ul style="list-style-type: none"> <li>• Work routines that invite the use of leadership competences</li> <li>• Favorable working conditions and facilities</li> <li>• Autonomy to arrange work routines</li> </ul>
	Role of supervisor	<ul style="list-style-type: none"> <li>• Discussions/interaction on content and outcomes</li> <li>• Expectations</li> <li>• Social support</li> <li>• Feedback</li> <li>• Active involvement in program activities</li> </ul>
	Role of colleagues	<ul style="list-style-type: none"> <li>• Discussions/interaction on content and outcomes</li> <li>• Expectations</li> <li>• Social support</li> <li>• Feedback</li> </ul>

(\* codes added after the first analysis)

Table 4.1: Variables, indicators, and codes used in this study

The data were collected through individual semi-structured interviews that were conducted in two sets four months after graduation (February–June and October–December, 2011). The interviews were based on an interview protocol derived from Table 4.1. Each interview lasted 60–90 minutes on average. As the participants and supervisors were interviewed four months after finishing the Master's program, the interviews were retrospective in their focus, looking at changes and conditions during the two-year Master's program and considering the leadership qualities and roles that the participants already had before starting the program.



## 2.4 Data analysis

The interviews were recorded and transcribed. The transcriptions were analyzed using a two-step approach to develop the coding scheme. The first coding scheme was based on the literature and followed the indicators in Table 4.1. A first reading of a subset of interviews resulted in a more detailed understanding of the possible impact of the Master's program and the conditions for transfer. This procedure resulted in a final coding scheme that included 29 codes to facilitate detailed analysis (see Table 4.1; the added codes are marked with asterisks). Each interview was coded by the first author using the coding scheme and MAXqda software for computer-assisted qualitative data analysis. To enhance the validity of the analysis, the outcomes of the interpretation were audited by having the codes of randomly chosen fragments checked in a peer review by a researcher familiar with this field (Kvale, 2007). All codes were discussed until agreement on the coding was established, and the coding of the fragments was adjusted in accordance with that discussion.

The analysis of the coded interviews was performed by alternating between within-case analyses of each interview and cross-case analyses (Miles & Huberman, 1994). Each separate interview was analyzed, looking for themes and patterns in the responses. Next, a cross-case analysis was conducted, looking at all responses on a specific code to determine an overall observation of each theme.

To answer the third research sub-question ('To what extent can the use, or lack thereof, of leadership competences be explained by the dynamics between the school's organizational transfer climate and the participant in the Master's program?'), the participants were divided into four categories based on their responses on the four codes concerning transfer (new roles, impact, satisfaction, and turnover intention). The responses on these codes were assigned numerical values ranging from zero (low, negative) to two (high, positive). Based on the sum of these values, participants were ranked from high to low levels of transfer. For the last category, the responses on the final motivation for transfer were used to make a distinction between a high or low ambition for applying the leadership competences in the workplace. This procedure resulted in four groups of participants:

1. Participants with a high level of transfer
2. Participants with a medium level of transfer
3. Participants with a low level of transfer but a high level of ambition
4. Participants with a low level of transfer and a low level of ambition

To ensure reliability, this grouping was validated by a member check by the participants (respondent validation: Creswell, 2012) and by three independent experts, each of whom categorized three interviews. Based on these checks, the fourth category was reformulated as: 'Participants with a low level of transfer and a limited ambition to apply their leadership competences beyond their own teaching.' In addition, one participant was placed into another category.

The responses of the participants in the first three categories were compared in a cross-case analysis to identify patterns in dynamics between the organizational transfer climate and participants' teacher leadership. The fourth category was omitted from this part of the analysis because for this group, a low level of transfer could be explained not only by organizational aspects but also by a limited ambition to apply their competences beyond their own teaching. For space considerations, in Section 3.3, we present only the results for the first and third categories of participants.

## 3. Results

### 3.1 Development of leadership competences and motivation for transfer

#### 3.1.1 Development of leadership competences

In their reflections, all participants indicated they had developed a stronger awareness of pupils' individual needs and a deeper understanding of theories on teaching and learning. Participants used these theories to analyze practices in school, ground their interventions in the classroom, design curricula, and collaborate with school leaders and colleagues. Several participants stated they had developed a more critical and analytical attitude toward assumptions and practices in their school. Five participants reported that they felt more confident in research activities and that they tended to include inquiry into processes of curriculum change and innovation. These participants also developed a broader perspective on teaching and learning, as well as on school organization and development. Most participants indicated they had become more confident in addressing, supporting, inspiring, or convincing their colleagues. They also indicated that they had become more proactive and entrepreneurial. However, three participants stated that they still felt insecure in their role of inspiring and convincing colleagues and supervisors.

Supervisors confirmed that the participants had developed their knowledge and a broader perspective on teaching and learning and that this development had increased their confidence and strengthened them in their roles of inspiring colleagues. However, some supervisors also expressed concern about the competences of the participants as inspirers and communicators and about their confidence in addressing colleagues.

#### 3.1.2 Motivation for transfer

The initial motivation of all participants to participate in the Master's program was primarily personal: to break out of the routine of their teaching, to find theoretical justification for their intuitive assumptions in their teaching, to be challenged, or to compensate for limited or poor initial teacher education. The decision to choose this particular Master's program was also based on personal decisions not to develop their career toward management roles but to engage in a program that was closely connected to their daily practice. One third of

participants explicitly mentioned transfer motivations focused on improving their teaching performance and the learning of their pupils, whereas one third indicated they wanted to contribute to school development beyond their classrooms.

After finishing the program, all participants were highly motivated to apply their new knowledge and skills in their daily work at their schools. The motivation to use their expertise beyond the classroom had increased considerably, as 14 respondents stated that they are now eager to support their colleagues, contribute to curriculum development, or contribute to the development of the school as a whole.

*I want to go beyond my classroom. The atmosphere I've created in my classes, I want that outside the classroom too. We've discussed it within our team and they were eager: 'This is something concrete we can work on together.' That's just fantastic; that gives me energy. (Participant 13)*

### **3.2 Transfer of leadership competences: participants' roles, work, and job satisfaction**

During or after the Master's program, six participants were given new formal roles in which they were challenged to use their new abilities. These roles included being chair of a school-wide innovation team, teacher researcher, coordinator of language policies, educational expert, and school-based teacher trainer. Two participants were given new informal roles with a stronger involvement in cross-curricular issues or as a sparring partner for their supervisor.

For 10 participants, there was no change in their role at school. Seven of the participants experienced this lack of change as frustrating and as a lack of recognition by their supervisors. Some supervisors justified this lack of change in roles by stating that the Master's program already puts considerable pressure on the participants. One participant was even excused from performing a coordinating task to reduce his workload. These supervisors indicated during the interviews that now (six months after completing the program) was the time to reconsider roles.

Most participants and their supervisors (13) reported a variety of ways in which participation in the program had impacted the school, from changes in teaching methods school-wide, to the creation of learning communities, the start of new projects, and changes in the organizational structures. Two supervisors mentioned that they now had new experts at their disposal who could play a major role in school development.

*The research that is done within the school creates ripples in the pond, which will affect colleagues in her team. (Supervisor of participant 15)*

Most participants (12) indicated that they were not entirely satisfied with their jobs. Several participants said that they wanted to play a more prominent

role in their school but lacked the time to do so due to a heavy workload. For some participants, this lack of time was related to a lack of recognition. Other participants reported that they were not in the position to use their expertise in the school or could not implement the theme of their Master's thesis.

*I feel that I've reached the ceiling. I want to do more with the things I developed. I really enjoyed the program and I learned so much. And then just to get additional teaching hours ... I love it, but I didn't do all that writing just for this. (Participant 8)*

Some were struggling with the organizational structure, as they felt restricted by hierarchy, rules, and the decisions of management, which prevented them from playing the role they wanted to play.

*The structure of the school is such that either you are a teacher or you are in the management. And I don't want to be part of the management. So if they'd structure things differently, I could have a different and better role. Now, I just do many things on my own initiative, giving unasked-for advice, et cetera. (Participant 2)*

The participants' satisfaction or dissatisfaction is reflected in their intention to look for a new job. Five participants stated that they had no intention of leaving their schools, as they had been given new and challenging opportunities. Eight indicated that they might change jobs if an interesting opportunity arose or if they would not receive more professional freedom or more recognition in terms of non-teaching hours or an increase in salary. Four said that they were actively looking for other jobs in which they could use their new competences. These participants were especially seeking jobs in which they could combine being a regular teacher with educating new teachers, supporting colleagues, or participating in research projects.

### 3.3 Participant perceptions of the dynamics between the organizational transfer climate and their leadership ambitions

#### 3.3.1 High level of transfer (seven participants)

##### *Strategic alignment*

Strategic alignment of the goals of the Master's program and the change agenda of the school becomes visible in the expectations and rationale at the start of the program. For the participants with a high level of transfer, the **initiative** to enroll in the Master's program was a combination of individual initiative (five participants) and an active invitation from their school leader or supervisor (five participants). School leaders or supervisors invited the participants either because they knew that these teachers had reached their peak and needed new challenges to keep them engaged and motivated or because they felt the need for teacher leadership and specialist expertise in their schools and recognized the potential of these teachers.

*It was a joint initiative: the school leader and me together. I was looking for a course that would allow me to develop myself, and he suggested*

*this one. [...] I want to improve myself and I want to contribute to the improvement of the school. (Participant 15)*

The initial **expectations** expressed by the school were general in respect to school development: it was expected that investing in the professionalism of teachers would have an impact on colleagues and the school as a whole.

*The simple thing is that when three teachers are doing such a Master's program, it will have an effect on all the others. I can see it in this school, but I can't express it in figures. (Supervisor of participant 15)*

The **reasons to facilitate the participant** remained implicit in most cases. Three participants experienced this implicitness as a token of underlying mutual trust between participant and school leader. Two participants considered the implicitness of expectations to be problematic; they experienced a lack of follow-up on expectations in terms of roles and responsibilities. This lack of follow-up was partly caused by the gap between the top management of the school – which had decided on their participation in the program but had little interaction with the participants during the program – and the middle management responsible for day-to-day supervision, who were minimally involved in the strategic considerations top management made concerning this Master's program and were instead preoccupied with internal organizational problems.

*I think that the school leader has had thoughts about this, but it wasn't really discussed in the management meetings at that time. It was more of an announcement – 'This is something we will use in some way or another' – but it was never really discussed. (Supervisor of participant 2)*

#### *Situational cues and use opportunities*

According to the theory of transfer, it is important that the structure and culture of the workplace encourages the application of learned competences (situational cues). According to the respondents, three of the schools had **explicit policies** concerning professional development.

*In this way we create an example through which we indicate that we are willing to invest in our teachers. And not only her, but all our teachers. The message is: 'You can do such a course too, and we're willing to invest in that. But it's your decision.' (Supervisor of participant 15)*

All participants with high levels of transfer felt that their expertise was recognized within the school. This **recognition** took the form of explicit appreciation for roles, invitations to take on new tasks, autonomy and responsibility in projects, requests for the wider implementation of products and materials the teachers developed, requests to advise supervisors or colleagues, an increase in salary, and facilitation in time. Nevertheless, four participants reported obstacles to having their quality and role recognized, caused by supervisors' preoccupation with day-to-day problems and crises within the school, a lack of time to engage in activities beyond one's own teaching, and inflexible formal structures in terms of available

salary scales and criteria for promotion that did not recognize the leadership elements of the Master's program.

*She has special qualities and deserves a special position in the school. But it doesn't fit in our structure. I'm looking for ways to change that structure and to create opportunities to recognize her quality through a higher salary level. (Supervisor of participant 15)*

Despite their colleagues' or school leaders' growing recognition and expectations, participants did not feel they were held **accountable** for using their newly acquired competences. Accountability within their schools was mostly connected to formal processes of personnel evaluation, but these processes rarely considered the new leadership competences of the Master's-level teachers.

All members of this subgroup had **work routines** that allowed them to use their new competences in a variety of contexts, from working with pupils to contributing to school development on a wider level.

*I could combine it perfectly with the daily tasks that I am expected to do. There was a perfect overlap. My study has been my job for the past two years. (Participant 18)*

Two participants had formal roles within their schools as coordinators, whereas the other five had informal roles that entailed supporting supervisors or acting as experts within their teams. These roles were considered important conditions for acceptance by their colleagues.

*I think that an ordinary teacher will find that the doors of the classrooms of other teachers will remain closed to them. On the one hand, because they can't find the time to observe their colleagues' classes, and on the other hand, because it's not clear that you have a different position. My colleagues expect me to be involved in the development of teaching. (Participant 15)*

All participants in this subgroup had been **facilitated** to complete the program: they had been given a reduced workload of one or two days a week. In addition to being given time to study, organizational conditions were also considered important. To be able to support colleagues, it was emphasized that it is necessary for participants to have opportunities to meet with colleagues and observe their lessons. As all participants in this subgroup had non-teaching tasks, they had the opportunity to organize these opportunities more easily than participants who had only teaching tasks.

All participants in this subgroup indicated that they had a large degree of **autonomy** in terms of their lessons and in activities that go beyond their teaching role.

*I create these opportunities myself or with a group of colleagues. We sit together to talk about professional development policies, and what we want to change. And within no time, we've created a working group. (Participant 9)*

### *Roles of supervisors and colleagues*

The supervisors of five participants played an important role as the participants' counterparts. Their **interaction** and **involvement** ranged from discussing the possible impact of the program's content and the participants' research projects on the school, to providing feedback on essays and reports.

In some schools, discussions about lectures and essays were powerful sources of mutual inspiration.

*Her ideas on school development also gave me new ideas. When we sit down together, we look at teaching and learning in a different way. The quality of these discussions has also led me to new insights. (Supervisor of participant 15)*

The supervisors in other schools stated that they had not spent a sufficient amount of time discussing the content and outcomes of the Master's program with their participants due to changes in leadership positions, which led to a lack of ownership of the program.

All participants in this category reported feeling that their supervisors showed an interpersonal interest in the progress of their studies and provided **social support**. The supervisors of three participants had expressed explicit **expectations**; for example, they expected the participants to challenge their colleagues and to take the lead in educational innovations. Most participants were encouraged by the useful and positive **feedback** that they received. This feedback focused on how they communicated with colleagues and how they created support, engagement, and a sense of ownership within the team.

*I try to coach him in the fact that he has undergone a development, and that his colleagues haven't. That's something he isn't always aware of. He has to learn how to deal with that. (Supervisor of participant 9)*

With respect to the roles of colleagues, **interaction with colleagues** depended partially on personality: some participants appeared to have a burning enthusiasm to share their new insights into educational issues with colleagues and to challenge them by initiating dialogues, whereas others were more hesitant to share their knowledge and felt they had to limit the information they shared with colleagues.

Both participants and their supervisors were aware of the dangers of an increased difference in thinking between the participant and the remainder of the team, which could hinder discussions with colleagues.

*When you don't make a policy, the good ones become better, and the others stagnate. So the divide deepens, which is a problem. She acts, thinks and communicates at a certain level, while the others think that she's got weird ideas. If we can't bridge that gap, I sometimes wonder what we are doing to her. (Supervisor of participant 15)*

Both participants and supervisors stated that in their schools, it was not common for teachers to discuss teaching, learning, and pupils. However, in several schools,

initiatives had been taken to stimulate the dialogue on teaching and learning by initiating peer review and collegial classroom visits. Several participants played a key role in these initiatives, motivated by the Master's program. The team structure that had been introduced in most schools provided a good platform for these endeavors. Participants reported that within these teams, they felt recognized for their expertise, partly based on their new formal or informal roles, leading to new **expectations**. However, as these teams were located within hierarchical structures, the position of teacher leaders could be problematic.

The seven participants all said that they experienced **support** from colleagues in the form of contributions to brainstorming sessions, colleagues taking over daily tasks, willingness to contribute to questionnaires and interviews, personal support and interest, and supportive **feedback**.

### 3.3.2 Low level of transfer and high level of ambition (five participants)

*Strategic alignment, situational cues, and use opportunities*

All participants in this subcategory started the Master's program on their own **initiative**. Both the participants and their supervisors indicated that at the start of the program, no explicit **expectations** with respect to roles and impact had been expressed. For most participants, the school's expectations were restricted to personal development, indicating that the Master's program was not embedded in the strategic agendas of the schools and would not lead to new roles during or after the Master's program. In the **arguments** that were used by the schools that supported their teachers, no connection was made with school development or the school's innovation agenda.

Three schools had explicit **policies** on the professional development of teachers, but only one made an explicit reference to Master's qualifications.

This group felt little or no **recognition**, as their supervisors were preoccupied with daily problems and crises within the school or lacked appreciation for theories on learning. Several participants indicated that they felt that they had to fight for recognition by school leaders. For example, some participants sent their essays and publications to their supervisors. One participant expressed the fear that everything would be 'back to normal' again after graduation.

*I have the feeling that I'll have to fight not to sink back into oblivion. After graduation, I'll have the feeling: 'Damn, I'm all on my own.' Everything will go back to normal, like nothing has happened. We've had our party; finished! But that must not happen; that can't be allowed. It would be a waste of money, energy, time and expertise! (Participant 5)*

These findings also implied that participants were not held **accountable** by the school for using the competences they developed during the Master's program.

The **work routines** of this group gave the members limited opportunities to use their newly acquired competences. Two participants indicated that they could



use their new competences only within the context of their own teaching. The other three participants also indicated that opportunities only existed in curriculum development and with the colleagues on their team. Three of the participants had no formal or informal leadership position within their team.

In terms of **working conditions**, the participants in this subgroup had a limited reduction in teaching hours. Some had the minimum reduction of half a day, as provided by the Ministry, but even had to fight for that. One participant paid the course fee herself. As most participants did not have any non-teaching tasks, they reported problems with finding opportunities for team meetings.

*What I actually need is more time with my colleagues. When you realize that we don't even have a weekly meeting moment, you can understand that most has to be done in the corridors and in between classes.*

*(Participant 7)*

For this subgroup, their **autonomy** was restricted to their teaching and classroom contexts. As a result, some used their entrepreneurship to create new opportunities outside the school, for example, by joining the board of a national professional association for vocational teachers.

#### *Roles of supervisors and colleagues*

About half of the participants indicated that they had few **discussions** with their supervisors or had discussions only when they insisted upon them.

*I asked whether they wanted to read it, but I always got an evasive answer: 'If it's not too long... Is it useful to me ...?' These kind of remarks don't give you the feeling: 'Wow, this is what they've been waiting for!'*

*(Participant 7)*

The supervisors had few **expectations**. One indicated that he and his team were not interested in theories but only in practical solutions, whereas three participants suggested that the academic level of the program made it difficult for them to consider their supervisor as a serious partner. The supervisors were minimally **involved**: both supervisors and participants indicated that the pressure on supervisors to attend to organizational and administrative matters prevented them from spending time on discussions related to teaching and learning.

The participants in this subgroup did not receive strong **support** from their supervisors. Although the supervisors reported that they gave **feedback** during formal performance evaluations, the participants indicated that they received no feedback on their performance related to the Master's program or to their leadership competences. In some cases, the feedback was felt to be counterproductive.

*With all those references to literature: that's something that our teachers are not interested in. He was a bit disappointed when I told him that.*

*(Supervisor of participant 14)*

With respect to the role of colleagues, the participants indicated that **discussions** with colleagues were hindered by a lack of opportunities for professional dialogue and by work pressure within their schools.

*The teachers' room, which would be the place for exchange, is a very casual place where people run in and out and have little chats, but no complex discussions. [...] It is not a place where you would take time to have extensive debates or where I can really tell my colleagues about an interesting and fascinating lecture I attended. (Participant 2)*

Some participants reported receiving hostile responses to their research plans from colleagues. They were not given opportunities to observe their colleagues' teaching, and attempts to inspire and challenge their colleagues were not always welcomed. **Social support** was mostly restricted to a small core of befriended colleagues.

At the same time, the **expectations** of colleagues were heightened due to an increase in the participants' professional authority as experts in educational issues.

*It's as if your colleagues see you differently. Like you've become some kind of authority. But at the same time it feels uncomfortable that they give you that role, as I'm not always sure that I'm able play that role. (Participant 5)*

Only two participants in this group received **feedback** from their colleagues. They blamed this limited feedback on the lack of a feedback culture within their schools, where critical feedback on performance within the team or on processes of school development was rarely given.

## 4. Discussion

The use of interviews as the main source of data gathering created opportunities for a detailed understanding of the respondents' perceptions of the successes and failures in the transfer of leadership competences to the workplace, as well as the factors of organizational transfer climate that influenced this transfer. At the same time, this approach created limitations, as only two participants from each school were interviewed on the organizational transfer climate of the school. Furthermore, the use of self-reporting as the main source of data gathering limits the generalizability of the findings. Finally, given the interviews were only held four months after completion of the master course, no conclusion can be drawn with respect to the sustainability of the transfer of learning.

Considering these limitations, the results of this study indicate that within the context of this Master's program, the transfer of leadership competences to the workplace is not self-evident. Although almost all participants and supervisors indicated that the participants had developed teacher leadership competences during the Master's program and all participants felt motivated to share their new insights with colleagues and to use these competences to contribute to

their school's development, the impact on roles and school development varied.

Within most of the schools where the transfer was effective, the Master's program was used as a strategic tool for both school improvement and personal development. Most participants in these schools felt recognized by their supervisors. They were engaged in active dialogue with their supervisors about their roles in developing the school and their team. The supervisors and participants appeared to have developed strategic partnerships focused on changing the school culture and improving teaching and learning in the school. Although there was little experience with informal leadership in their schools, the participants could claim leadership and they were granted formal or informal leadership positions. Through engagement in non-teaching activities, they had opportunities to interact with their colleagues via observation, dialogue or support. In two schools, the participants were able to apply their leadership competences in new roles but reported limited recognition and a lack of time. As they felt a lack of support from their supervisors, both left their school six months after graduating.

In the schools of participants who exhibited a low level of transfer, the Master's program was viewed as a tool for personal development and not for school improvement. The participants felt isolated within their schools. As they had no formal roles beyond their teaching tasks and few opportunities to meet and talk to colleagues, they felt that they could only use their new competences in their own teaching and in developing their lesson plans. They struggled with the school cultures, which were focused on delivering lessons; allowed little room for critical discussions; and considered research and theory to be non-productive in the daily work of teachers. These obstacles motivated several participants to look for a new position at another school that recognized teacher leadership.

Our analysis demonstrates that this variation in levels of transfer and in the satisfaction of graduates of the Master's program is closely related to the organizational transfer climate of schools in terms of strategic alignment, situational cues, use opportunities, and support from supervisors and peers. However, the analysis also indicates that through their leadership roles, the Master's graduates can inspire their supervisors and support and stimulate collaborative learning within their teams. Through these activities, part of the participants contributed to a change in expectations and to acknowledgement of informal leadership and redefined roles of formal and informal leaders in the school. In this way they contributed to a change in the organizational transfer climate within their school.

This illustrates the dynamics between the organizational transfer climate and the participants in the Master's program, as on the one hand the organizational transfer climate seems to support or hinder transfer of leadership competences, while on the other hand participants who show high levels of transfer are able

to influence elements of the organizational transfer climate. They initiate a culture of peer learning by stimulating peer observation, peer feedback and collegial learning, they actively engage colleagues in their research projects, they gain respect and recognition by sharing their expertise, they stimulate team development and inspire their supervisors. The extent to which these participants in the Master's program are able to change the organizational transfer climate depends on several factors:

- The strategic partnerships between formal and informal leaders. This partnership is essential, as leadership is something that must be both claimed and granted (DeRue & Ashford, 2010). Without such partnerships, informal leaders face professional isolation and cannot exert their leadership or initiate new developments influencing the content, structure and culture of the school.
- Opportunities to meet and support colleagues: The impact of teacher leadership on colleagues depends strongly on whether the opportunity to meet colleagues to discuss issues or to visit classes exists. Participants in schools with a low level of transfer are fully occupied with teaching tasks, which limit them to act beyond their own classes and to influence supervisors and colleagues.
- Strategic sensitivity of teacher leaders. As teacher leaders are part of the organizational transfer climate, they have the opportunity to influence this. To change an organizational transfer climate which is not supportive of transfer is a complex challenge which asks for strategic skills.

In some schools, the conditions for developing teacher leadership appeared favorable at the start of the program; however, eight of the 18 participants had a change of supervisor or school leader during the program, which impeded the development of a consistent policy in the school. Alignment between school levels is also problematic when a school leader and team leader have different perspectives on the goal of the Master's program. These different perspectives can lead to contradictory and confusing expectations of participants in the Master's program.

## 5. Conclusion

The participants in this study indicate that many of their schools give little or no priority to research, theory, innovation, development, or organizational learning. These schools understand professional development through a Master's program as an individual activity unrelated to school improvement. This study demonstrates that the organizational context is an important factor that influences the impact of Master's programs focusing on teacher leadership: when a changed teacher returns to an unchanged school, the result is a teacher who is frustrated and drops out. From the perspective of an individual Master's-level teacher, dropping out is not necessarily problematic, as it can create opportunities to move on or move up, but from the perspective of school development, opportunities are lost. This finding has implications for

educational policies that are focused on increasing the number of Master's-level teachers in schools with the intention of stimulating school development, as these policies also have to address the leaders and organizational transfer climate of the school.

In our study, we identified schools that would likely not consider themselves as schools with perfect transfer conditions in terms of their organizational transfer climate, but where a partnership of a formal and informal leader was created in a joint attempt to change the school climate into an open one with a focus on organizational learning. In such schools, the transfer of learning is a two-way process where the application of newly developed competences in the workplace leads to workplace changes by creating favorable conditions for teacher leadership and contributing to a climate that is focused on organizational learning. This finding demonstrates that whereas teacher leaders can act as change agents in their schools, the organizational transfer climate cannot be viewed as a static condition that supports or hinders effective transfer but must be viewed as dynamic and influenced by effective transfer.

If we want this two-way process to take place, we need to fundamentally rethink the design of Master's programs. In traditional in-service courses and qualification program, the design is characterized by two separate activity systems: the university and the workplace of the school. Boundary crossing must take place between these two activity systems. The link between both activity systems must be made by the teacher acting as the boundary crosser, participating in the Master's program at the university and working at the school at the same time. This link is weak when these teachers are the only such boundary crossers and are not supported in this boundary crossing. This finding suggests redesigning Master's programs in such a way that they recognize the key role of supervisors, the importance of opportunities to collaborate with colleagues and the necessity of strategic skills of teacher leaders. In the design of Master's programs it seems essential to involve program leaders, participants, school leaders, and supervisors in boundary crossing activities, bridging the gap between traditional off-site qualification programs and on-site professional development and school development.



## INTERMEZZO 3

### A new design for a Master's program focused on boundary crossing<sup>7</sup>

#### 1. From transfer to boundary crossing

In the previous chapter, we examined the development of leadership competences in a post-initial Master's program for teachers and the impact from the application of these competences on the workplace. As a frame of reference, we used concepts from theories on learning transfer, focusing on the organizational transfer climate.

Our analysis shows a variation in levels of transfer and in the satisfaction of graduates of the Master's program. This variation is closely related to the schools' organizational transfer climate in terms of strategic alignment, situational cues, use opportunities, and support from supervisors and peers. In some schools, the Master's graduates may, through their leadership roles, inspire their supervisors and support and stimulate collaborative learning within their teams. Through these activities, some of the participants contributed to a change in expectations and an acknowledgement of informal leadership and redefined roles for formal and informal leaders in the school. In this way, they contributed to a change in the organizational transfer climate within their school. In other schools, the Master's program was viewed as a tool for personal development and not for school development. In these schools, the organizational transfer climate was not supportive, and graduates had few opportunities to use their leadership competences to change the climate.

These differences illustrate that the organizational transfer climate is not a static condition for effective transfer and that a complex and dynamic relationship exists between the application of the graduates' leadership competences and the organizational transfer climate. By studying the Master's program *Professioneel Meesterschap*, we found that within the context of a Master's program focusing on teacher leadership, a reciprocal process may occur: the ability to apply newly developed leadership competences at the workplace depends on the extent to which the organizational transfer climate supports and stimulates this application. Meanwhile, the application of these newly developed competences

<sup>7</sup> This intermezzo is based on Snoek, M. (2013). Transfer en boundary crossing bij masteropleidingen voor leraren. *Tijdschrift voor Lerarenopleiders*, 34(3), 5-16.

by the Master's teachers may contribute to a change in the organizational transfer climate by creating favorable conditions for teacher leadership, thereby creating a climate focused on organizational learning.

This reciprocal process can be understood by using the concepts of boundaries and boundary crossing, as these concepts avoid the replicative conceptions that are implicitly associated with the concept of transfer (Akkerman & Bakker, 2011):

*'The literature on boundary crossing and boundary objects has a different focus than the literature on transfer in various ways. Although transfer is mostly about one-time and one-sided transitions, primarily affecting an individual who moves from a context of learning to one of application (e.g., from school to work), concepts of boundary crossing and boundary objects are used to refer to ongoing, two-sided actions and interactions between contexts. These actions and interactions across sites are argued to affect not only the individual but also the different social practices at large.'* (p. 136)

As illustrated in Chapters 1 and 2, the context of a Master's program for teacher leadership may be represented as two activity systems separated by boundaries with limited permeability; governed by different sets of values, norms and expectations; and dominated by different aims, tools, rules, communities, and divisions of labor. In many Master's programs, such as that examined in the previous chapter, the participant in the Master's program is the only boundary crosser, being a member of both activity systems and moving between these two systems. His or her challenge is to apply the theories and skills acquired in an academic setting within the day-to-day context of the school while at the same time bringing the reality of the school into the academic program. If he is not successful in this endeavor, he may adapt, as a chameleon, to the dominant rules and values of the activity system he is in. In such a situation, the Master's program might impact his personal expertise but will have little impact on the school as a whole.

## 2. Combining qualification and intervention

A Master's program focused on teacher leadership intends to reach beyond the individual expertise of teachers; it aims to change leadership practices within schools and to support the development of a culture of shared leadership (Hulsbos et al., 2012; Spillane, 2006). In the design of most Master's programs, the primary focus is on qualification. This focus is reflected in the way in which the Master's program is based on a formal contract between the university and the participant, without a formal role for the school. This primary focus on qualification is also reflected in the frameworks for accreditation of Master's programs that are focused on the effectiveness of the program in raising the competence level of participants as reflected by the Dublin descriptors. The impact of the program on the work practice or leadership practice in schools is not a formal criterion for the accreditation of a program. However, as the previous study shows, preparing and supporting teachers to develop qualities with respect to teacher leadership is not sufficient to bring about change in schools. When school culture and leadership



culture are not responsive to teacher leadership, and when these teacher leaders are isolated, they are hardly effective as change agents.

In school-development programs that aim to bring about change in the school, other design principles are used based on theories regarding organizational change or organizational learning (Boonstra, 2004; Hargreaves, Lieberman, Fullan, & Hopkins, 2010; Hoban, 2002; Rondeel, 2012; Verdonschot, 2011). In such programs, the focus is often on school-internal arrangements, with or without external support, with a focus on teams, commissioned by the school board and with the involvement of several organizational levels within the school.

When we wish to combine the qualifying and intervening ambition within a Master's program, a redesign of the Master's program is needed to strengthen its embeddedness in the school. To gain a better understanding of the design principles for a Master's program that could combine the qualifying and intervening ambition, we will try to redefine the Master's program using the concepts of boundaries and boundary crossing.

### 3. Boundaries and boundary crossing in Master's programs

Within the context of a Master's program on teacher leadership, the participants at the Master's program move back and forth between the two activity systems, the university and the school. At the school, they are teachers working with students; at the university, they are students who aim to obtain a Master's qualification. Each activity system has its own dynamics. Within the school, the teachers are members of an activity system that is focused on pupil learning (outcome) and governed by lessons and tests (tools). Teachers frequently operate in a culture where they work in isolation with limited professional cooperation, based on formal hierarchical structures and restricted by timetables and external pressure to find quick solutions to problems. At the university, they are part of an activity system that is focused on their learning (outcome), governed by lectures and assignments (tools), in a culture of academic rigor and careful analysis, and dominated by academic quality criteria and peer review.

In the Master's program, the participants act as *boundary crossers* moving across the boundaries between both activity systems. This boundary crossing may lead to *expansive learning* (Engeström, 2001). Expansive learning may be understood as a community process—not an individual process—and as a process in which *'the learners are involved in constructing and implementing a radically new, wider and more complex object and concept for their activity'* (Engeström & Sannino, 2010, p. 2). Through expansive learning, ideas from different cultures meet and acquire new meanings (Gutiérrez et al., 1999). This expansive learning influences not only the boundary crossers themselves but also their colleagues, as the boundary crossers act as 'brokers' introducing new elements from one community of practice to another (Tsui & Law, 2007; Wenger, 1998).

For this expansive learning to occur, the Master's program must act as an effective *boundary zone* (Miedema & Stam, 2008; Tsui & Law, 2007), where

elements of both activity systems are present and interact.

This expansive learning in a boundary zone may be facilitated by *boundary objects*, practices or instruments that encourage and facilitate interaction and exchange between the two activity systems (Star, 1989). In Chapter 2, we discussed future scenarios as an example of such a boundary object. Within the context of the Master's program, such a boundary object could be the participant's thesis research project. In such projects, dilemmas in the school are taken as an object for research, with the aim of finding new solutions and approaches that may be used in the school. A connection is made between the practical context of the school and research methods and academic theories from the university; another connection is forged between the participant in the Master's program, his or her colleagues and supervisors in the school, and the university teacher as research supervisor.

#### 4. Strengthening boundary crossing in Master's programs

To strengthen the potential of the Master's program to become a catalyst for interventions at the workplace and thus to improve the impact of the Master's program on the work practices and leadership practices within the school, the Master's program must be redesigned as a boundary zone. Within this boundary zone, boundary crossings between the school and university contexts are stimulated through the use of effective boundary objects that facilitate expansive learning.

One way in which to strengthen boundary crossing is through an increased quantity of boundary crossers. Compared to individual teachers who, acting as isolated boundary crossers, must try to convince and inspire colleagues and supervisors to engage in new work practices or leadership practices, a group of teachers who work at the same school and are enrolled in a Master's program encounter fewer obstacles in boundary crossing. In addition, supervisors may be invited to engage in activities that take place within the boundary zone, and university teachers may be invited to engage in activities within the school.

In addition, the program must be understood by both activity systems as a context that connects both teacher development and school development. Studies in the human resource area emphasize the involvement of the workplace in the learning arrangements of employees by focusing on the 'corporate curriculum': the organization's perspective on a learning design that aims at mutual effects at the individual and organizational behavior levels (Kessels, 1993). Kessels draws attention to 'external curriculum consistency, *'the homogeneity of the notions of parties involved on what the problem is and how it can be solved by means of educational provisions'* (Kessels, 1993, p. 27). Within the context of the Master's program, this definition implies a shared perception and alignment between the aims and design of the curriculum by school management and supervisors, participants, course designers, and teachers at the university. This alignment may foster closer

links between the formal Master's-level criteria and the school's strategic agenda. The NIME master *Professioneel Meesterschap* intended to create such a strategic alignment. However, the alignment was restricted to the university and the NIME board at national level. In this alignment a 'relational approach' at local level in designing the Master's program (Kessels, 1993) was missing. Through such a relational approach between university and local schools, university teachers and school management can cooperate in the design and implementation of the program to create a consistent curriculum based on a shared understanding of how professional development may contribute to local school development. This approach also implies a shared responsibility between the program designers at the university and the key stakeholders in the school with respect to the monitoring of the progress of qualifications and interventions and with respect to creating favorable conditions for the effective application of newly developed leadership competences in schools. Therefore, to create a Master's program that acts as a boundary zone between the school and the university, the design process itself should already involve boundary-crossing activities.

This focus on alignment between university and school leads to a broader understanding of boundary crossing, recognizing both its importance in designing the program and during the program.

## 5. A redesigned Master's program stimulating boundary crossing

Based on a reflection on the outcomes of the study presented in Chapter 4 and on the concept of boundary crossing, a new design for the Master's program *Professioneel Meesterschap* has been developed using six design principles intended to strengthen boundary crossing between school and university both in the design and monitoring process and in the program itself:

- Strengthening boundary crossing in the design and monitoring process:
  1. A strategic alignment between the university's program aims and the school's change agenda
  2. Joint ownership between university and school (e.g., through shared design and shared monitoring)
- Strengthening boundary crossing in the program itself:
  3. A connection between course content and school themes
  4. A collective design involving a larger group of participants from one school
  5. Boundary-crossing activities that engage supervisors and colleagues from the school in program activities
  6. Boundary-crossing activities that engage university teachers in school development activities within the school

In 2010, representatives from three vocational colleges and the Centrum voor Nascholing began to discuss the possibilities for adapting the Master's program *Professioneel Meesterschap* to suit teachers from vocational colleges. These

meetings resulted in an adapted design led by the above design principles. In September 2011, 42 teachers from the three vocational colleges started in the new program. These teachers were selected for new 'senior teacher' positions within their college, with an adapted salary scale<sup>8</sup>.

The key characteristics of the program were as follows:

1. Strategic alignment: The ambition of the schools was to make a connection between the appointment of senior teachers, their professional development, and the schools' development. The senior teachers were expected to become change agents within their units, and the boards of the schools realized that these senior teachers would need leadership capacity for this, which could be provided through the Master's program.
2. Joint ownership: The Master's program was designed by the team of university teachers in close cooperation with key representatives from the human resource (HR) departments of the three colleges. A monitoring group was created consisting of the university teacher staff team, the three key representatives of the HR departments of the colleges and one senior teacher/participant from each college with his/her supervisor. This monitoring group met six times during the two-year program.
3. Connection between course content and school themes: The content of the Master's program was adapted to consider issues related to vocational education. The participants were required to conduct a thesis research project focusing on an issue within their daily practice, resulting in an intervention within that practice. The boards of the colleges stimulated the senior teachers to pick research themes that were closely related to the strategic issues of the college and were of wider relevance to the whole of the college. In addition, each lecture resulted in an assignment through which teachers would relate the content of the lecture to the local school context.
4. Collective design: Within each college, 10 to 20 senior teachers participated, creating a group of teacher leaders within each college. The senior teachers were clustered into three mixed study groups to enable exchange between the three colleges.
5. Boundary-crossing activities among supervisors and colleagues: During the program, the supervisor of each participant and members of the colleges' administrative staff were invited to join the key lectures, which provided theoretical input for the participants. The supervisors were invited to several additional sessions in which progress in the thesis research was discussed.
6. Boundary-crossing activities by university teachers: The design of the adapted program did not consider boundary-crossing activities for university teachers towards the schools.

Through this design, which is characterized by close cooperation between university and schools and by intensive boundary crossing, a learning

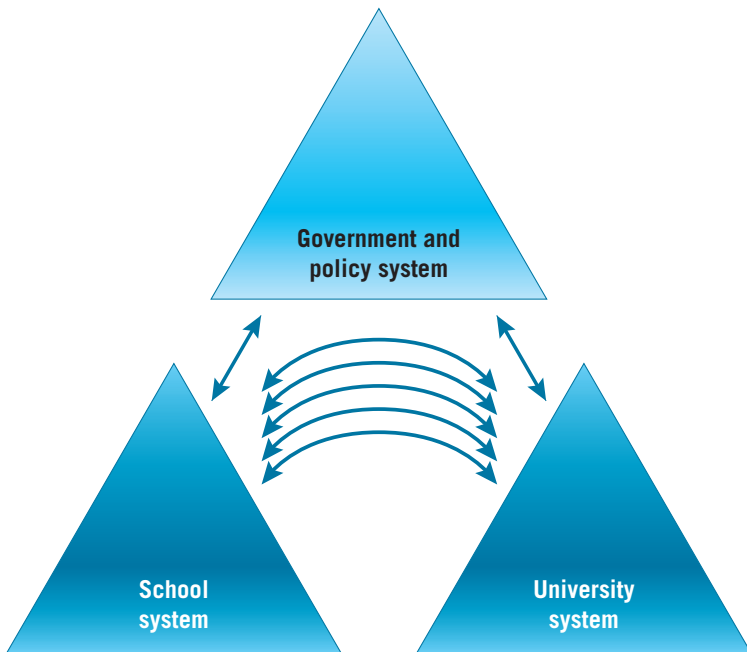
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<sup>8</sup> Salary scale LD, which in the Dutch context is the highest possible salary scale for a teacher.

arrangement was created that fitted within the fourth scenario presented in Chapter 2: a network scenario. This design was expected to help the Master's program act more effectively as a boundary zone between the university and the school. This expectation is the focus of the study presented in the next chapter: To what extent did this redesigned Master's program, facilitating boundary crossing, combine the qualifying and intervening ambition of the program, resulting in both individual development and school development?



# 5







## CHAPTER 5

# Increasing the impact of a Master's program on teacher leadership and school development by means of boundary crossing<sup>9</sup>

*The effective transfer of learning in a post-initial Master's program for teachers requires an intensive process of boundary crossing between universities and schools. In this case study, we investigate how the development and impact of teacher leadership through a Master's program can be supported by a design that stimulates boundary crossing activities between schools and universities. The case study focuses on 42 experienced teachers from three colleges for vocational education who were promoted to senior teacher positions and participated in a two-year part time in-service Master's program. Through interviews with the senior teachers, their supervisors and university teachers and through mixed focus groups, data were collected on boundary crossing activities, professional development and school development.*

*Some of the boundary crossing activities focus on the process of designing and monitoring the program, aiming for strategic alignment and shared ownership between university and school. Boundary crossing activities during the Master's program focused on increasing the number of boundary crossers by engaging several participants from one school in the program and by engaging supervisors and university teachers in boundary crossing activities.*

*Although the boundary crossing activities by supervisors and university teachers were limited, the Master's program served as a catalyst, stimulating the innovation of work practices and the development of new leadership practices. The leadership of the senior teachers initiated a development process that shifted from a formally mandated form of leadership to a more culturally embedded form of leadership. This case study leads to a new understanding of the design criteria for Master's programs and boundary objects that can facilitate boundary crossing between university and school.*

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<sup>9</sup> This chapter is based on Snoek, M.; Enthoven, M.; Volman, M; & Kessels, J. (submitted). Increasing the impact of a Master's program on teacher leadership and school development by means of boundary crossing.

## 1. Introduction

### 1.1 Boundary crossing within the context of Master's programs

The relation between the design of post-initial Master's programs for teachers and their actual impact on outcomes in schools is complex. A connection is assumed to exist among the design of the learning arrangements; the development of knowledge, competences and skills by the participants in the program; the actual roles, performance and behavior of teachers in the classroom; and the outcomes in schools in terms of student or pupil learning outcomes or school development. This connection is influenced not only by cognitive learning processes on an individual level but also by the complex interrelationship of contexts, purposes and practices in the workplace (Tusting & Barton, 2003).

This complex interrelationship implies that the 'transfer of learning' cannot be defined as a one-way process of passing on discrete knowledge and skills learned within a Master's program to a new situation in the workplace of the school. Instead, the 'transfer of learning' needs to be understood as a reciprocal process that involves not only a reinterpretation of the work situation and an adaptation of the new competences to the local context of the school but also a change of the work practices in the school itself (Akkerman & Bakker, 2011; Snoek & Volman, 2014; Tuomi-Grohn & Engeström, 2003).

In this reciprocal process, two separate activity systems can be identified: that of the school as a working context and that of the university as a learning context (Engeström, 2001; Tsui & Law, 2007, Yamagata-Lynch & Haudenschild, 2009). Each activity system has its own dynamics, focused on its intended outcomes, namely, the learning and qualification of pupils versus the learning and qualification of teachers. Within the context of a Master's program, teachers who participate as students in the program act as *boundary crossers* because they move across the boundaries between the activity systems. Within the school, they are teachers working with pupils, and within the university, they are students who aim to obtain a Master's qualification. Through boundary crossing, ideas from different cultures meet, contradictions between these cultures are resolved, and new meanings are generated (Gutiérrez et al., 1999). Boundary crossers can act as 'brokers', introducing new elements from one community of practice to another (Tsui & Law, 2007; Wenger, 1998). In this way, boundary crossing can lead to *expansive learning*, in which the participants not only develop their knowledge, competences and skills but also reconstruct their own context (Engeström, 2001). The Master's program can be considered to be a *boundary zone*, creating a context in which the two activity systems can interact and boundary crossing can take place (Miedema & Stam, 2008; Tsui & Law, 2007). Boundary objects can facilitate the process of expansive learning; these are concrete objects, artifacts or processes that encourage and facilitate interaction between the activity systems (Star, 1989). The Master's thesis that is part of a Master's program can be considered to be this type of boundary object.

However, this process of boundary crossing between the learning context and the work context is complex, and expansive learning cannot be taken for granted. In the case study presented in Chapter 4, the Master's program's lack of impact on the activity system of the school was explained by program design factors and by school factors. In the program design, the focus was on individual teachers from different schools. This design implied only one boundary crosser from each school, which created a weak context for expansive learning. An analysis of school factors revealed limited expectations from the schools, as several schools considered the Master's program to be only a tool for individual professional development and not a tool for school development. Studies in the domain of human resources have addressed this issue by emphasizing the 'corporate curriculum', the organization's perspective on a learning design that aims to obtain mutual effects at the level of individual and organizational behavior, bridging individual professional development and school development (Kessels, 1993). A corporate curriculum aims for external curriculum consistency: *'the homogeneity of the notions of parties involved on what the problem is and how it can be solved by means of educational provisions'* (Kessels, 1993, p. 27). This concept implies that the alignment of aims, the design of the program and favorable conditions for the effective application of newly developed competences in schools are the shared responsibility of the program designers at the university and of key stakeholders in the school.

The notions of boundary crossing and external curriculum consistency suggest that Master's program designs that intend to stimulate expansive learning need to be based on a strategic alignment between the expectations of program leaders at the university and the key stakeholders at the school, on a shared feeling of ownership and on the possibility of taking themes from the school practice as a topic for further study during the Master's program. In addition, boundary crossing can be strengthened when it is not restricted to an individual participant who is an isolated boundary crosser. When multiple participants from a single school participate in the program and when their supervisors and university teachers from the Master's program also actively participate in boundary crossing activities, the potential for expansive learning might be increased.

In the present case study, we take a closer look at a Master's program that focuses on developing teacher leadership. By encouraging boundary crossing between the two systems of school and university, this program aims to contribute to individual professional development as well as school development.

## 1.2 Master's programs and teacher leadership

Master's programs can prepare teachers for new roles in their schools, varying from becoming a subject or methodology expert who can support colleagues to becoming an innovator of curricula to becoming an inquiring practitioner

who uses data to improve teaching. These qualities and roles relate closely to the concept 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, pp. 287–288). Teacher leaders provide direction and exert influence on colleagues to improve teaching and learning outcomes (Katzenmeyer & Moller, 2009; Leithwood & Reihl, 2005). This influence can be exerted through formally mandated leadership, based on formal positions or roles in the organizational hierarchy of the school, or through non-formal leadership, which is embedded in the school's culture, and recognizes the dynamic potential of all teachers to exercise leadership as part of their role (Frost, 2012; Kessels, 2012; Lambert, 2002; MacBeath, 2009).

Several studies emphasize the need for building teacher leadership capacity, stressing that developing teacher leadership requires the development of new qualities that are not part of initial teacher education (Frost & Harris, 2003; Murphy, 2005; Ross et al., 2011). Post-initial qualification programs such as Master's programs could contribute to the development of these leadership qualities. The development and enactment of leadership by teachers who are engaged in Master's programs implies a change in 'leadership practices' in a school. Leadership (both formal and non-formal) needs to be claimed and granted; it requires the development and internalization of new identities, both by leaders and followers (DeRue & Ashford, 2010). In this process, situational elements, such as structure, culture, routines and instruments, and personal elements, such as implicit leadership theories and self-efficacy, play important roles (Spillane, 2006; York-Barr & Duke, 2004).

A Master's program that aims to change leadership practices in schools needs to address these individual factors (implicit leadership theories and self-efficacy of the program participants) as well as the situational factors (organizational culture and structure).

### 1.3 Studying the impact of a Masters' program

To study the effectiveness of a Master's program, we need to examine the design of the learning arrangement; the development of knowledge, competences and skills by the participants in the program; the changes in the actual roles, performance and behavior of teachers within the classroom and the school; the contribution to school development in terms of changes in work practices and leadership practices; and the individual and organizational factors that influence the connections among these elements. Based on Hackman and Oldham's Job Characteristics Model (Hackman & Oldham, 1980) and the work of Mayrowetz, Murphy, Seashore Louis and Smylie (2007), the conceptual model shown in Figure 5.1 can be used to illustrate the relation among these elements.

Figure 5.1 illustrates that through design characteristics that focus on active boundary crossing and external curriculum consistency between university and school (1), the Master's program can contribute both to the qualification of individual participants (2) and to changes in the school culture and structure (6). Both individual development and changes in the school culture and structure (5) result in changes in the workplace in terms of new tasks and roles stemming from the recognition of newly developed qualities (3). Through these new tasks, roles and recognized qualities, the Master's teachers should be able to exercise leadership in terms of providing direction and exerting influence within their team (4), leading to school development in terms of changes in their daily work practices and those of their colleagues and in terms of changes in the leadership practice within their team or the school as a whole (5). Finally, changes in work practices and leadership practices can influence organizational structures and organizational cultures, which are considered to be moderators for the impact of the Master's program on school development (6). Thus, a reciprocal process is created in which Master's teachers themselves can contribute to the creation of favorable conditions for teacher leadership and to a climate that is focused on organizational learning (Snoek & Volman, 2014).

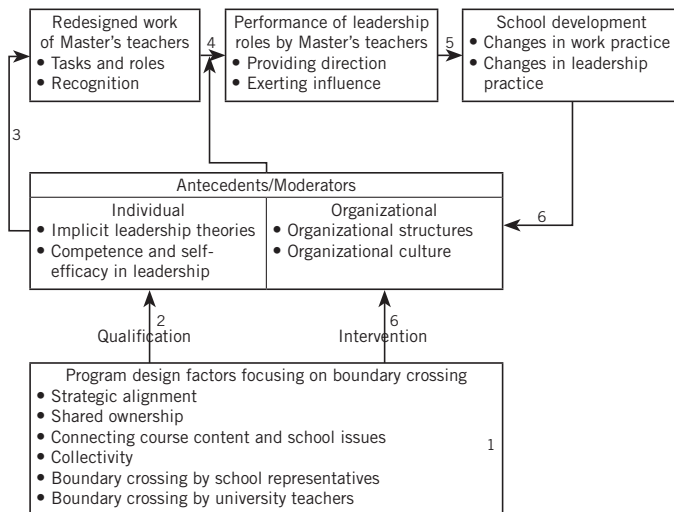


Figure 5.1: Conceptual model for evaluating the effectiveness of a Master's program on leadership performance and school development

### 1.4 Objective and context of this study

The objective of this study was to investigate how a Master's program that focused on teacher leadership and that was designed to strengthen boundary crossing between school and university contributed to individual as well as school development. Based on the conceptual model presented in Figure 5.1, we addressed the following research questions:



1. To what extent and how does the program create and support opportunities for boundary crossing between school and university?
2. What is the impact of the program on individual factors?
3. To what extent do participants experience a redesign of their work that requires the use of leadership competences?
4. What is the impact of this redesign of work on the leadership roles of the participants?
5. What is the impact of these leadership roles on school development in terms of changes in work practices and leadership practices?
6. How do organizational factors influence the impact of leadership roles, and how are these factors changed by the leadership roles of the participants?

The object of the study was post-initial, two-year, part-time Master's program in teacher leadership competences (*Professioneel Meesterschap*) that was offered by teacher education institutes in Amsterdam since 2009. The post-initial character of the program implied that participants were experienced teachers who had completed their initial teacher education and who had been teaching for several years; these teachers followed the 60 credit program along with their teaching job. The participants were 42 experienced teachers from three vocational colleges who had been selected and appointed by their employers as senior teachers. Their appointment as senior teachers implied that they joined the Master's program. The curriculum of the Master's program was focused on developing the knowledge, skills and attitudes required for teacher leadership. The curriculum had been adapted based on prior experience from the previous case study reported in Chapter 4 to strengthen opportunities for boundary crossing. The aims of the program were closely connected to the ambitions of the colleges in terms of school development; the program was developed and monitored in close cooperation between the university and the vocational college staff; and assignments were designed in such a way that connections between curriculum content and local issues were stimulated, and resulting essays or other products could be shared with supervisors (e.g., team or department head) and colleagues. Between 7 and 18 teachers from each vocational college participated, and HRD staff and supervisors from the vocational colleges were invited to participate in lectures and key sessions on research questions for the participants' thesis projects.

Two of the four authors of this study were involved in the Master's program as external advisors to the teaching staff and supported quality improvement of the program.

## 2. Focus and methodology

### 2.1 Research design

The study was designed as a collective case study (Stake, 1994). Data were collected with the participants in the Master's program, who originated from three vocational colleges that offer vocational programs in a wide variety of professional areas for students aged 16 and over. Although the participants followed the same Master's program, their working contexts differed with respect to organizational structures and cultures. As boundary crossing activities manifested differently in the three contexts, the three vocational colleges could be considered as subcases (see Table 5.1).

<p>School 1 has 12,000 students distributed across different locations and different departments. Each department has a director and several managers; the managers are each responsible for several teams that provide the curricula for a specific vocational program. The respondent from the strategic management level characterized the school as changing from a managerial and hierarchical organization to a learning organization with a focus on teaching quality and staff development. The internal HRD Academy is responsible for providing professional development programs. This HRD Academy is a sparring partner for the university staff team in terms of creating strategic alignment between the course goals and the agenda of School 1. The HRD Academy also plays a key role in arranging group meetings for the 18 senior teachers to discuss their roles and to exchange experiences and expertise (knowledge cafes) and sessions for the senior teachers and management of the school to position the senior teachers and to stimulate a shared understanding of roles and responsibilities.</p>
<p>School 2 is relatively small; it has 5500 students in six locations and several departments. Each department has a director and a number of self-steering teams. Each team is responsible for developing, delivering and assessing its vocational program and for making decisions on task division among team members. Within each team, there are coordinators appointed with special responsibilities. The coordinators meet in school-wide platforms to make adjustments to different programs. The structure of self-steering teams demands high-quality awareness from all staff and a commitment to students and colleagues. Seven senior teachers participated in the Master's program. The head of the HRM department has been the sparring partner for the university staff team in terms of creating strategic alignment between the course goals and the agenda of School 2.</p>
<p>School 3 has 8500 students in two locations with several departments. Each department has a director and different managers who are each responsible for several teams that provide the curricula for a specific vocational program. The focus of the school's change agenda is to improve teaching quality in each of the programs. This goal requires leadership and pedagogical professionalism from teachers. The appointment of 17 senior teachers fits with this ambition. A representative of the HRM department and one of the board members have been the sparring partners for the university staff team in terms of creating strategic alignment between the course goals and the agenda of School 3. After the start of the Master's program, the school faced severe financial problems. As a result, there is a strong focus on efficiency. This focus also applies to the senior teachers: their impact should be as wide as possible, not focusing on one specific team or vocational program but rather aiming for school-wide relevance and impact.</p>

Table 5.1: Characteristics of the three vocational colleges

Through this collective case study, we aimed to gain a deeper understanding of how, in these specific contexts, boundary crossing was experienced

and understood and how participants, university teachers, supervisors and management in the three schools differed in their perception of the impact of the Master's program on school development.

## 2.2 Respondents

Several groups of respondents contributed to the data collection. For the interviews, three participants in the Master's program were selected from each college. The criteria for selection were that the participants were from different professional areas (health care, economics and technology) and were not lagging behind in their study progress. Eight participants agreed to participate and provided the names of their supervisors within the schools. Other respondents included the university teachers, who in pairs supported the three course groups with mixed participants from the three vocational colleges, and key stakeholders in the area of human resource development (HRD) in each of the colleges.

After being informed of the aim of the interviews and being guaranteed anonymity, all respondents gave their consent for the use of the interview data.

## 2.3 Instruments

To answer the research questions, we used a number of instruments for data collection (see Table 5.2). Through individual semi-structured interviews, the perceptions of the eight participants and their supervisors were recorded. The university teachers were interviewed in pairs. HRD staff from the three vocational colleges were interviewed to provide the context of the Master's program in each college.

Along with the individual in-depth interviews focusing on a limited sample of participants, additional data were collected focusing on the impact of boundary crossing by the full group of participants. In a peer group interview with the university staff, boundary crossing and the role of the university teachers were discussed. At the level of each vocational college, a focus group meeting was arranged with the strategic management of the college, two participants and two supervisors (differing from those interviewed), focusing on the perceived impact of the Master's program on the vocational college as a whole. Finally, six meetings of a monitoring group consisting of university teachers, HRD stakeholders and representatives of participants and supervisors were recorded. All interviews and focus group meetings were conducted in the final semester of the Master's program. To structure the interviews, we used the conceptual model of Figure 5.1 to identify key concepts and indicators (see Table 5.2). These indicators were used to design the interview protocols and to analyze the interviews.

The interviews were divided between two researchers and lasted 60-90 minutes each. The interviews were recorded and transcribed verbatim.



### **Data analysis**

The indicators listed in Table 5.2 were used as a coding scheme to analyze the interviews. Two researchers performed the data analysis. The coding scheme was discussed between these two researchers to reach agreement on the interpretation of the codes. Using the resulting coding scheme, the interviews were summarized in two ways:

- Each interview was summarized using the coding scheme. These summaries were used to draw individual participant descriptions that combined participant, supervisor and university teacher perspectives. Individual participant descriptions were combined into subcase descriptions in which the interview data from one vocational college were combined. Finally, the three subcases were compared. The two researchers discussed differences in summaries and interpretation until full agreement was reached.
- Additionally, the two researchers coded each interview using MAXqda software for computer-assisted qualitative data analysis. Using these codes, a cross-case analysis was conducted (Miles & Huberman, 1994), combining all responses with a specific code to uncover overall patterns and themes linked to each research question.

The outcomes of the cross-case analysis and the individual participant and subcase summaries were compared to ensure consistency. Based on these two outcomes, overall and subcase patterns were identified.

The subcase patterns of each vocational college were summarized and reported in a focus group interview at each school to create a member check (Creswell, 2012) and to discuss the implications of the outcomes for further policy development within the school. These focus group interviews were used as additional data sources.

Research question	Key concepts	Indicators	Research instruments							
			Individual level	(Sub) case level			Recorded meetings of monitoring group			
			N=	8	8	3	3	3	1	6
Q1: Master program as boundary object	Course design factors	Strategic alignment/external curriculum consistency Shared ownership Content relevance of course themes for the school Collective approach Boundary crossing by supervisors Boundary crossing by university teachers	x	x	x	x		x	x	x
Q2: Individual characteristics	Implicit leadership theories	Leadership theories of participants	x	x	x					
	Competency and sense of (self-) efficacy	Pupil learning Innovation Research Supporting and inspiring colleagues	x	x	x					
Q3: Characteristics of (redesigned) work	Job characteristics	Changed tasks and responsibilities New roles	x	x	x	x	x			x
	Recognition	Recognition by supervisor Recognition by colleagues Job satisfaction	x	x	x	x	x			x
Q: Application of leadership role	Providing direction (content)	Initiating new developments Giving direction to developments Monitoring and adapting developments	x	x	x			x		x
	Exerting influence (process)	Role in decision making Coaching and supporting Creating support	x	x	x			x		x
Q5: School improvement	Impact on working practices	Impact on content Impact on teaching methodology Impact on knowledge and expertise Impact on structure Impact on culture	x	x	x			x		x
	Impact on leadership practices	Changing role of supervisor Changing role of Master's teacher Changing role of colleagues	x	x	x			x		x
Q6: Organizational characteristics	Organizational structure	Structure Stability	x	x	x	x	x	x		x
	Organizational culture	Leadership theories of supervisor and colleagues Focus on learning Mutual trust Recognition, granting and claiming of leadership	x	x	x	x	x			x

Table 5.2: Overview of key concepts and data collection instruments

### 3. Results

In the next section, we present the outcomes of the analysis of the interviews and focus group meetings. In the presentation of the outcomes, we summarize the responses from the different respondents and illustrate these responses with typical quotations from the interviews. In the presentation of the results, the responses from the three schools are only discussed separately when differences arose among the schools.

#### 3.1 Boundary crossing between school and university

The Master's program was designed in such a way that boundary crossing was stimulated using the design criteria listed in Figure 1. The interviews focused on how participants, their supervisors, their university teachers and other stakeholders perceived this boundary crossing.

##### *Strategic alignment*

Boundary crossing had already started in the process of designing the Master's program. Key stakeholders in human resource development in the vocational colleges and university representatives had contributed to the design of the program in an effort to connect the ambitions of the schools with the aims of the Master's program. According to the HRD stakeholders of the schools, developments within the schools and their local contexts and expectations from society required new capacities of teachers. Teachers within their schools must be able to work as members of self-steering teams and to assume responsibility for curriculum development, learning results and pedagogical mastery. To support such self-steering teams, senior teachers should play a key role, and Master's programs should support these senior teachers in assuming that role.

According to all respondents, the boundary crossing during the design phase resulted in a Master's program that combined and linked professional development at the Master's level with school development and human resource strategies (such as the differentiation of salaries).

*Suddenly, we could take a huge step in terms of lifelong learning and increasing the quality of our teaching. By appointing senior teachers, we could speed up our ambitions (HRD staff, School 1).*

Alignment was visible in the similar expectations that the Master's program participants, their supervisors, the HRD stakeholders and university teachers expressed toward the expected role of the senior teachers as teacher leaders. In these expectations, the role of senior teachers in initiating curriculum innovations, supporting colleagues and advising management was emphasized. During the interviews, relations were drawn between these roles and the necessary leadership qualities, namely, a thorough knowledge of teaching, learning and curriculum design; an inquiring mindset; and an awareness of organizational structures and dynamics.

### *Shared ownership*

This shared understanding was the basis for a shared sense of ownership and collaboration between the schools and the university. To monitor how the aims of the two activity systems of the schools and the university were met, a monitoring group composed of the HRD stakeholders from the three vocational colleges, representatives from the group of participants and supervisors and the team of university teachers was created to monitor progress and to address issues that arose during the Master's program. This group met six times during the two-year period. Throughout these meetings, an ongoing topic of discussion was the shared responsibility of both the school and the university to challenge the senior teachers to apply their leadership competences within the school. These meetings created an opportunity to monitor progress from the perspective of both the university teachers and the school and to adapt the program where necessary.

*The collaborative assignment in the last semester needs to be closely connected to the change agenda of the schools. That connection is not clear enough. It could be improved by stimulating a structured reflection by the senior teachers on that change agenda. Discussion followed on the question whether this collaborative assignment should be arranged in separate groups focusing on one specific school, or whether it should be arranged in mixed groups (Minutes of the monitoring group, November 2012).*

This shared feeling of ownership was limited to the participants of the monitoring group, as both the individual senior teachers and supervisors who were interviewed indicated that they had little to no influence on the content of the Master's program; the negotiation of program content and design had occurred at a strategic HRD level in each school, with little involvement or ownership by individual participants or supervisors.

### *Content relevance*

Most participants and their supervisors indicated that the academic content of the Master's program was relevant and could be applied in their daily work. In particular, the research project that was designed as a thread running through the program created opportunities to bridge the academic aims and content of the Master's program and issues in the schools. Most participants felt inspired to share the knowledge they acquired in the program with their colleagues and supervisors and to use this knowledge as a new perspective on daily problems and issues.

*He is now working on an essay on learning careers. That is closely connected to our curriculum in which we try to focus on individual learning paths for students. So, yes, it is very relevant, as there are lots of connections! (Supervisor of senior teacher 2, School 1).*

However, for two participants, the different aims and expectations of the two activity systems created contradictions and conflicts as they struggled with the

formal requirements of a Master's-level program in terms of academic rigor. These requirements focus on documented proof of Master-level skills through essays and research papers judged by formal Master's-level criteria. In their view, this requirement impeded their learning and curiosity and limited the possibilities to connect their learning to their daily practice and that of their colleagues.

### *Collectivity*

The design of the program aimed to engage a larger group of participants from one school in the program, spreading boundary crossing over several boundary crossers. Responses with respect to this element of the program design focused on two aspects: the collective impact of the senior teachers on their organizations and the mutual support within the group of senior teachers.

Supervisors and HRD stakeholders emphasized that the large group of senior teachers generated a critical mass within the schools, as they simultaneously created several 'breeding places' for innovation. These senior teachers built a momentum that could not be ignored in the schools. School leaders, department heads, senior teachers and colleagues all realized that by defining a new senior teacher profile with an adjusted salary scale and promoting a group of 42 senior teachers according to this profile, a new subgroup had been created, and questions on their specific role and responsibilities needed to be answered. Although at the start of the program, an initial profile was defined in each school and was used in the selection of the senior teachers, questions on roles and expectations were raised at several levels throughout the two years of the program, creating a continuous awareness of the existence of this new group of teacher leaders.

*I believe that it is an added value that there are more senior teachers within our unit, that they are not isolated. This creates movement at different places at the same time (Supervisor of senior teacher 1, School 1).*

The senior teachers appreciated the collectivity of the program: they felt supported by their colleagues participating in the program, they extended their network within their schools across teams and departments, and they became aware of the personal qualities of their fellow senior teachers. They also considered their collectivity to be a lever for influencing school-wide policies and for acting as a think tank within their school.

The three schools varied in how they fostered this collectivity. In School 1, the internal HRD Academy played a key role in bringing together the group of senior teachers in knowledge-sharing sessions and in giving them a collective role during internal conferences and management sessions. In School 2, few collective activities were organized, restricting teacher leadership activities mostly to the level of the team or department, whereas in School 3, the senior teachers organized their own shared sessions together with the staff unit for curriculum development.

*Boundary crossing by school supervisors*

In the design of the program, the aim was to engage the participants' supervisors in program activities by inviting them to key sessions in the students' research projects and to guest lectures that were part of the program. In the first semester, *collaborative research sessions* were organized in which research themes and research questions were discussed between participants and supervisors. These sessions were considered to be fruitful for finding a match in expectations between schools and the university and for developing a shared understanding of local needs and academic criteria for practice-oriented research. After this collaborative start, the supervisors had little involvement in the research projects until the final semester, when concrete outcomes could be shared and the implications for teams and curricula and the possibilities for wider dissemination could be discussed.

According to the respondents, having the supervisors attend *guest lectures* was considered to be a less effective boundary activity. Although all supervisors were invited to attend guest lectures that were part of the program, most attended only two or three out of the 15 guest lectures. Their motivation to do so was mostly expressed as interest in the wellbeing of their senior teachers and as recognition of their engagement in the Master's program.

*Actually, it is mostly valuable for him, as a kind of recognition: Oh, my supervisor is willing to travel to Amersfoort just for me! (Supervisor of senior teacher 8, School 3).*

*For me, it is important to get a feeling for what happens there. But it is also a kind of support toward the senior teachers (Supervisor of senior teacher 6, School 2).*

Attending guest lectures was not considered to be a useful method for personal professional development by the supervisors. According to one of the participants, this might be due to the supervisors' lack of active involvement in meaningful learning activities. This participant suggested that he would prefer a shared assignment for participant and supervisor that linked the content of the lecture to the local situation at the school. Another participant suggested that the guest lectures might be more effective boundary activities if, in addition to supervisors, other colleagues from her team could participate, providing input for follow-up discussions within the team.

*Boundary crossing by university teachers*

Boundary crossing activities do not need to be restricted to supervisors and colleagues engaging in activities of the Master's program, but also can involve university teachers engaging in activities at the school. This type of boundary crossing did not occur. The university teachers were reluctant to see a role for themselves at the school. The design of the program did not provide meaningful boundary activities connecting the university teachers to the school context. As a result, the university teachers had very little information about the actual context of the participants and about their performance and application of Master's qualities in the workplace.

*The only role I see for myself is to support the senior teachers in such a way that they can claim their role within their school, that they can negotiate with the management of their school. It is not our role to intervene directly within the schools (University teacher).*

The participants and supervisors had mixed feelings regarding the possible involvement of the university teachers in the school. On the one hand, they had difficulties imagining meaningful boundary activities and noted the risk that university teachers could be seen as external busybodies without real engagement or understanding of the local context, which would threaten the authority of supervisors. On the other hand, more involvement of university teachers in the school context was welcomed, as it could increase the involvement of the supervisor in the Master's program, could bring more expertise into the school to solve tough problems and could contribute to a stronger fine tuning between university and school with respect to content and the roles of teacher leaders.

*We are talking about learning communities and network learning. It should be possible to organize it in such a way that a learning community with a supervisor, two or three senior teachers and a university teacher analyze problems and give feedback to each other (Senior teacher 6, School 2).*

### 3.2 Individual characteristics and redesigned work

This section will focus on research questions 2 and 3: the impact of the Master's program and boundary crossing on the individual characteristics of the senior teachers and the redesign of their work (in terms of new tasks and roles).

#### *Changes in individual competences, self-efficacy and personal leadership theories*

The senior teachers indicate that they have developed their knowledge, competences, skills and sense of self-efficacy with regard to teaching, learning, organization and innovation. They indicate a strong development of their sensitivity to organizational and change processes and the development of their research and analytical skills. Moreover, they have developed an inquiring attitude, a helicopter view and an awareness of the wider context. Their supervisors recognize these new qualities.

*For years, I had the feeling of being too far ahead of colleagues. I missed the tools to close that gap and to get them on board. Now, I have acquired these tools, and that feels very good (Senior teacher 6, School 2).*

*I see a large difference from a half-year ago. At that time, they were very much dependent on the opinion of their supervisors, e.g., on which research topic to choose. Now, they are much more independent, define their own focus and priorities (University teacher).*

The senior teachers vary in their individual characteristics and in the development of these characteristics. For one senior teacher, the supervisor

indicated that the Master's program has also created confusion and uncertainty regarding a new professional identity and new professional expectations. As a consequence, he realized that his role was to support the development of that new identity and to coach the senior teacher to create situations in which she could assume the leadership role and thus develop confidence.

*The program does exactly what a good educational program should do: create confusion. But that also creates uncertainty. Because of that, she didn't dare to take authority. And that implies that I have to take a role in this, to support her and to put her in position (Supervisor of senior teacher 4, School 2).*

The collective approach that was part of the design of the program was effective in developing a shared understanding of the teachers' leadership role. This shared understanding contributed to shared and explicit leadership theories, which were characterized by a proactive and independent attitude, self-awareness, initiative and entrepreneurship. Through this collective understanding of their leadership role, the senior teachers are able to avoid pitfalls and to avoid reverting to previous patterns.

*The funny thing is that when some are starting to complain about school structures or cultures, they immediately correct each other: hey, we agreed not to do this anymore! What is the underlying problem and what can we do about it? (HRD coordinator School 1).*

The senior teachers realize that their leadership differs from the leadership of formal managers. The senior teachers are explicit in their opinion that they are part of their team, although their senior role grants them more authority. Several participants emphasized that the final responsibility should stay with the manager.

*It is OK that I give direction to this process, but there has to be some kind of controlling and monitoring role for the manager. He is the one that should hold people accountable (Senior teacher 8, School 3).*

During the interviews, the senior teachers expressed personal leadership theories. Their conviction is that curriculum innovation cannot be initiated top down but rather that it requires dialogue and shared responsibility at different levels. These teachers see themselves as mediators between different levels in the school, bridging administration and teachers and trying to build mutual understanding.

*The time is over when innovations were pre-cooked by some small taskforce, remote from the daily practice in classrooms. The real change will be in how we will cooperate across internal boundaries. A shared understanding that we will need each other to accomplish something. Education and all the processes around it are so complex that it can't be arranged and solved at the top (Senior teacher 6, School 2).*



### *Characteristics of the (redesigned) work*

As the management of the three schools realized that the participants at the Master's program needed sufficient time for their learning process and program assignments, it was agreed that the real start of their new teacher leadership role would be after graduation. This postponement of expectations was most explicit in School 2, where participants, supervisors and management reported that no change of tasks had occurred yet.

*I leave them alone for now. That may sound strange, but they already have to do so much ... But when they are finished, I have a number of tasks ready (Supervisor of senior teacher 4, School 2).*

In the other schools, new tasks had gradually been given to the teachers that were related to the redesign, innovation and coordination of curricula; support and coaching of teams and colleagues; and being a partner for their supervisor. As the selection of the participants in the Master's program was based on their seniority within their team, most of them had already performed tasks related to coordination, curriculum development or active involvement in projects.

Although there was little change in formal tasks, all respondents indicated that they performed their tasks differently, assuming new roles by using a deepened understanding of theories on teaching and learning; a wider perspective on their team, curriculum and organization; a more inquiring attitude; a stronger focus on sharing knowledge; and through all of this, a stronger sense of self-confidence and authority. The boundary crossing activities stimulated these teachers to see themselves, their tasks and their contribution to their school in a different way.

*Before I started this study, I did things differently. I searched for something on the Internet, took some information from national conferences, but that was about it. The study makes me look not only for the theory but also makes me aware of the processes at school and the organization behind it. It makes me sit back to analyze the whole process: are we doing the right things, does everything fit? For me, that is the added value, that stronger awareness (Senior teacher 6, School 2).*

### **3.3 Impact on leadership performance and school development**

This section focuses on research questions 4 and 5: the leadership performance of the senior teachers (in terms of providing direction and exerting influence) and the impact of this leadership performance on school development (in terms of changes in work practices and in leadership practices).

#### *Leadership performance*

The senior teachers' new understanding of their leadership role and their contribution to their team led to a change in their performance. Their scope widened as their perspectives on their teaching, their curriculum and their team were enriched with a stronger awareness of the issues and developments in the school as a whole, the workplace and society. Through this wider awareness, the

senior teachers *provided direction* to their colleagues and supervisors because they felt able to contribute new perspectives, to anticipate external developments and thus to influence the agenda of their team and their supervisor.

*I tell my supervisor and colleagues about new developments and opportunities at the national level that are coming and how we have to deal with these; that if we don't anticipate and make decisions, we will miss opportunities (Senior teacher 6, School 2).*

Several senior teachers indicated that their focus shifted from administrative coordination to curriculum leadership. They became less focused on quick solutions to problems. Through a more inquiring attitude, these teachers developed a tendency to analyze problems and to look for relevant literature and theories before jumping to solutions.

*We have a very strong tendency to react ad hoc to issues. I learned through those research projects to value what research can mean for our daily practice: that it can create a break in the daily race, that you don't need to have an answer right away (Senior teacher 1, School 1).*

In providing direction, the focus of the senior teachers varied. All senior teachers widened their perspective from their team to other teams within their department, sometimes in close cooperation with other senior teachers within their department. In School 3, the senior teachers were given an explicit role across departments to support teams in the process of curriculum redesign. In the other schools, some supervisors saw a potential opportunity in exchanging senior teachers across departments, but no initiatives had been taken yet. Not all senior teachers shared this ambition to work across departments. Some felt that they lacked the background and knowledge to support teams from other professional sectors.

*My professional area is technology. I have no business in health care. We have a different way of thinking and talking. I can take my role within the technology domain. But for other professional areas, there are other senior teachers (Senior teacher 2, School 1).*

The senior teachers' *influence* focused not only on curriculum content but also on the development and support of colleagues and teams. Several senior teachers realized that they acted as role models to colleagues, both with respect to their teaching and with respect to their focus on theory and their professional development.

*It is what they expect. When it comes to new teaching approaches, they look at you. I try to be a role model in this as much as possible. I am aware that I am supported by my school to do this study, so my team should benefit from it (Senior teacher 8, School 3).*

With the input from the Master's program, the senior teachers developed a stronger awareness of the professional development of the team as a whole. They stimulated collaborative discussions on teaching and learning, providing input from theory,

and they tried to coach their colleagues and to emphasize the individual qualities of team members and their contributions to the team as a whole.

*I organize study meetings and write a newsletter. Through this, I make a connection with what is happening outside our school and what is relevant for our teams. In the newsletter, there is a special column for colleagues who follow CPD courses to share this with other colleagues. In this way, people become aware of each other's qualities and can make use of them (Senior teacher 1, School 1).*

Several senior teachers tried to stimulate the self-awareness of their team, building their capacity as a self-steering team and building a pro-active relationship with their manager, thereby influencing the leadership practices in their school.

*I try to influence the attitude within our team. That people are not sitting back passively, waiting for what will happen to them. That they take the initiative themselves. Our team has now become much more proactive and therefore a much more equal counterpart for the head of our department. This also generates lots of positive energy, and other teams recognize this (Senior teacher 1, School 1).*

#### *Contribution to school development*

The general strategy of management and supervisors was to limit expectations with respect to the concrete outcomes of the teacher leadership of the senior teachers during the course of the Master's program. However, both senior teachers and supervisors recognized that during the Master's program, a wide variety of concrete outcomes that contributed to school development were achieved, both with respect to the work practice and leadership practice within and across teams.

*Impact on the work practice* is reflected in the new curricula that have been developed, sometimes in close cooperation with the work field. Teams have adopted new didactic approaches that use new tools to make teachers aware of their impact on students, developed new strategies to fight early exit from school and used new mentoring approaches, among other activities. Two senior teachers reported that these changes have also resulted in promoting ownership, self-awareness and a pro-active study attitude among their students.

*I realize that the things that I learn, that pro-active attitude, that I share that with my students, that I try to make them aware of how they learn and what they learn. Through this, in one of the groups, half of them decided to accelerate their learning. They realized that they could organize their own curriculum, and they graduated half a year earlier. I realize that by making the things that I consider important more explicit and by showing that in practice, they take their own responsibility much sooner and understand better what they want to learn and why they are here, that they are not dependent on the circumstances, but they themselves can influence these circumstances to a large extent (Senior teacher 1, School 1).*

Senior teachers, supervisors and HRD stakeholders also reported the impact of the leadership performance of the senior teachers on *leadership practice* within the school, as reflected in the growing self-awareness of the teams. Inspired by the leadership of the senior teacher, teams initiated the innovation of curricula and teaching, became more able to solve problems and developed a positive flow and a stronger focus on team learning. These teachers felt better equipped to discuss their needs and ideas with managers; to develop a greater openness to research, data and theory; and to develop a stronger focus on sharing knowledge. They more systematically considered the feedback of students and initiated renewed discussions on teaching and learning.

*The head of our department is a facilitating leader. He wants to know: what do you need, what can I do for you? Many colleagues had problems with that. They wanted him to tell them what they should do. Through my study, I can now recognize this. Now I can say to my colleagues: Look, this is how he works. So we have to make our own plan: this and this is what we want, and this is what he has to do. This really has changed the way we work and cooperate. More and more, we now are working as a team (Senior teacher 2, School 1).*

### 3.4 Changes in the organizational structure and culture

Organizational characteristics are both conditions for the effective impact of Master's programs on school development and the results of the boundary crossing activities that are stimulated by the design of the Master's program and the leadership role that is assumed by senior teachers.

Organizational structures and cultures are not static but rather can change because of boundary crossing activities and because of leadership initiatives by senior teachers. In their responses, both senior teachers and supervisors highlighted issues with respect to internal boundaries; the role of self-steering teams; the contribution of senior teachers to the wider strategic aims of the school; expectations with respect to the organizational level where the leadership of the senior teachers would have impact; and pressures with respect to accountability measures and financial limitations.

The three schools are large institutions that are characterized by *internal boundaries* between departments, between teaching staff and administrative staff and between teachers and management. These boundaries had created a situation in which teachers felt dependent on the decisions made by management, where a curriculum innovation unit had taken the curriculum responsibilities from teachers, and where a culture of complaint could blossom. The strategic alignment between the university and the school and the boundary crossing of participants, supervisors and strategic management created a stronger awareness within the schools of the need for leadership roles for teachers that transcend traditional boundaries. The senior teachers themselves contributed to the reduction of boundaries by stimulating exchange between different departments, by stimulating dialogue between teachers and administrative staff and by mediating between teachers and management. In School 3, the senior teachers

initiated a regular exchange with the staff unit for curriculum development to share and strengthen the curriculum development processes.

Within the three schools, the respondents realized that strengthening the teachers' voice and role in curriculum development requires a change in culture from a hierarchical organization to *self-steering teams*. Within School 2, the organizational structure was already based on self-steering teams, whereas within the other two schools, initial steps in this direction have been taken. The senior teachers are expected to contribute to the ability of these self-steering teams to assume responsibility and accountability for organizing their work and developing their teaching. The combination of appointing senior teachers and engaging them in the Master's program is considered to be a catalyst in this process toward self-steering teams.

*I believe that next to the bureaucratic aspects of this organization, I can contribute to a culture where team members can base their work on a stronger sense of self-awareness of their own qualities and expertise instead of on a docile attitude, thinking that they have no choice. But, we are not there yet (Senior teacher 1, School 1).*

This focus on self-steering teams suggests that teams could define their priorities from the bottom up. This possibility appeared to contrast with the overall ambition that senior teachers contribute to the *wider strategic aims of the school*. This overall ambition was reflected in the responses of most supervisors and senior teachers, which indicated that, after graduation, the supervisors would provide assignments or projects that the senior teacher could or should assume. In School 3, for example, the senior teachers were expected to assume the lead in implementing a new school-wide vision and educational model.

*As a centralized organization, we will always look for some kind of assignment. It has been suggested that senior teachers or their teams should come up with their own suggestions for projects, but I don't think that is the best idea. I think that managers, the central administrative departments and the school board should take the lead in this (Supervisor of senior teacher 4, School 2).*

This sentiment contrasted with the activities that the senior teachers initiated during their Master's program, which were not instigated from above but rather were based on their personal and professional observations of quality issues within the daily practice of their teams, of external developments and of the needs of their colleagues.

The organizational structures of the vocational colleges were characterized by *different hierarchical levels*: that of teams, departments and the school as a whole. The expectations varied with respect to the levels at which the senior teachers could contribute. Within School 3, there was a strong focus on the school-wide impact of the senior teachers, whereas the other schools focused

on the impact at the team and unit levels. All supervisors considered the senior teachers to be inspiring sparring partners at their own department or team level. At that level, the senior teachers were expected to update their supervisors on theories, research and external developments. Several supervisors expected that the senior teachers would assume particular tasks, especially in relation to coordinating and monitoring curriculum innovations and stimulating the development of self-steering teams within their departments. However, some senior teachers and some supervisors expected the senior teachers to assume roles at the wider school level, even though the organizational structures needed to support the school-wide mobility of senior teachers were not in place. Within School 1, the senior teachers were supported by the internal HRD Academy, which played a key role in strengthening the department heads' awareness and collective understanding of the strategic role that this group could play within the school as a whole. However, none of the schools considered the senior teachers to be a strategic think tank at the overall school level.

Although the senior teachers were not considered to be a collective factor within the school, School 3 had high expectations for the individual contribution of the senior teachers to the *school as a whole*. The expectation of the management of this school was that the research projects that the senior teachers conducted as part of their Master's program would have a potential impact on the entire school. In most research projects, the initial focus was on one specific team or student group, whereas the end phase initiated extension to other student groups or curricula. In three cases, steps had already been taken to implement the outcomes in other teams or departments or even school wide.

*His research study focused on the inter-relation between teachers and students. This led to a very positive response within his team. Colleagues considered the tool he developed as very useful to reflect on their relations with students and to discuss this with them. Now, we want to extend it to other teams in small pilots. He will lead these pilots. Eventually, all teams within our school will work in this way (Supervisor of senior teacher 8, School 3).*

The *pressure* in the schools brought by financial limitations and accountability measures from the government created a context within the schools where there was little time for teacher meetings, collegial discussions and reflection. Several senior teachers indicated that they struggled with the organizational focus on control measures, which left little room for a culture based on trust. Because teachers and managers were held accountable, there was a tendency toward justification and window dressing. The senior teachers tried to create a counter balance by addressing this tension, by stimulating exchange and discussions among teachers on teaching and learning, by focusing on team development through coaching and peer review and by stimulating research and inquiry.

Most of these issues reflect an ongoing dialogue on organizational conditions and on the precise roles of senior teachers within schools. This dialogue has

been encouraged through the various boundary crossing activities involving senior teachers, supervisors and university teachers. The senior teachers played a key role in changing organizational conditions through initiatives that connected different levels within the school, crossing internal boundaries. Through collaboration as a group, they tried to strengthen their impact on the level of the school as a whole, stimulating a culture that focused less on control and more on development and trust. Collectively, these teachers tried to manage expectations with respect to their roles; they developed a concrete profile of senior teachers in the final phase of their study that indicated what colleagues, supervisors and the school board should expect from them.

## 4. Discussion

### 4.1 Limitations of this study

The use of interviews as the primary source for data gathering created opportunities for a detailed understanding of the respondents' perceptions of the leadership capabilities developed by the senior teachers, their impact in the schools and how the Master's program and boundary activities between school and university contributed to this impact. At the same time, the process created limitations, as only eight participants and their supervisors were interviewed. In addition, the use of self-reporting activities as the primary source of data gathering may limit the reliability of the findings. Through triangulation by interviewing senior teachers, their supervisors and their university teachers, we tried to increase the reliability of our findings. Furthermore, the combination of interviews with the HRD stakeholders and university teachers and the focus group interviews at each school provided an opportunity to construct a complete picture for each school.

Finally, the design of the study was such that the Master's program and the associated boundary crossing activities were studied as an isolated intervention within the schools. Within the dynamic contexts of schools, a wide variety of impulses and interventions contributed to changes in work and leadership practices. The contribution of these other impulses and interventions to the work practices and leadership practices in the schools could only be covered in a limited way because they were not systematically explored during the interviews.

Because our research questions focused on boundary crossing activities between the university and the schools during the Master's program, data gathering took place during the end phase of the Master's program. As a consequence, this study could provide no information on the sustainability of the leadership roles of the senior teachers and their long-term impact. However, although school management emphasized that the senior teachers would be expected to assume their role only after graduating from the Master's program, the data showed that during the two-year program, the senior teachers

developed new roles and new attitudes toward their work, already leading in most cases to clearly defined outcomes at both the work practice and leadership practice levels.

As a result, notwithstanding the limitations of the data gathering process, the study provided insights into how a Master's program focusing on teacher leadership could both contribute to individual leadership development and support school development by strengthening boundary crossing between school and university.

#### 4.2 The impact of the Master's program

The focus of this study is on the impact of a Master's program on individual professional development as well as school development. Many studies have shown that learning arrangements focusing on individual professional development have a weak relation to actual improvements at the work place. Hackman and Oldham (1980) indicate in their Job Characteristics Model that changes in workplace performance are related to core job characteristics. Mayrowetz et al. (2007) used this finding to develop a model to understand the impact of distributed leadership in schools. In this model, they understood distributed leadership as work redesign, relating the redesigned work, the outcomes in terms of leadership performance and school development. The model *'contains our best understanding of how and why efforts to develop distributed leadership in schools would operate and serves as a starting point for predicting the success (or failure) of these reforms'* (Mayrowetz et al., 2007, p. 75). As the aim of the Master's program was to develop distributed leadership in schools, we used this model in an adapted form to understand the impact of the program on individual professional development and school development.

From our findings, we can conclude that the Master's program has a large impact on both levels. On an individual professional level, the program initiated a change in expertise, attitude, authority, self-awareness and sense of self-efficacy. Senior teachers participating in the Master's program indicated that they have developed new perspectives on their role and position and new qualities that can be used in their daily work routines. Although the formal tasks and job characteristics of the senior teachers had not yet been substantially redesigned, they used their new perspectives and new qualities to perform their regular tasks with a different focus. In their tasks, they used a deeper understanding of teaching and learning, a stronger sense of organizational processes, a stronger focus on colleagues and a different, more inquiring attitude. Colleagues, supervisors and the strategic management of their schools recognized these qualities and granted the senior teachers greater authority within the school. Through their leadership, the senior teachers initiated changes in the content and methods of the curriculum; used research to elaborate on challenges such as early school leaving, student mentoring, workplace guidance and student assessment; and initiated interventions for improvement in those areas. These



teachers supported their colleagues, tried to strengthen the self-awareness of teams, stimulated a more analytical approach in schools and acted as counterparts and sparring partners for the heads of departments.

Our study suggests an adaptation to the model of Mayrowetz et al., as the redesigned work was not so much a condition for leadership performance as it was a result of leadership performance. This adaptation recognizes the ability of teachers who develop their leadership skills to actively redesign and reinterpret their work themselves. Within the focus group sessions and the meetings of the monitoring group, the general understanding was that the Master's program served as a catalyst, stimulating innovation and reflection on existing practices. In this way, various developments within teams and departments were initiated, challenging existing work practices and creating new leadership practices with a focus on team learning and self-steering teams. Through their leadership, the senior teachers were able to contribute to a change in organizational structures and cultures, which had appeared to be hindering teacher leadership. These teachers were able to cross internal boundaries, to strengthen the voice of teachers in defining the strategic aims of the school, to contribute to a culture of trust and to clarify the potential role for teacher leadership.

### 4.3 The impact of boundary crossing

In the interviews, we tried to identify the extent to which the design of the Master's program strengthened its impact by creating several opportunities for boundary crossing. One of the key elements in the design of the Master's program was to create boundary crossing activities during the design process of the Master's program, stimulating strategic alignment and shared ownership. The ambition of the three participating schools was to combine the opportunity to appoint senior teachers with a Master's program, connecting professional development with school development and connecting teacher leadership with innovation (Frost, 2012). The resulting *strategic alignment* between the strategic agenda of the schools and the aims of the Master's program was reflected in the similar expectations that were expressed by the senior teachers, supervisors, management and university teachers with respect to the roles of the senior teachers. In addition to the activities within the Master's program, the HRD staff of the schools organized activities to position the senior teachers within their schools, thus strengthening the impact of the Master's program. In all three schools, the change of roles fit within a wider strategy and intention to promote self-steering teams of teachers and to deliberately involve teachers in the redesign of curricula and teaching.

This strategic alignment was reinforced by the *shared ownership* that was created through the involvement of the HRD stakeholders in the design of the program and in the regular meetings of the monitoring group with representatives of the senior teachers, the management of the schools and the university staff. This shared ownership built a platform from which to discuss issues and to suggest adaptations to the program. However, this ownership did

not extend to all of the senior teachers' supervisors. Most of the supervisors felt that they had no role in the design of the Master's program for their senior teachers. As a result, there was a limited sense of external curriculum consistency (Kessels, 1993). This gap between the strategic management of the schools that initiated the Master's program, and the supervisors collaborating with the senior teachers within their department, indicate that boundary crossing activities need to address not only the boundaries between university and school but also the boundaries within schools like those between strategic management and the department level.

The *collectiveness of the design*, involving 42 senior teachers from three colleges for vocational education as boundary crossers, and the connection of the senior teacher position to the organizational structure of the school contributed strongly to a shared awareness of the role of the senior teachers at all levels. The group of senior teachers developed strong collective self-awareness of their role and contribution to the school. At the same time, the strategic management, administrative units, heads of departments and teachers could not ignore the existence of a new group of teacher leaders within the schools.

#### 4.4 Effective boundary objects

The Master's program was designed such that it could act as a boundary zone, facilitating boundary activities within the context of the Master's program. To facilitate expansive learning within that boundary zone, boundary objects play an important role. Several boundary objects can be identified. The *monitoring groups* acted as a boundary object, creating a space where stakeholders from the two activity systems met and developed a shared understanding of critical elements in the design of the program. This group discussed opportunities for increased impact and stronger involvement of supervisors, which were translated into suggestions for improving the program and strengthening its integration in the school.

Another boundary object was the *research project* that all students had to complete as part of the Master's program. Most senior teachers experienced the research as a powerful boundary object, as it provided tools for reflection, analysis and new perspectives on issues within their daily practice. Within the research project, the two activity systems of the university and the school confront each other. The tension that this confrontation creates can be a powerful source for expansive learning (Engeström, 2001). However, when this tension becomes too great, it can frustrate learning. Two senior teachers experienced this type of imbalance; they felt that the focus on formal Master's-level criteria and formats conflicted with their practice-oriented learning style and thus impeded their learning. Moreover, some supervisors had no clear idea regarding how research could fruitfully contribute to school development after completing the Master's program. They acknowledged the need for an inquiring attitude but saw very few opportunities for senior teachers to engage in research activities in their future work.

One aim of the Master's program design was to involve supervisors and university teachers in the process of boundary crossing. However, the actual involvement of supervisors in boundary crossing was limited, and the involvement of university teachers was non-existent. Nevertheless, in the interviews, both participants and supervisors saw the potential value of this involvement. However, attending *guest lectures* did not appear to be an effective boundary object for supervisors; it was experienced as non-committal and without additional value. The guest lectures did not aim for a mutual and collaborative learning process among senior teachers, supervisors and other colleagues. Regarding the boundary crossing by university teachers, a concrete boundary object was missing, leading to hesitation on the part of university teachers to join activities in the schools.

Boundary objects can act as an interface for shared discourse through which differences between contexts are explored, knowledge is transformed and collective learning can be achieved (Carlile, 2004). In the monitoring group and the research projects, this type of discourse was established, creating an effective boundary object that provided '*a shared syntax which allows exploration of semantic differences*' (Macpherson, Jones, & Oakes, 2006, p. 7) between school and university. However, for the supervisors and university teachers, boundary objects that created such a shared discourse were missing. During the interviews, several suggestions were made to create a 'third space' (Stein & Coburn, 2005) in which participants, supervisors and university teachers could meet to work on challenging and tough problems from the schools. Such third spaces could develop into effective boundary objects that engage supervisors and university teachers in a shared discourse.

## 5. Conclusion

In this study, we examined the development and impact of teacher leadership within schools and how this process could be supported by a Master's program and by boundary crossing activities between schools and universities. The study shows that boundary crossing activities can help to bridge the gap between university and school that exists in many traditional academic Master's programs. The design contributed to clear outcomes in terms of school development. In the case study reported in Chapter 4 which focused on a Master's program with similar aims, the impact on school development was much smaller. Relevant boundary crossing elements were missing in that program, resulting in frustration on the part of the participants.

By using the concept of boundary crossing (Akkerman & Bakker, 2011; Star, 1989) together with the concept of external curriculum consistency (Kessels, 1993), six design elements were identified that could transform the Master's program into a boundary zone connecting university and school (see Figure 5.1). Of these six design elements, three elements appeared to be decisive with respect to the increased impact of the program:

1. Strategic alignment: The alignment between the program aims and the ambitions of the schools to improve their teaching in response to societal expectations was considered to be an important element for strengthening the impact of the program. The appointment of senior teachers and their engagement in the Master's program fitted neatly within a wider change agenda and with the ambitions to strengthen the teachers' voice and role in curriculum development. The focus on teacher leadership was supported by an organizational structure with mandated senior teachers and by a focus on self-steering teams.
2. Ownership: A shared understanding of school management and the university teams with respect to the aims and intended impact of the Master's program and the role of the senior teachers was created not only during the design process but also during the program itself through shared involvement in monitoring progress.
3. Collectivity: the engagement of a larger group of participants from one school created, on the one hand, a critical mass in schools that cannot be ignored and, on the other hand, a context for mutual support and exchange among teacher leaders in schools.

The study also contributed to our understanding of boundaries and boundary crossing between schools and universities; we identified two factors that limited the impact of boundary crossing:

1. Multiple boundaries: The study showed that not only the boundary between school and university but also the boundaries within schools, i.e., between teachers, teacher leaders, management and administrative staff, need to be taken into account. For example, our study showed that the shared ownership developed between the university teachers and strategic management did not extend to the supervisors, indicating that internal boundaries exist between strategic management and supervisors. When these boundaries are not included in the process of boundary crossing, and when supervisors or other administrative staff do not have the opportunity to develop ownership, the introduction of teacher leadership may have little impact at the school level. Instead of expansive learning, a 'legitimate coexistence' between the new teacher leaders and hierarchic leaders may result (Akkerman & Bakker, 2011).
2. The quality of boundary objects: The study showed that it was not sufficient to involve supervisors in guest lectures. If the ambition is to engage supervisors from the school or teachers from the university in the process of boundary crossing, it is necessary to define boundary objects that can act as an interface through which shared discourse can take place (Carlile, 2004), e.g., by creating third spaces where participants, university teachers and supervisors can work together, each contributing their specific expertise to solve tough problems in schools.

Our study also leads to reflections on the concept of teacher leadership. Within the schools that participated in this study, leadership was formally

allocated. This type of leadership is connected to a specific position within the organizational structure based on a formal selection process, available positions and a higher salary. In this context, school management offers teacher leadership positions based on a formal mandate. In this way, teacher leadership is integrated formally and strategically into the structure of the school organization. This structure is different from a context in which teacher leadership is distributed and embedded in the culture of the school and in which every teacher is given the opportunity to assume leadership based on the expertise needed in a specific situation. These types of teacher leadership can be considered to be two discrete and fundamentally different forms of teacher leadership and two manifestations in a developmental process (MacBeath, 2009).

The formally mandated leadership of the senior teachers – defined by management and accompanied by a higher salary – appeared to fit within the existing hierarchical structures of the schools. Within the context of the three vocational colleges, this structure appears to strengthen the leadership positions of the senior teachers: the formal structures prevented the group of senior teachers from being ignored because high expectations were created by management, supervisors, colleagues and the senior teachers themselves. The senior teachers were expected to demonstrate their fitness for the challenge and to prove their added value to the school. However, through these expectations, added value appears to be defined by the strategic goals of the organization and top management and translated into assignments given by the management and supervisors to the senior teachers; these assignments aim to benefit the whole school and not just one team or a specific curriculum. In its extreme form, this structure might imply that senior teachers are mere strategic tools used by the school board to reach their aims. This approach hints at a reactive role for senior teachers and might indicate that the senior teachers are considered to be mere instruments for realizing the strategic aims of the school or department as a whole and to be extensions to management. This viewpoint appears to contrast with the concept of self-steering teams that define their own issues and priorities from the bottom up based on local concerns instead of central strategic aims. However, in the context of the three schools in this study, formally and strategically distributed leadership appears not to be just a distinct manifestation of teacher leadership but also a phase in the developmental process, as indicated by MacBeath et al. (2009). In fact, several senior teachers used their leadership role to reinforce the self-awareness, autonomy and ownership of their teams and thereby changed the leadership practice toward more culturally embedded manifestations of teacher leadership.

In our study, the main focus was on the influence of boundary crossing on the school. However, boundary crossing implies a reciprocal process because expansive learning impacts both activity systems. Because the data collection primarily focused on stakeholders in the school, we cannot draw conclusions regarding the impact of the boundary crossing activities on the university. The

strategic alignment and collaboration between university teachers and the strategic management of the schools in designing and monitoring the program indicate that there is an awareness within the university of the importance of adapting Master's programs according to the needs of schools. However, the university teachers were reluctant to extend their role and to engage in activities within the schools. They understood their main task as supporting the senior teachers in such a way that the senior teachers would be able to engage supervisors and colleagues and to manage interventions independently within their local context. As a result, the university teachers had sparse information about the local context of the senior teachers and their performance in terms of leadership, implementation and inspiration. This lack of information suggests that the primary focus of the university teachers remained on the academic value of the program for the individual participants. The practical impact on the school was a secondary concern, leaving the impact of the boundary crossing on the university relatively unexamined.

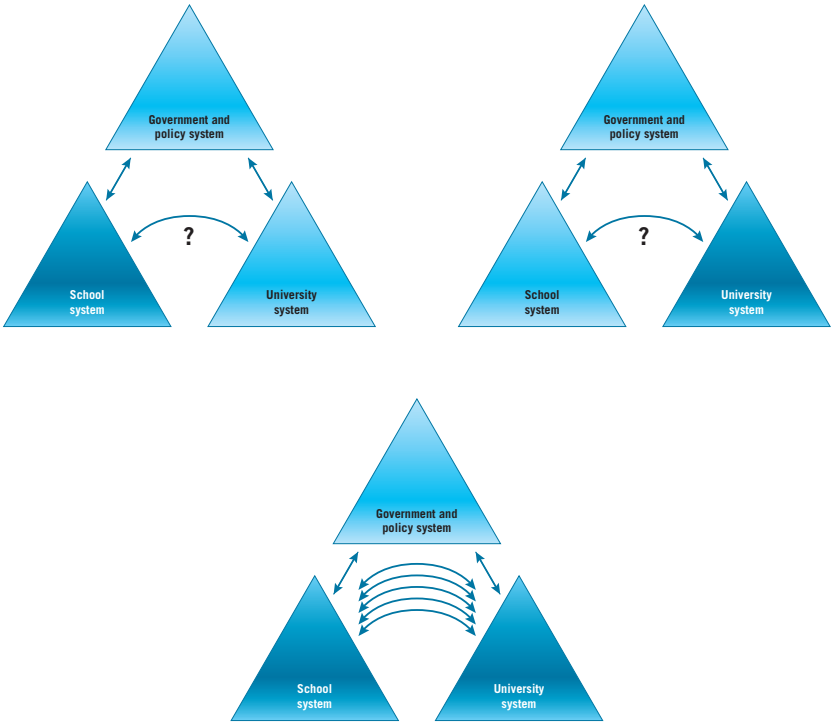
In a situation where mutual benefits of boundary crossing are expected, developing effective boundary objects that engage university teachers more intensively in boundary crossing activities and that stimulate expansive learning at the university level should be a topic for further research.







# 6





## CHAPTER 6

# Discussion and conclusion

In this final chapter, we will summarize the findings of the research project and answer the overall research question that was formulated in Chapter 1 (section 1, 2 and 3). Next we will discuss how the outcomes have deepened our understanding of effective post-initial learning arrangements that both contribute to professional development of teachers and to development of schools (section 4). In section 5 we will discuss how the outcomes contributed to an enriched understanding of how teacher leadership can be developed within schools. After discussing the limitations of the research design and presenting topics for further research (section 6), we will conclude this chapter with the implications of our research for schools, universities, teachers and national educational policy.

### 1. Introduction

Given the complexity of education and the changing expectations of society towards education, schools need to be responsive to the needs of parents, employers and society and to innovate their teaching accordingly. Successful school improvement is dependent on schools' capacities to manage change and development. As teachers are key actors in schools, this change capacity of schools can be increased by using and supporting the change capacity of teachers. The change capacity of teachers can be understood as the capacity of teachers 'to - individually or collectively, through development, inspiration, and research - provide direction and exert influence on their colleagues, school leaders, and other school community members to improve teaching and learning practices that enhance student learning and achievement'. This capacity which we indicate as 'teacher leadership', requires specific skills and knowledge. To increase change capacity in schools and to strengthen teacher leadership, teachers need to develop their capacity for methodically designing and managing innovations and study the impact of these innovations (Van der Klink, 2012, p25).

According to Van der Klink (2012) and Boonstra (2000), innovation coincides with learning. This claim implies that teachers' professional development can be considered both a condition and a catalyst for successful innovation, and that participation in school development and innovation processes can contribute to teachers' professional development. The aim of this research

project was to gain insight into the relation between learning arrangements that aim to support the development of teacher leadership and processes of school development. The impact of such learning arrangements on school development cannot be taken for granted, as the relationship between engagement in such learning arrangements and the impact, in terms of school development or pupil learning outcomes, is complex and not straightforward. The steps from engagement in learning arrangements, to development of teacher competences, to behavioral changes of teachers within schools, and finally to school development and improved pupil outcomes depend on factors related to program design, personal qualities, and school contexts (Baldwin & Ford, 1988; Boshuizen, 2003; Gielen et al., 2004; Van der Klink, 2012).

To increase our understanding of the complex relation between the design of specific learning arrangements for teacher leadership and their impact in terms of teacher development and school development, our main research question was the following:

To what extent and in what way do post-initial learning arrangements that focus on teacher leadership contribute to teacher development and school development?

## 2. Three prototypical learning arrangements for teacher leadership

The design of post-initial learning arrangements for teacher leadership is based on implicit and explicit educational theories, the wider policy context, and societal trends and developments. To identify learning arrangements that could be the context for this study, we needed to answer the first research question:

1. What trends in society and education influence the design of teachers' learning arrangements and what is their impact on the dynamics between schools and universities?

To answer this research question, we analyzed 48 documents that present alternative scenarios on the future of (teacher) education. This analysis revealed key international trends that might impact the design of learning arrangements for teachers' post-initial learning. Through the analysis of these scenario documents, four prototypical scenarios for teacher education could be identified, which vary with respect to the roles of key stakeholders in the educational system - governments, schools, and universities - and the way in which boundary between their activity systems were crossed. Three of these scenarios can be recognized within Dutch arrangements for post-initial teacher development.

The *market-oriented scenario* is a scenario in which learning arrangements are the result of a customer-provider relationship. In this scenario, the school

is the dominant activity system. The key focus is meeting the needs of the school as a customer. Universities must be responsive to these needs and compete with other educational providers to offer their services to schools. The Ministry has a limited role, mainly focusing on guaranteeing a level playing field between different stakeholders. Within a market-oriented scenario, learning arrangements for teachers are school centered.

Within the Dutch context, such learning arrangements can be recognized in many school-wide post-initial arrangements for teacher development. In these arrangements, schools define learning arrangement content and hire providers. In Intermezzo 1 and Chapter 3, we connected the Academic Development School to this scenario as a school centered context for developing teacher leadership. Although these Academic Development Schools are typically based on partnerships between schools and universities, schools are the dominant actors, defining research topics, structure, arrangements, and criteria for selecting and evaluating teachers, while universities' roles are limited to supporting the development of teachers' research competence. For this reason, this arrangement can be defined as 'school centered.'

The *bureaucratic scenario* is a scenario in which the government activity system and national policy making are dominant, defining the playing field for the other two stakeholders. As a result, schools and universities are focused on formal quality requirements set by the government.

Within the Dutch context, formal university qualification programs have to meet government requirements set by the Dutch-Flemish Accreditation Organization (NVAO). Internal quality procedures for Master's programs are strongly focused on meeting these criteria.

In Intermezzo 2 and Chapter 4, we connected the Master's program *Professional Meesterschap* (Professional Mastery) to this scenario. Although secondary education institutions initiated this Master's program in teacher leadership, school involvement and commitment were limited. As a result, the formal criteria for higher education programs, defined by the Ministry and the NVAO, dominated the design of the program. The schools did not express explicit expectations for the program aims, content, or design, resulting in a university-centered learning arrangement.

The *network scenario* is a scenario in which boundaries between the school and university activity systems are crossed. In a boundary zone between the school and university, representatives from both activity systems meet and work together, stimulating expansive learning in both activity systems. In Intermezzo 3 and Chapter 5, this scenario is connected to the redesigned Master's program in teacher leadership, *Professioneel Meesterschap*. Based on the outcomes of the case study reported in Chapter 4, the program was redesigned such that boundary crossing between school and university activity systems was intensified. By explicitly defining the intended outcomes in terms of individual professional development (i.e., qualification) and contributions to a reformed school agenda (i.e., intervention), both activity systems are actively engaged in

the design of the program and in monitoring its progress and outcomes. As a result, the learning arrangement is partnership centered.

The fourth scenario, the *professionalism scenario*, in which professional groups play a key role, was not considered a possible prototypical context for studying the impact of teacher leadership learning arrangements. The main reason for its exclusion is that such arrangements are not yet common. Existing arrangements that are offered by professional groups largely focus on developing subject expertise, domain specific expertise and subject methodology expertise, offered by subject teacher associations. On a small scale, bottom-up initiatives focusing on teacher leadership emerge in small communities of innovative teachers, such as *Leraren met Lef* (Teachers with Courage), *Onderwijspioniers* (Educational Pioneers), *the Crowd*, and *Meesterschappers*. Learning arrangements offered and managed by professional groups might become more common when the national professional body of teachers, *de Lerarencoöperatie*, takes a more prominent role in professional development of teachers, e.g. through a wider implementation of the register for teachers. When the formal requirements for registration gain wider implementation, teacher bodies might offer and manage a wider variety of learning arrangements which might also include arrangements for developing teacher leadership.

The analysis of the scenario documents reveals that the future for teacher education is largely defined by the extent to which key stakeholders and their activity systems are open to boundary crossing and the willingness of these stakeholders to cross or remove institutional boundaries.

### 3. Summary of the outcomes of the empirical studies

Chapters 3, 4, and 5 presented three empirical case studies examining the impact of post-initial learning arrangements on teacher development and school development. Through these studies of learning arrangements in different contexts, we developed a deeper understanding of the conditions that increase or decrease the impact of these learning arrangements.

#### 3.1 Impact of leadership development within Academic Development Schools

In Chapter 3, the first reported case study aimed to answer the second research question:

2. To what extent and in what way do learning arrangements within an academic development school contribute to teacher and school development, and which aspects of school culture and school organization play a role in this contribution?

In the academic development school that was the context for this case study, the main focus of the arrangement was on research projects that contribute to

school development. The contribution to teacher development remained rather implicit, with an emphasis on developing research skills. There were no explicit criteria or explicit assessment procedures. Nevertheless, teacher researchers reported learning outcomes at several levels. Through their specific research topics, teacher researchers developed expertise that they could use to improve work practices within their schools. At a personal level, they also developed stronger self-efficacy in conducting research. At the same time, engagement in research projects enhanced professionalism and leadership qualities, as it contributed to teachers' development of a critical stance toward existing school practices. Teacher researchers developed an increased professional distance and the ability to view issues from different perspectives. This experience increased their awareness of schools as complex organizations and of the role of management; teacher researchers also developed their sensitivity to the school's vision and educational concept. They learned to identify how research could benefit classroom innovation and how their own passions, competences, potential, and colleagues' qualities could contribute to innovations. These findings illustrate that the engagement of teachers in research projects can contribute to changes in work and leadership practices at school.

The study also reveals conditions within the school's organizational structure and culture that can support the impacts of research projects at the wider school level:

- Collaborative work in research teams;
- Shared ownership of teacher researchers and school management;
- A combined focus on research, design, and implementation;
- The need for recognition and a platform to share the outcomes of research projects with colleagues;
- Room for a new dynamic within the school that is based on focus, reflection, and careful analysis.

These conditions are similar to the conditions that Admiraal, Smit and Zwart (2013) found in their recent review study on teacher research in schools. Based on an analysis of 30 publications, the authors extracted five key recommendations to improve the impact of research conducted by teachers. These recommendations focus on the time and space that are available for teacher research, collaboration between teachers, support and commitment from school management, connecting research themes to work practices in school, and the freedom to define research themes and designs.

### **3.2 Impact of leadership development and organizational transfer climate**

In the second case study (Chapter 4), the third research question was answered:

3. To what extent and in what way does a formal Master's program in teacher leadership contribute to teacher development, new teacher leadership roles, and school development, and which elements within the organizational transfer climate of the school stimulate or hinder these developments?

The focus of this case study was a Master's program in teacher leadership. Based on the outcomes of the previous study, which emphasized the importance of organizational structures and cultures, the second case study focused on the organizational transfer climate of the school and how it stimulates or hinders a formal Master's program in teacher leadership to contribute to teacher development, new teacher leadership roles, and school development.

This study demonstrated that in the context of a Master's program in which teachers participated on an individual basis, the impact of the program on individual teacher development can be significant. Master's teachers developed a stronger awareness of pupils' individual needs and a deeper understanding of teaching and learning theories. They developed a more critical and analytical attitude toward assumptions and practices in their school; they felt more confident in research activities and tended to include inquiry into processes of curriculum change and innovation. They also developed a broader perspective on school organizations and development. They became more proactive and entrepreneurial. Most participants indicated that they gained more confidence in addressing, supporting, inspiring, or convincing their colleagues.

The teachers developed a strong motivation to use these new qualities within their teams and the schools as a whole. However, the opportunities to use their leadership qualities outside their classrooms and to contribute to team and school development depended on the extent to which aspects of the organizational transfer climate - such as strategic alignment, situational cues, use opportunities, and support from supervisors and peers - were supportive. When these aspects were supportive, the teacher leader and supervisor created a strategic partnership. If these aspects were not supportive, the teacher leaders became isolated and frustrated and in some cases even decided to move to another school.

These findings confirmed the importance of the organizational transfer climate as a condition for effective transfer (Baldwin & Ford, 1988; Boshuizen, 2003; Gielen et al., 2004; Van der Klink, 2012). However, these conditions are not fixed characteristics of the context of a given school. The aim of the Master's program *Professioneel Meesterschap* was to provide participants with tools that can help them claim positions and contribute to changes in the school's transfer climate. As a result, teacher leaders themselves can influence the organizational transfer climate. However, when teacher leaders are isolated within their schools and the school management, supervisors and colleagues are not responsive, teacher leaders will find it difficult to make a difference. School cultures are persistent, and when a single isolated teacher leader, changed by engagement in a Master's program, returns to an unchanged working environment, frustration risks are significant. When there is no strategic alignment between the school's reform agenda and the aims of the Master's program and when the Master's program participant is the only boundary crosser in the school, a Master's program in teacher leadership may have an



impact at the individual professional development level, but the impact at the school development level will be limited. In such schools, the Master's program is considered a tool for personal professional development, not a tool for school development.

The outcomes of this study initiated a rethinking of the Master's program using the concepts of activity systems and boundaries. The Master's program can be understood as a boundary zone, creating a space for expansive learning through boundary activities that bridge the activity systems of the school and the university. This perspective helped in redesigning the Master's program by stimulating boundary-crossing activities, aiming for the maximum impact at school, and redefining the roles of university representatives and local school representatives in developing and running the program.

### 3.3 Impact of leadership development and boundary crossing

The third case study (Chapter 5) focused on senior teachers from three vocational education colleges who enrolled in the redesigned Master's program, *Professioneel Meesterschap*. Based on the outcomes of the second case study as reported in Chapter 4, six design principles have been formulated for Master's programs that intend to stimulate expansive learning by increasing boundary crossing between the university and the workplace. These design principles focus on the design process (1 and 2) and the program itself (3 to 6):

1. Strategic alignment between the school's reform agenda and the aims of the Master's program
2. Shared ownership by the university and the school
3. A strong connection between program content and school issues
4. Collectivity: engaging several teachers from one school in the program
5. Engagement of school supervisors in boundary-crossing activities
6. Engagement of university teachers in boundary-crossing activities

With these design principles, the Master's program *Professioneel Meesterschap* was redesigned in close cooperation with human resource development (HRD) stakeholders in the colleges for vocational education. From these three vocational schools, 42 teachers who were appointed as 'senior teacher' participated in the new program. This redesigned Master's program was the focus of the third case study. The key question for this study was the following:

4. To what extent and in what way can an educational design that focuses on boundary crossing between the activity systems of the school and the university strengthen the impact of a Master's program in teacher leadership on teacher development, new teacher leadership roles, and school development?

The study revealed that senior teachers developed their knowledge, competences, skills, and sense of self-efficacy with regard to teaching,

learning, organization, and innovation. They indicated a strong development of their sensitivity to organizational processes and processes of change, and they developed their research and analytical skills. Moreover, they developed an inquiring attitude, a helicopter view, and awareness of the wider school context. Although there was little change in the formal tasks of the 42 senior teachers who participated in the Master's program, these new qualities helped change their work performance. Both senior teachers and their supervisors reported that senior teachers performed their tasks differently, assuming new roles by applying a deeper understanding of teaching and learning theories; a wider perspective of their team, curriculum and organization; a more inquiring attitude; a stronger focus on sharing knowledge; and stronger self-confidence and authority. They were able to provide direction and exert influence toward their colleagues and teams, toward their supervisors, and, collectively, toward management and staff at the school level.

Through these new performances, the senior teachers made an impact on work practices at the team or unit level. This impact was reflected in new curricula, new didactic approaches, new tools and instruments, and in the way the teachers were role models for their students. The senior teachers were also able to influence leadership practice within the school by contributing to team self-awareness, a stronger proactive team attitude, a stronger focus on team learning, and a greater openness to research, data, and theory. On several teams, there was an increased focus on sharing knowledge and more intense discussions on teaching and learning. Through their leadership roles, the senior teachers were able to contribute to favorable conditions for teacher leadership as they addressed internal boundaries, created more room for teacher's agency within self-steering teams, and contributed to a culture in which teacher leadership could flourish.

The respondents' overall impression was that the Master's program and the context in which the senior teachers were placed created strong impulses within schools, contributing to both personal development and a wide variety of instances for school development. The study also revealed that of the six design principles that were supposed to strengthen boundary crossing between university and school, three principles were decisive in explaining the impact of the program. The alignment of the Master's program with the schools' strategic ambitions ensured a productive context for the senior teachers' initiatives. This productive context was strengthened by the way in which their formal positions as senior teachers were integrated within a wider system of teacher profiles. In addition to strategic alignment, the shared ownership by university and school stakeholders was also considered an important design element. This shared ownership was manifest in the monitor group that evaluated progress and, based on these evaluations, suggested program adaptations.

The collectivity of the Master's program proved a strong lever for a shared awareness of senior teachers' roles at all school levels. The strategic

management, administrative units, department heads, and teachers could not ignore the existence of a new group of teacher leaders within the schools. For the group of senior teachers, the program contributed to a strong collective self-awareness of their role and contribution to the school.

Although the outcomes revealed that the design of the Master's program was effective in developing and implementing teacher leadership within the schools, elements in the design could still be improved. The shared feeling of ownership that was experienced within the monitor group was not widely spread, as supervisors of the senior teachers did not feel connected to the design and monitor process, indicating the existence of internal boundaries in vocational schools. Supervisors' involvement in boundary-crossing activities was limited, as effective boundary objects appeared to be missing. The lectures of the Master's program were intended as boundary objects, but the invitation to supervisors to join lectures did not actively engage them in further dialogues, as supervisors, senior teachers, and university staff were not challenged to work together. Another design limitation was that boundary crossing of the university teachers was limited to their engagements with the participants. For university teachers, their main focus was on supporting professional development of individual participants. They did not see an explicit role for themselves within school development processes, nor an opportunity for expansive learning within the university. A boundary object that could engage them more actively in discourses with supervisors and that could provide a more detailed understanding of issues and performances at both the school and the university was missing. For follow-up improvement of the impact of the Master's program, further research would be useful on designs for effective boundary objects in which participants, supervisors and university teachers engage in a shared dialogue where contexts and dilemmas are explored collaboratively.

## **4. Learning arrangements that support professional development and school development**

The three empirical case studies contribute to a deeper understanding of learning arrangements that focus on teacher leadership and the way in which such learning arrangements contribute to individual professional development, improved leadership performance at the workplace, and school development. Based on this deeper understanding, we will draw wider-ranging conclusions for the design of learning arrangements for teachers in the following sections.

### **4.1 Mental models based on transfer**

One key conclusion that we can draw from these case studies is that the debate on learning arrangements for teacher development is dominated by the metaphor of transfer. In this metaphor, the activity systems of universities and schools are separated. Teacher development is considered a unidirectional process that is based on a replicative conception of learning (Bransford &

Schwartz, 1999; Hager & Hodkinson, 2009) and is disconnected from complex contextual factors that influence the dynamics of activity systems (Engeström, 2001). In this metaphor, knowledge provided in one context must be applied in another context. Although the transfer metaphor is often used to address the lack of an impact of learning arrangements on changes at the workplace, the use of metaphor itself might actually emphasize the separation of the two contexts. Through such a separation, professional development and school development might be considered as two separate issues: professional development as a problem for the university teachers who might see learning arrangements as a rational design, relating any outcomes directly to the learning arrangement, ignoring personal and institutional contexts; and school development as a management issue for school managers, reducing teachers to *'mere pawns on their chess board'* (Leeman & Wardekker, 2013, p.35). This separation ignores the need of a 'theory of improvement', an explicit understanding of how professional development activities contribute to school improvement and improved learning outcomes of pupils (Van Veen et al., 2010; Wayne, Yoon, Zhu, Cronen, & Garet, 2008) and which combines a theory of pedagogy and a theory of change (Elmore, 2003; Fullan, 2012).

This separation is deeply rooted in the educational system. Accreditation criteria for university programs focus on the individual learning outcomes of participants, not on the impact at the workplace. Within the structure of the teaching profession, the implicit assumption is that teachers graduating from initial teacher education have acquired all necessary competences to assume full responsibility for teaching children and no additional qualifications are needed. When starting teachers fail to meet these expectations, the university as the context for initial teacher education is blamed. Within the Master's program that was studied in the third case study, this separation can be recognized, as both university teachers and some HRD school stakeholders continued referring to the traditional transfer metaphor. They emphasized that the Master's program should empower senior teachers such that they would be able to initiate school reform and provide leverage against supervisors who are not responsive to teacher leadership. When these senior teachers are not able to initiate change, the implicit suggestion was that the university had failed in providing them with the appropriate tools.

The separation between learning and application also creates a hierarchy in which knowledge and theory hold a higher status than application; in which academic research is considered more important than practice-oriented research; and in which academic universities enjoy a higher status than universities of applied sciences. In the Netherlands, the dominant market model in post-initial teacher development arrangements is another example of how roles and responsibilities are separated, as teacher development is considered something that can be bought from a provider. This model results in universities that push their post-initial education into commercial and profit-oriented companies, thus reducing the universities' opportunities to engage

in school development and to connect this school development with teachers' lifelong professional development.

To strengthen the connection between professional development and school development, strong and close partnerships must be created between universities and schools. These partnerships must be based on equality and perceive university teachers and school stakeholders as partners in both learning and innovation. In the Netherlands, school-university partnerships that have been built within the context of initial teacher education appear to be fruitful contexts for such a new equality. However, the international analysis of partnerships in the context of Professional Development Schools reveals *'a growing recognition that these partnerships are inefficient in establishing new collaborative cultures and in many cases they even preserved the old hegemonies of the involved institutions'* (Gorodetsky & Barak, 2008, p. 1907). Even within such partnerships, transfer-based mental models dominate; the focus is the student teachers' initial qualifications, and schools still primarily serve as practice fields for pre-service teachers (Gorodetsky & Barak, 2008). Within such partnerships, the university is still considered the 'expert', and the partnership is not used for school or university innovation, as each institution continues to maintain its own culture and unique discourse.

To increase the impact of learning arrangements on school development, we need to abandon segmented mental models in which teacher development and innovation are considered different and sequential tasks. We need to *'understand continuity and transformation in learning as an ongoing relation between changing individuals and changing social contexts'* (Beach, 1999, p. 103) and design learning arrangements accordingly. Such arrangements require the growth of a new culture based on boundary-crossing activities with actors from different systems interacting and engaging in knowledge activities *'as border crossers, as people moving in and out of borders constructed around coordinates of difference and power'* (Giroux, 1992, p. 29). When we want to stimulate engagement in boundary-crossing activities, dominant mental models must be challenged. This challenge can create room for expansive learning as a mutual process, in which participants from different activity systems reconstruct their own context.

#### 4.2 Expansive learning and the quality of boundary objects

The boundaries between schools and universities can cause discontinuity and problems in school-university interaction. At the same time, boundaries and boundary crossing can be a powerful sources for expansive learning; participants develop their knowledge, competences, and skills, but they also reconstruct their own context to resolve discontinuities (Engeström, 2001). Applying Engeström's activity theory to teacher learning, Tsui and Law (2007) illustrate how this theory can be used to understand the interaction dynamics between university teachers, school mentors, and student teachers. However, their study provides no guidelines and conditions for effective boundary objects and expansive learning. In this research project, we attempted to identify

conditions for expansive learning and for connecting professional development and school development. We explored three approaches to gain a deeper understanding of the boundary-crossing process and how this process can contribute to solving discontinuities between universities and schools.

The first approach was to strengthen the mutual involvement of schools and universities in designing learning arrangements. A close relationship between the aims of the learning arrangement and the school's reform agenda is essential in creating a context in which professional development and school development are aligned. Next to an alignment of aims, there is also need for a shared theory of improvement through which both school and university share an understanding of how professional development contributes to school development. By creating external curriculum consistency, conditions are set for a shared understanding and fruitful interaction between stakeholders within the boundary zone that is created by the learning arrangement. This shared understanding must include stakeholders at different levels: strategic management, teachers, and supervisors.

The second approach was to strengthen the position of the boundary crossers. Boundary crossers have a rich and valuable position because they take part in both activity systems; however, they also have a difficult position because they often operate on the periphery of the two systems, belonging to or accepted by neither system (Akkerman & Bakker, 2011). The third case study showed how engaging a larger group of boundary crossers and establishing an explicit senior teacher position at schools helped boundary crossers contribute to expansive learning and actively reconstruct their schools' activity systems.

The third approach was to create boundary objects within these learning arrangements that could engage stakeholders in a shared discourse through which contextual differences are explored and collective learning can be achieved (Carlile, 2004; Star, 1989). Several boundary objects appear effective in stimulating expansive learning: the writing and discussion of future scenarios (Chapter 2), involvement in research projects (Chapters 3, 4 and 5), and shared monitoring groups that evaluate and adjust the learning arrangement (Chapter 5). These boundary objects are effective in engaging different stakeholders and stimulating meaningful discourses. Inviting supervisors to join guest lectures did not prove to be an effective boundary object, as the context of guest lectures did not provide supervisors with opportunities for active engagement in shared and meaningful dialogues.

The boundary zone and its boundary objects create opportunities for boundary learning. Akkerman and Bakker (2011) identify four possible mechanisms for boundary learning: (1) *Identification*, in which lines of demarcation between practices are redefined and a renewed understanding is created for how separate practices are delineated from each other; (2) *Coordination*, in which new ways of effective cooperation are identified and work is distributed

efficiently across practices; (3) *Reflection*, in which separate practices learn from each other and in which perspectives from one practice are used to redefine other practices; and (4) *Transformation*, in which practices are profoundly changed and in which boundary learning may lead to the creation of new hybrid in-between practices. This last mechanism can be compared to Engeström's concept of expansive learning.

According to Akkerman and Bakker (2012), these mechanisms can manifest themselves at organizational as well as individual levels. In all three case studies, the learning arrangement facilitated a transformation at the individual level, as teacher researchers and participants in Master's programs developed new identities as teacher leaders. At the organizational level, the boundary learning mechanism varied. For some participants in the second case study, the boundary learning at their school was limited to identification, as clearly defined roles and responsibilities were set and confirmed, largely reflecting existing hierarchies between teachers and supervisors and leaving little room for informal leadership roles. In some schools, boundary learning was extended to coordination, as strategic partnerships were developed between Master's teachers and supervisors seeking an effective combination and synergy of formal and informal leadership roles. In the third case study, boundary learning resulted in transformation, as new leadership practices were being developed within the schools, leading to new organizational identities of the schools.

Akkerman and Bakker (2012) indicate that further research should focus on cultures and conditions that are supportive to boundary crossers. The third case study showed that three approaches – mutual involvement in the design of the learning activity, strengthening the position of the boundary crosser, and effective boundary objects – proved powerful in supporting teacher leaders who act as boundary crossers, generating expansive learning within the schools and linking individual professional development with school development.

### 4.3 Expansive learning within the university

In the previous section, we emphasized the impact of expansive learning on both individual professional development and school development. In the case studies, little attention was paid to the potential impact of boundary crossing activities on universities. We, as researchers and university teachers, were focused on the impact of the learning arrangements on schools. In all three case studies, mutuality and reciprocity were limited, as the implicit aim was for the university to support teachers in contributing to school changes. Aiming for change within the university was not 'part of the deal'.

However, in boundary-crossing processes, expansive learning can take place within both activity systems. Using the metaphor of boundary crossing, more attention can be given to the potential reciprocity of boundary learning. Within the university, discussions on the outcomes of this research project have strengthened awareness of the need for other mental models. The way in which

the findings from the second case study stimulated the adaptation of the Master's program toward a partnership model illustrates the responsiveness of the university to expansive learning.

However, the transfer metaphor is still strongly engrained in the approaches of university teachers. University teachers are expected to support their Master's students in meeting the criteria for a Master's qualification. As a result, university teachers' dominant focus is individual professional development. University teachers recognized the third case study's strategic alignment between school and university, linking program aims and schools' innovation agendas, but they still understood their role in supporting senior teachers so that senior teachers could be effective in initiating change within their schools. The university teachers emphasized that the Master's program should empower senior teachers, enabling them to provide leverage against supervisors who are unresponsive to teacher leadership. In this mental model, the participants in the Master's program are considered the sole boundary crossers, change agents and mediators between university and school.

Except for the monitor group meetings, university teachers only engaged in dialogues with senior teachers, not with other school representatives. University teachers were reluctant to what they considered 'mingle in school matters.' However, as a result, they had little first-hand knowledge of the context and issues within the senior teachers' schools or how senior teachers performed at their workplace. Within the design of the program, boundary objects were missing that could bring together senior teachers, supervisors, and university teachers in a shared discourse, e.g., in learning communities that focus on complex problems and allow each participant to contribute on an equal basis. To create such discourse university teachers need to be able to step out of their dominant roles as 'teachers' and consider themselves as 'learners' as well.

Partnership-based learning arrangements that aim to stimulate expansive learning will need a mindset that is fundamentally different from learning arrangements that fit within bureaucratic or market scenarios (Mitchell & Alexandrou, 2011). In partnership-based Master's programs, strategic alignment, shared ownership, and equal collaboration between participants, supervisors, and university teachers are not just design criteria or conditions for increasing the impact of the program; they are also fundamental elements in our understanding of how expansive learning can generate change within both activity systems. This expansive learning can link individual professional development, school development, as well as university development.

#### **4.4 Bureaucratic, market, or network scenarios for teacher development**

In this research project, we observed different prototypical arrangements for teacher development: a school centered design, a university centered design, and a partnership centered design; we also observed their contributions to teacher development and school development.



The potential impacts of the learning arrangements on professional development of the teachers who participated in the three studies are similar. The differences between the three contexts revolve around the three following elements.

The first element is the explicitness of learning outcomes. In the first case study, learning outcomes remained rather implicit, as there were no explicit learning aims formulated and no formal assessment provided. This implicitness makes it difficult to share learning outcomes with colleagues and supervisors within the school. Given the similarity in learning outcomes that have been reported between the three groups, the academic development school's learning outcomes could be formally recognized through an additional assessment and be credited as part of a Master's qualification. Making implicit learning outcomes more explicit could help teacher researchers share those learning outcomes with colleagues, contributing to a stronger position of teacher researchers.

The second element is schools' commitment and the alignment between the learning arrangement and the school reform agenda. This alignment was strong in the first and third case studies but weak in the second case study.

The third element is the way in which the learning arrangement was embedded in a wider 'strategic human resource development policy' (Schramade, 2011; Van der Klink, 2012) that connects innovation aims, human resource development and human resource management. Again, this element was present in the first and third case studies, in which teachers were positioned as teacher researchers or senior teachers. This explicit position made teachers more visible, recognized, and accepted as brokers between different activity systems.

The fourth scenario that was identified in Chapter 2 - the professionalism scenario - was not represented in the case studies, as no structured teacher leadership learning arrangements managed by professional groups exist. However, such arrangements may develop in the future when the professional body of teachers gains a stronger position within the educational infrastructure. Such arrangements can be powerful instruments for teacher learning, as the profession itself manages these arrangements. By taking control over its professional development, the profession strengthens its autonomous voice and professionalism. However, self-control of the profession over its professional development arrangements, might distance this professional development from local school development. Our case studies revealed the importance of linking these two types of development and of focusing on expansive learning across boundaries. Learning arrangements that professional groups offer must be embedded in the school's strategic agenda through external curriculum consistency. They require strong positions for learning arrangement participants as boundary crossers within the school. They also need to employ boundary

objects that can engage different stakeholders within the school in a shared discourse through which contextual differences are explored and collective learning can be achieved.

## 5. Developing teacher leadership in schools

The three case studies demonstrated how teacher leadership could be powerful in engaging teachers in school development processes that extend beyond their own classes. Teacher leaders can initiate changes in curricula and teaching methods and support these changes with small-scale studies. They can support their colleagues' teaching and learning, stimulate teams' collaborative learning, and contribute to teams' self-awareness. They can bring educational theories and research outcomes into the school dialogues. They have a wider perspective on school organizations and reform processes and can use this knowledge to initiate, manage, and monitor innovation projects. In addition to these contributions, teacher leaders can be counterparts for supervisors and management, addressing strategic issues at the school level.

As such, teacher leaders are crucial in strengthening the profession's role in improving the quality of teaching and learning. Our case studies identified two crucial elements that are conditional in supporting this key role of teachers: the development of leadership competences and the way in which teacher leadership is embedded in school structures and cultures.

### 5.1 Developing teacher leadership competences

In a recent literature review on teacher leadership, Poekert (2012) concludes that studies on teacher leadership *'focus heavily on the foundational components of teacher leadership rather than the means by which it is developed, the means by which it is practiced in school, the targets of its influence and its impact on teaching and learning'* (p185). Therefore, there is a need for empirical studies that focus on how teacher leadership competences are developed, how teacher leadership can be implemented in schools, the underlying processes (Hulsbos et al., 2012; Muijs & Harris, 2006), and teachers' roles in developing teacher leadership (Poekert, 2012).

In this research project, we gained a profound understanding of the leadership development process from teacher leaders' perspectives. The case studies demonstrate that leadership qualities can be developed through engagement in teacher research and participation in a Master's program. During the case studies, remarks were occasionally made that teacher leaders who were not able to generate school change were just not adequate as teacher leaders or that the university was not effective in preparing them for their school roles. These remarks ignore that teacher leadership is a new concept within many schools, requiring new mental models for organizations and hierarchies and new professional identities. This novelty implies that the teacher leaders within our case studies were pioneers who had to lay the groundwork, not only by

exerting their leadership to innovate education and support colleagues, but also by creating fertile ground in which teacher leadership could flourish. Such pioneers face a considerable and complex task when they are left to act alone.

Remarks that teacher leaders were just not adequate ignore this considerable and complex task and reflect the dominance of the transfer metaphor, suggesting that leadership development entails acquiring some tools and then applying them in the workplace. These remarks suggest that teacher leadership is something that is 'turned on' during a Master's program, just as novice teachers after initial teacher education are often expected to immediately perform at the same level as teachers with 30 years of teaching experience. This static view on teacher leadership ignores that developing teacher leadership competences calls for a transformative learning process (Kegan, 2009; Mezirow, 2000; Ross et al., 2011) in which taken-for-granted frames of reference are transformed and new mindsets are developed. This process will require time and opportunities to test new behaviors. Just as novice teachers need support in the first steps of their career, starting teacher leaders will need support during their first steps as teacher leaders. This support must be given by fellow teacher leaders, supervisors, HRD departments, school management, and university teachers. This support was available in the academic development school of the first case study and in the three vocational schools in the third case study. However, these support structures end when learning arrangements have a limited duration, such as Master's programs. It is the responsibility of schools, universities, and teacher leaders to maintain some type of support structure for teacher leaders in schools. Communities that bridge boundaries between schools and universities, even extending to other schools, can play an important role in this effort. The Community of Master's Teachers in the Netherlands (*COMN*) and networks such as *Leraren met Lef* are examples of such communities.

The development of teacher leadership aligns with teachers' career development processes and lifelong learning. Teachers who were engaged in the learning arrangements of the three case studies reported strong personal and professional growth, as they could relate their practical experience as teachers to new, wider theoretical notions and a change of identity. This progress indicates that learning arrangements focusing on teacher leadership fit very well in post-initial career paths and can be considered a professional development strategy (Poekert, 2012). In this manner, the teaching profession can develop into a profession that is characterized by continuous development and growth through several phases: junior teacher (in a probation phase), teacher, teacher leader. During these phases, the focus extends from pedagogical leadership within the classroom to teacher leadership covering classrooms, teams, schools and possibly the profession as a whole.

## 5.2 From strategically distributed to culturally distributed leadership

In schools where a culture of distributed leadership is absent, the development of leadership competences by individual teachers has little overall impact on

schools. To create a school culture of distributed leadership and to strengthen teachers' roles in school innovation, it is necessary to give potential teacher leaders a clear position within the school supported and recognized by school management (e.g., as a teacher researcher or senior teacher). These leadership positions can be formalized through an explicit mandate from school management, connected to designated time and explicit expectations with respect to outcomes. This structure with mandated teacher leaders creates a clear context in which expectations are set, support can be provided, and teacher leadership roles cannot be ignored (Murphy, 2005).

However, such an arrangement creates a static context for teacher leadership: for all school staff, it is clear who is a teacher leader and who is not. This understanding creates a new hierarchy within schools. For regular teachers, it is clear that they do not have that position unless the school management selects them for it. Leadership is not an open invitation to all schoolteachers; it is a designated task. Some criticize this structurally embedded leadership, as *'it places a limit on the development of leadership capacity, reaffirming the view that the sort of professionalism that includes the exercise of leadership is only for the few rather than the many'* (Frost, 2012, p. 210). This perspective on teacher leadership contrasts with a perspective in which leadership is embedded within a school's culture that *'recognizes the potential of all teachers to exercise leadership as part of their role as a teacher. This view resonates with the work on 'professional learning communities,' 'reflective professional enquiry,' and the 'deprivatisation of practice'* (Frost, 2012, p. 210).

This perspective of culturally embedded 'leadership for all' seems attractive and resonates with democratic values. However, our study demonstrated that there is little opportunity to develop this type of leadership within a context where no tradition of teacher leadership exists. Although formally mandated teacher leadership might run the risk of excluding other colleagues who do not have that senior position, our study demonstrates that senior teachers in formal and mandated positions can use their leadership to support teams in strengthening their agency as self-steering teams. Through their positions, senior teachers supported new distributed leadership practices and contributed to a culture in which teacher leadership became part of the school culture. This outcome aligns with the continuum of different forms of distributed leadership as identified by MacBeath (2009). These different forms can be considered a distributed leadership taxonomy or continuum, as *'each of these different forms of leadership may be appropriate at a given time and in a given context'* (p. 44). The type of mandated leadership within the academic development school and vocational schools aligns most closely with 'strategically distributed leadership' but might eventually develop into 'culturally distributed leadership'.

However, this development from strategically distributed leadership to culturally distributed leadership cannot be taken for granted. Distributed leadership is full of contradictory and power-related issues (Lumby, 2013). As can be

recognized in the third case study, the formal mandate given by the school management can easily be used to give teacher leaders assignments that align with the school's strategic agenda. School management's focus on teacher leader assignments can be understood in terms of the school's need to 'get the most out of the teacher leaders' and to widen their impact on school improvement as much as possible. However, the downside of this focus is that school management dominates the issues that teacher leaders are expected to focus on, reducing school improvement to a management problem in which teachers are only pawns (Leeman & Wardekker, 2013; Van den Berg, 2012). In that case, the focus might be on school-wide managerial problems and general strategic issues, leaving little attention for micro-level issues with which teachers struggle. This managerial power might alienate teacher leaders from their colleagues, as they become strategic tools for school management (Murphy, 2005).

School leaders must be aware of these issues of autonomy, power, control, and facilitation in developing and sustaining teacher leadership. Successful school improvement and implementation are dependent on teachers' capacity for change. Teacher leaders can initiate and support innovation, but they cannot do so on their own. Therefore, teacher leaders have a key role in strengthening teacher teams' capacity for change. Professional development can lead to teacher leadership, and this teacher leadership will contribute to professional development of teacher leaders and their colleagues (Poekert, 2012). Schools that invest in developing leadership in some mandated teacher leaders must realize that this strategically distributed form of leadership is only one, albeit necessary, step toward more culturally embedded leadership forms in which self-steering teacher teams take the lead in adapting to the dynamic circumstances that they constantly face in providing the best possible education for their pupils.

## 6. Limitations and directions for further research

Sparse research has been conducted on how teachers can develop their leadership, how teacher leaders interact within school leadership practices, and what impact that newly developed leadership has on schools (Muijs & Harris, 2006; Poekert, 2012). Therefore, this study is explorative in nature, observing concrete contexts for leadership development and their impact on teacher development and school development.

### 6.1 Reflections on the research sample

In this research project, three contexts for teacher development were selected based on future teacher education scenarios. These future scenarios were inspired through a trend analysis regarding the education of teachers. The selected contexts differed in terms of the roles and relationships between schools and universities. The fourth scenario, the professionalism scenario, in which a professional group has a key role in designing and offering

teacher leadership learning arrangements, was not selected as a context for research, as such learning arrangements are still rare in the Netherlands. For further research, inclusion of such learning arrangements, e.g., around *Onderwijs pioniers* (*Teacher pioneers*), could provide new information. Issues concerning transfer, boundary crossing, and school impact might develop differently in such contexts because professional, not institutional, borders dominate such designs.

Within each of the chosen contexts, one specific arrangement was studied using a case study design. Through case studies, contemporary phenomena can be studied within their real-life context, especially when boundaries between phenomena and contexts are not clearly evident (Yin, 2009). In case studies, generalization is not reached by statistical rules but rather through theoretical replication (Yin, 2009), where the cases are designed to cover different theoretical conditions. Through careful case analysis and comparison common explanations can be identified. Through such explanations, the case study approach can provide insights that are valuable for understanding other similar situations or cases (Cohen, Manion, & Morrison, 2011; Nisbet & Watt, 1984). In this research project, three specific local cases in a specific phase of their development could be studied. In each case, there was 'within-unit variation' (Gerring, 2004), as within each case the school was the unit of analysis.

In the first case study, the three schools of the Amsterdam Academic Development School (AcOA) were studied. The AcOA is one of 35 academic development schools in the Netherlands. The case study took place in the initial phase of its existence. In this case study, respondents included 11 of 19 teacher researchers in the three schools that participated in AcOA. Although only one academic development school was studied, the findings are similar to findings from other studies on academic development schools and on teacher research in schools (Admiraal et al., 2013).

In the second case study, the focus was on the Master's program *Professioneel Meesterschap*. This Master's program was unique as it was the only NIME-accredited MEd program and a non-government-funded program. However, the program aims focusing on teacher leadership were similar to those of the Master's of Learning and Innovation program that is offered at other universities. The participants in this program came from various schools across the entire country. Of the first two cohorts, 18 of 21 participants were included in the case study, all coming from different schools. Although there are similar programs within the Dutch context, there are no available research outcomes on the impact of such programs on teacher development and school development. Extending research to other programs would be useful to compare our findings with similar Master's programs.

In the third case study, the focus was again on the Master's program *Professioneel Meesterschap*, but the program was redesigned in close

cooperation with three vocational schools. This program was unique in its design, so our findings cannot be compared with outcomes from other studies. In this context, eight of 42 senior teachers were selected to be included in the detailed data collection process. Selection criteria for those senior teachers comprised a mixture from the three vocational schools and from different sectors. Using other data, additional information was gathered on all participants.

Although the three contexts for the case studies differed and only one case study was used for each context, the within-case variation and the consistency of the outcomes over the three case studies indicate that the outcomes are generative and have meaning for a wider set of contexts.

## 6.2 Reflections on the research design and methods

The research design was based on a series of qualitative case studies. The strength of case studies is their close connection to reality and their potency to illustrate unique features and uncontrolled variables within research contexts. Qualitative and narrative research methods are considered valuable approaches in research on teacher leadership (Hulsbos et al., 2012) and the dynamics of organizations, change, and learning (Boonstra, 2000), as they can provide insight into dynamic processes and teacher leaders' personal and subjective interpretations.

Through these case studies, it was possible to generate a detailed understanding of the design of the different learning arrangements and stakeholders' perceptions about the impact of the learning arrangement on teacher development and school development, along with facilitating and hindering conditions. The three case studies were not intended to compare the three contexts but rather aimed to enrich our understanding of the impact of arrangements on teacher leadership development and school development. Through this approach, each study created an additional and more detailed understanding of the arrangements at stake. This understanding widened perspectives in each case study, shifting from a general understanding of the school's structural and cultural conditions to a closer understanding of the impact of the organizational transfer climate. This closer understanding of conditions influencing the impact of teacher leadership development could be used to redesign the Master's program. In the last case study, this understanding led to a more detailed understanding of boundary crossing and criteria for effective boundary objects.

Using interviews, the studies primarily focused on self-perceptions. Interviews can create a limitation, as perceptions may be blurred. Additional sources were used to generate a more balanced impression of the impact of the learning arrangements. In the first case study, documents and meeting minutes were used. In the second case study, each participant's supervisor was interviewed. In the third case study, interviews with supervisors, university teachers, and

HRD staff were added, and monitor group meetings were analyzed. However, no observational information was collected on the quality of teachers' actual leadership performance at the workplace or on the actual impact of the research projects that were conducted by teacher researchers and Master's students. Additionally, colleagues' voices were missing, even though effective teacher leadership would have a considerable impact on colleagues. Further studies can create a more detailed picture if they include concrete research project outcomes and colleagues' perspectives and observe teacher leaders' leadership performance. Another limitation is that the data collection process took place during or just after participation in the learning arrangement. As a result, these case study findings provide no indication with respect to the long-term effects of teacher leadership performance. Further longitudinal research would be helpful for answering the questions how the leadership performance of teacher leaders will impact long-term school leadership practices and whether strategically distributed leadership will evolve into culturally distributed leadership in vocational schools (MacBeath, 2009).

In Chapter 3, we used the validities that Anderson and Herr (1999) mentioned to evaluate the research projects of the teacher researchers. In these validities, special attention is given to the 'democratic validity' of research projects: the extent to which stakeholders are involved in designing the research project and giving meaning to the research data. This involvement is important, as case studies are not easily open to cross-checking, potentially leading to observer bias problems (Cohen et al., 2011; Nisbet & Watt, 1984). Stakeholder involvement was weakest in the second case study, as participants in the Master's program and their supervisors were mainly treated as objects of study. In the first and third case studies, respondents were more actively involved, as preliminary results were reported and discussed with participants and other stakeholders (e.g., in the monitor group and focus group meetings in the third case study). In all three case studies, the outcome validity and catalytic validity, which focus on the usefulness of the outcomes of the research project for schools and the impact of these outcomes on generating change, were high because the outcomes were used to redesign the learning arrangements or to strengthen the organizational contexts for teacher leadership.

### 6.3 Directions for further research

So, although we were able to answer the main research questions, new questions arise which could be topic for further research:

- The research could be extended to other learning arrangements and contexts, including arrangements that fit in the professionalism scenario and are initiated by professional groups. Also, as the research context within this study focused on secondary and vocational education, further research should include learning arrangements for teacher leadership in primary education.
- The case studies of this research project were mainly focused on the design of the learning arrangement and on the conditions at the workplace. The



attention for personal characteristics of the participants and how these affected the impact of the professional development on school development was limited. This could be included more explicitly in further studies.

- Extension of the research to other learning arrangements, like other Master's programs, can help in identifying effective boundary objects that facilitate boundary crossing.
- Further research can focus more strongly on internal boundaries within schools (including perceptions of colleagues and staff departments more explicitly in the process of data collection), and on the impact of boundary crossing on the university.
- Finally, further research can focus on the long term impact of teacher leadership and provide insight in the extent and way in which mandated leadership in schools can develop into culturally embedded leadership.

## 7. Practical implications

The resulting insights from this research project have several implications for schools, universities, teachers, and policy makers.

### 7.1 Practical implications for schools

To meet the changing demands of parents, pupils, and society, schools are in need of innovation and reflection capacities. As teachers are key stakeholders in these innovation and reflection capacities, it is important that schools' human resource policies focus on the pedagogical quality of teachers and their skills and competences with respect to leadership and innovation (Lambert, 2006). Learning arrangements for teachers, whether they are on- or off-site (e.g., a Master's program), can contribute to these competences. Developing these competences for leadership and innovation can be supported by a variety of on-site or off-site learning arrangements, conditions and structures, creating a rich learning landscape for teachers (Ruijters, 2006).

Introducing teacher leadership in schools will challenge existing structures and cultures. It can threaten existing hierarchies, positions, and autonomies. Strategies that aim at strengthening teacher leadership will need strong support from the school's strategic management and a close connection to the school's reform and capacity-building agenda. The policy in the three vocational schools is a good example of such a strategic alignment, as the introduction of new teacher profiles was not seen as an isolated policy issue and was closely connected to the schools' broader innovation agendas.

Such a strategic alignment cannot simply be established at the school's top level; instead, it should be adopted at all school levels. If not, internal boundaries might lead to a lack of ownership. This alignment requires a close involvement of schools' middle management, as it has a key role in stimulating and recognizing the development of individual teachers and teams.

To support teacher leaders in assuming school leadership roles, their positions must be strengthened. Giving them a clear position as teacher researcher or senior teacher can provide such support. The connection with high teacher profiles (LC-salary scale in primary schools, LD-salary scale in secondary and vocational schools) can be an effective lever in this positioning. Another way to strengthen teacher leaders within the school is by appointing more than one teacher leader. Through a collective approach involving several teacher leaders, a critical mass can be created. Within such collaborative approaches, it is easier to create strategic alignment between program aims and the school's agenda for change. The collective perspective does not have to be restricted to potential teacher leaders. When schools focus on strengthening self-steering teams, all team members can be engaged in team-focused learning arrangements. The school-focused Master's program that Mitchell and Alexandrou (2012) describe is a good example of such a team-focused approach.

Appointing teacher leaders within a school is not a sufficient condition for changing leadership practices. Strategically distributed leadership might strengthen hierarchical structures when this leadership is not connected with teams' day-to-day issues and not focused on supporting teams in their self-steering capacities. It is important that both school leaders and teacher leaders are aware of the difference between strategically distributed leadership and culturally distributed leadership. If schools want to strengthen culturally distributed leadership and improve teachers' innovation capacity, it is necessary to trust teachers in their foci and intentions. Mistrusting teachers will create a meager context for innovations (Tschannen-Moran, 2009).

## 7.2 Practical implications for universities

The capacity for teacher leadership is one of the core competences for teachers who are part of a strong profession and can take the lead in improving teaching and learning. Institutes for teacher education need to lay the foundations for this capacity within their initial teacher education programs. As teachers are the key to providing as well as developing high quality education, initial teacher education should prepare teachers as experts in teaching and learning and experts in innovation and reflection. Within teacher education programs in the Netherlands, growing attention has been given to inquiry and practice-oriented research. However, in initial teacher education and formal requirements for novice teachers, little attention is paid to leadership qualities and understanding schools' organizational dynamics and reform processes. Universities should consider including these elements in initial programs, as they contribute to the development of a professional identity that extends beyond the boundaries of the classroom (Fullan, 1993).

Teacher educators are role models to their students (Lunenberg, Korthagen, & Swennen, 2007), not only in their modeling of exemplary teaching behavior, but also in their leadership performance, and involvement in innovation and inquiry. Teacher educators need to be aware of this modeling role. This awareness

is reflected in the professional standard for teacher educators through the 'standard on organization and policy' (VELON, 2012a). Being a role model to potential teacher leaders implies that teacher educators should consider themselves teachers as well as learners who use their involvement in boundary activities as a catalyst for changes within the university.

Achieving this reciprocal view on expansive learning requires intensive and democratic partnerships based on equality of the partners involved (Mitchell & Alexandrou, 2011), in which universities are flexible to adapt their programs to the school's issues and concerns and to design programs such that they contribute to both learning and innovation in both schools and universities. The focus on flexible partnership programs instead of 'taught programs' requires a different, more flexible and entrepreneurial mindset in teacher educators.

Flexible Master's programs can make it possible to recognize and accredit research projects that teacher researchers have conducted within academic development schools and to credit these as formal contributions to a Master's level qualification, leading to a certificate that can be used for shortcuts in Master's programs. In this manner, implicit learning within academic development schools and explicit learning in the context of a Master's program can be combined. However, this combination would imply a stricter and more formal assessment of the quality of teachers' research projects in academic development schools.

### 7.3 Practical implications for the partnership between universities and schools

To increase the impact of formal learning arrangement on school development, it can be helpful to redefine partnerships between universities and schools, avoiding metaphors that emphasize the separation of activity systems and focusing instead on creating shared spaces. Within these partnerships, external curriculum consistency is important. This consistency implies a shared understanding of professional development aims and school development aims (strategic alignment) and a shared understanding of how processes of professional development and school development are mutually related (a theory of improvement).

This shift applies to partnerships in both initial and post-initial teacher development. With initial teacher education, the limited impact of learning arrangements on work practices is still a major concern. One of the dominant problems that teacher educators experience is that in the classroom, students do not sufficiently practice the teaching skills that they have been taught at the university (Amagir, Van den Berg, Van Veldhuizen, & Wilschut, 2014; Wideen, Mayer-Smith, & Moon, 1998; Zeichner & Tabachnick, 1981). This problem is often formulated in terms of transfer: the concepts students have learned in one 'context for learning' are not applied in another 'context for application'. Redefining these problems in terms of boundary learning might help solve this problem. This redefinition recognizes that neither the university nor the school

can solve the problem of 'limited transfer' on its own. Thus, with initial teacher education, the challenge for universities and development schools is to redefine learning arrangements in terms of boundary zones, which requires strategic alignment between school and university, support for boundary crossers, and powerful boundary objects.

To strengthen the impact of initial and post-initial programs, boundary zones and boundary objects are essential, providing spaces and tools for activities that cross the boundaries between schools and universities. Such boundary objects can create spaces where stakeholders from different activity systems collaborate equally across institutional borders and agendas. Identifying such boundary objects is a challenge for universities and schools. Research projects, based on shared research questions and designs that can meet both systems' needs, can act as strong boundary objects, as can professional learning communities that allow teachers, teacher educators, and students to work together equally and to focus on a shared agenda.

Strategic alignment and collectivity as design criteria for Master's programs can be problematic in Master's programs with individual enrolment of teachers from various schools. In such Master's programs, the individual motivation of teachers to develop their professional qualities dominates. However, when schools aim at strengthening leadership capacity within their schools, collective programs based on strategic alignment can have a greater impact. These two perspectives of individual and collective enrolment, imply that universities can offer various parallel designs: 'taught programs' with a fixed curriculum and individual subscription and 'partnership programs', which are designed in close collaboration with one or two schools and participation from a teacher group (Mitchell & Alexandrou, 2012). These 'partnership programs' call for a fundamentally different approach from the university's management and teachers, recognizing school-university partnerships, involving the school's supervisors and strategic management, and aiming to contribute to innovations and interventions within schools. Developing such flexible partnership programs will be a challenge for universities at both the strategic level and the level of university teachers and their professional qualities.

#### **7.4 Practical implications for the teaching profession**

Teachers can assume leadership roles, not only within their classrooms but also beyond their classrooms – in their schools and in their profession, using their voices and agency to meet pupils' needs, develop school curricula, work collaboratively, and support colleagues. To assume these leadership roles, teachers need to develop their leadership qualities. This development is conditional for a profession that is granted professional autonomy and is trusted by school leaders and society. Therefore, teacher leadership qualities need to be integrated explicitly in teachers' professional requirements (*Bekwaamheidseisen*) (Onderwijsraad, 2014). These qualities include theoretical expertise in teaching and learning, a focus on academic research

outcomes, and an inquiring attitude. Other qualities include an open eye for developments in society and the workplace, a focus on shared aims, and an understanding of organizational structures and innovation processes. Those qualities create the foundation for professional autonomy, not on an individual level but on a collective level.

Teacher leaders act as boundary crossers between school and university and between their teams and school management. They will constantly need to find a balance between their focus on supporting colleagues in their concerns related to their day-to-day tasks in teaching pupils and their focus on supporting and advising school management on strategic issues for the school. As boundary crossers, teacher leaders need to act as brokers, connecting practical and strategic levels.

The role of teacher leaders in connecting practical and strategic levels becomes even more important for those teacher leaders who assume roles that extend beyond the level of their school. Within the teachers' professional body, the *OnderwijSCOöperatie*, and similar professional groups, teachers contribute to the development of national teacher policies, e.g., as ambassadors for the teacher register, as negotiators with the Ministry, or as quality assessors of learning arrangements. To be able to assume responsibility for such roles, such teacher leaders require a high level of strategic awareness and a thorough understanding of national policies and policy mechanisms. The teachers that are active within the *OnderwijSCOöperatie* and similar professional groups should be supported by learning arrangements that prepare teachers for such roles.

Through the *OnderwijSCOöperatie*, teachers reclaim their professional autonomy with respect to school curricula and professional development. This autonomy is reflected in the professional register for teachers, *Lerarenregister.nl*, through which the profession takes responsibility for maintaining and developing its professional quality. However, in the register and its professional development requirements, no connection is made with the school's reform agenda or to collective designs in which colleagues can work collaboratively on their professional development (OnderwijSCOöperatie, 2013). This focus on individual professional development neglects the importance of relating professional development activities to the school's innovation agenda. It also ignores the role of the school's organizational structures and culture as a condition influencing the impact of those professional development activities on school development. The teacher register need to be adapted such that it more explicitly connects individual professional development to school development and, as a collective instrument, stimulates collaborative team-oriented activities that connect professional development and school development.

### 7.5 Practical implications for national policies

Teachers' key roles with respect to pupils' learning, curriculum development, and innovation must be supported by national policies. Teachers' voices must be recognized in educational policymaking. This recognition is reflected in

Dutch educational policies that support the development of the teaching profession's national body and recognizes teachers as stakeholders in policymaking.

As indicated in Intermezzo 1, the Dutch government plays a key role in defining the playing field on which teacher development stakeholders operate. Through financial arrangements, quality criteria, and bilateral agreements, the government creates the conditions for schools, teacher education institutes, and the teaching profession to contribute to a strong teaching force (Ministerie van OCW, 2013). As indicated, connecting professional development and school development requires active collaboration and boundary crossing between stakeholders from different activity systems. To strengthen the relationship between professional development and school development, governmental policies must support this boundary crossing.

However, in terms of teacher development, the policy process seems to be dominated by negotiations between separate stakeholder groups, resulting in policy measurements that address only a single group of stakeholders. Through these separate steering mechanisms that focus on one specific stakeholder group, the policy-making process reflects and emphasizes existing boundaries between activity systems. In policies addressing post-initial teacher development, agreements with universities focus on learning arrangements that lead to formal qualifications, agreements with schools focus on school development, and agreements with the *Onderwijscoöperatie* and teachers focus on individual professional development. This research project demonstrated that the relationship between learning arrangements, individual professional development, and school development is important, but not self-evident. For learning arrangements to be effective in terms of professional development and school development, alignment between the aims and designs of the school and university contexts is necessary; boundary crossing between both contexts must also be stimulated. Governmental policies can play a key role in stimulating this alignment.

Policies that aim to increase the number of teachers with a Master's degree must consider schools' organizational climates. If these climates are not supportive of the qualities that Master's teachers bring to schools, investments in Master's programs will have limited impact on school development. The present bursary system for Master's studies for teachers, the *Lerarenbeurs*, focuses explicitly on teachers' professional development as individual teachers apply for funding, while no relation is required with the school's reform agenda (Ministerie van OCW, 2009). In addition to the individual *Lerarenbeurs*, collective arrangements must be made possible and stimulated, facilitating group enrolment fostering team collaboration. As collective and collaborative arrangements for a group of teachers from one schools will be logistically and financially difficult to arrange, it might be necessary to create arrangements that can be spread over a longer time. Such a scheme does not align with present funding arrangements, such as the *Lerarenbeurs*, and will require more flexibility in financial arrangements.

## 8. Final reflections

Within this research project it was necessary to limit ourselves. This limitation was helpful to focus our attention and to be able to find answers to the research questions. However by limiting ourselves, parts of the bigger picture are lost. We focused our study on teacher leadership, as the process by which teachers exert influence on colleagues, school leaders and other members of the school community. We did not look at the way in which teacher leaders exert influence on their pupils and students. Our choice to look at the impact of teacher leaders at levels beyond the classroom, might unintentionally communicate a message that this leadership is more important and of a higher status than the work of teachers within their classroom. This message reflects traditional hierarchies within schools.

However, that message is not a message we intended to communicate. The credibility of teacher leaders is based on the quality of their work with pupils. Within the classroom they will exert influence on pupils, trying to inspire and support them, putting effort in developing a leadership culture at classroom level. Within this leadership culture pupils are challenged to take collaboratively responsibility for the learning climate within the classroom and are stimulated to take charge of their own learning process.

Teacher leadership at team or school level cannot exist without this pedagogical leadership of the teacher within his or her classroom. However, the relation between these two levels of teacher leadership has not been clarified within this study. No information was collected regarding the impact of the professional development of the teacher leaders on their pedagogical leadership while working with pupils. As teacher leadership is considered a quality which is directly related to the identity of being a teacher, further research on how the identity of being a teacher and being a teacher leader, and on how working within and beyond classrooms are related, would be of value.

Another element that was lost through the focus that we chose for this research project, was the perspective of the university. As we are part of a system that is dominated by the 'transfer' metaphor, our thinking is also influenced by that metaphor. The main research question reflects that influence, as the focus on how post-initial learning arrangements contribute to teacher development and school development, ignores the reciprocity of expansive learning in the boundary zone between school and university. Through using the metaphor of boundary crossing in the third case study we became aware of the limited perspective of our research question. Retrospectively, we would have rephrased the research question as

*To what extent and in what way do post-initial learning arrangements that focus on teacher leadership contribute to teacher development, school development and development of the university?*

The fact that university development was excluded from our research question and therefore was not included in systemic data collecting, doesn't imply that there was no development within the university. The redesign of the Master's program that was the focus of the third case study shows how the experiences of university teachers and the parallel case studies contributed to change. A year ago, the experiences and research outcomes were the source for another design of a Master's program which is based on a joint program of the Master's program *Professioneel Meesterschap* focusing on teachers and a Master's program on educational leadership focusing on school leaders. Through the joint program, formal and in-formal leaders are brought together in one setting, strengthening their strategic partnership and shared leadership. This joint Master's program, the partnership Master's program of the third case study, and a taught Master's program on teacher leadership offered by the Hogeschool van Amsterdam, create a variety of learning arrangements that try to support teachers in raising their voice and in strengthening their agency. Through this we hope to contribute to a profession that takes the lead in making a difference in the lives of pupils.







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## SUMMARY

# Developing teacher leadership and its impact in schools

### Introduction

Successful school improvement is dependent on schools' capacities to initiate and manage change and development. As teachers are key actors in schools, this change capacity of schools can be increased by using and supporting the change capacity of teachers. Teachers' change capacity can be understood as the ability of teachers – individually or collectively, through development, inspiration and research – to provide direction and exert influence on their colleagues, school leaders, and other school community members. In this research project, this role to provide direction and exert influence – with the aim to improve teaching and learning practices that enhance student learning and achievement – is indicated as 'teacher leadership'.

Teacher leadership requires specific skills and knowledge. Initial teacher education programs do not adequately prepare teachers for leadership roles, leaving many teachers ill-prepared to exercise leadership beyond their classrooms. Developing teacher leadership thus requires specific post-initial learning arrangements. However, the relationship between the design of post-initial learning arrangements for teachers and their actual impact on school outcomes is complex. This connection assumes a causal relationship between the learning arrangement design and teachers' development of competences; a causal relationship between the developed competences and the teachers' actual roles, performance, and behavior in the school; and a causal relationship between new roles and behavior and the school outcomes in terms of student or pupil learning results or school development.

This research project focused on two issues: on the need for learning arrangements for teacher leadership and on the complex relationship between learning arrangements and their impact in the workplace. The key aim of the research project was to provide insight into the extent to and ways in which post-initial learning arrangements that focus on teacher leadership contribute to teacher development and school development.

## Theoretical framework

Within this study, the term ‘teacher leadership’ implies an active and responsible role of teachers that exceeds the level of the individual teacher acting in his or her classroom, adding activities related to teacher inquiry, innovation and inspiring colleagues and the school as a whole. Teacher leadership may be fixed through formal leadership positions that are mandated or delegated to specific experienced or accomplished teachers (Harris, 2007; MacBeath, 2009; Yukl, 1999). Alternatively, this role may be dynamic when each teacher is recognized as having the potential to exercise leadership as part of his or her role, when leadership is shared and distributed among all teaching staff, and when the roles of leaders and followers shift over time (Frost, 2012; Kessels, 2012; Lambert, 2002).

The relation between learning arrangements and application of newly developed competences at the workplace is indicated with the term ‘transfer of learning.’ Research on ‘transfer of learning’ indicates that the impact of learning arrangements at the workplace is influenced by the design of the learning arrangement, by the participant’s personal capacities and motivation, and by the ‘organizational transfer climate’ (Baldwin & Ford, 1988; Boshuizen, 2003; Gielen, Streumer, & Van der Klink, 2004; Van der Klink, 2012). This organizational transfer climate addresses the workplace conditions that support or hinder the application of newly developed competences at the workplace (Hatala & Fleming, 2007; Lim & Morris, 2006; Rouiller & Goldstein, 1993).

The awareness that the impact of learning arrangements is not only defined by the aims and design of the learning arrangement, but also by workplace conditions draws attention to ‘external curriculum consistency’: the homogeneous notions of the parties involved (e.g., learning arrangement providers and workplace managers) about the aims and intended outcomes of the learning arrangement (Kessels, 1993). To create that homogeneity, strategic alignment is needed between the key aims of the learning arrangement and the workplace reform agenda.

This strategic alignment calls for a dialogue between stakeholders from different contexts. This dialogue can be considered a boundary-crossing process between two activity systems (Akkerman & Bakker, 2011; Engeström, 2001; Tsui & Law, 2007). In this boundary-crossing process, the learning arrangement can be understood as a boundary zone, and the participants can be considered boundary crossers. Specific learning arrangement activities, such as a research project, can act as concrete boundary objects, stimulating and supporting a shared discourse through which contextual differences are explored and collective learning can be achieved (Carlile, 2004; Star, 1989).

## Research questions

To provide insight into the extent to and ways in which post-initial learning arrangements that focus on teacher leadership contribute to teacher and school development, it was necessary to identify specific learning arrangements

that could be the context for empirical research. This led to the first research question:

1. What trends in society and education influence the design of learning arrangements for teachers and what is their impact on dynamics and boundary crossing between schools and universities?

Four prototypical learning environments have been identified, based on a literature review. Examples of three of these prototypical learning environments can be recognized in the Dutch context. Three concrete examples of such learning environments have been used as context for empirical case studies, guided by the following three additional research questions:

2. To what extent and in what way do learning arrangements within an academic development school contribute to teacher and school development, and which aspects of school culture and school organization play a role in this contribution?
3. To what extent and in what way does a formal Master's program for teacher leadership contribute to teacher development, to new leadership roles for teachers, and to school development, and which elements within the organizational transfer climate of the school stimulate or hinder these developments?
4. To what extent and in what way can an educational design that stimulates boundary crossing between the activity systems of the school and the university strengthen the impact of a Master's program for teacher leadership on teacher development, on new leadership roles for teachers, and on school development?

## Contexts for teacher leadership development

In Chapter 2 the first research question is answered, identifying trends in society and education that influence the design of learning arrangements for teachers and their impact on the dynamics and boundary crossing between schools and universities. Based on the analysis of 48 documents with future scenarios on education and teacher education, a set of unpredictable key factors have been identified that might impact the design of learning arrangements for teacher's post-initial development.

The analysis also revealed the roles of key stakeholders: governments, schools, teacher bodies, and universities. These key actors are part of different activity systems. The scenarios that are presented in the documents show that the relation between these stakeholders and the boundary-crossing activities between the activity systems of these stakeholders have a large impact on the design of learning arrangements. Based on further analysis of the interaction between these different stakeholders in each scenario document, four potential prototypical scenarios for the future of teacher education emerged:

- The *market-oriented scenario* is a scenario in which learning arrangements are the result of a customer-provider relationship. The key focus is meeting the needs of the school as a customer, as universities and other educational providers compete to offer schools their services. The dominant actor is the school, and the focus is school development.
- The *bureaucratic scenario* is a scenario for (post-initial) teacher development in which the government and policy system is dominant, defining the playing field for each of the other two stakeholders. Boundary activities are largely shaped in terms of imposed regulations and negotiations between policymakers and pressure groups from the other two activity systems. The dominant focus is individual professional development in the context of formal quality requirements.
- The *network scenario* is a scenario in which boundaries between the activity systems of the school and university are crossed. Institutional structures are replaced by a network structure that is characterized by mixed communities of practice of teachers, school leaders, teacher educators and researchers. In this scenario, the dominant focus is bridging individual professional development and school development.
- The *professionalism scenario* is dominated by professional groups of teachers and teacher educators who assume responsibility for their professional quality.

The analysis of the scenario documents revealed that the future for teacher education is largely defined by the extent to which key stakeholders and their activity systems are open to boundary crossing and the willingness of these stakeholders to bridge institutional boundaries.

The *intermezzo* following Chapter 2 reflects the extent to which the four prototypical scenarios can be recognized within the Dutch context for teacher development. Based on this reflection, three different types of learning arrangements for developing teacher leadership were identified that could act as the context for the three empirical case studies: the academic development school as a school-centered context for teacher development (closely related to the market-oriented scenario); a university-centered Master's program for teacher leadership (closely related to the bureaucratic scenario); and a partnership-based Master's program for teacher leadership (closely related to the network scenario). At this moment, no examples of learning arrangements for developing teacher leadership competences that fit in the professionalism scenario, can be found within the Dutch context.

## Leadership development in academic development schools

In *Chapter 3*, the second research question will be answered. In this chapter, the first empirical case study is presented, focusing on the academic development school as a context and arrangement for teacher development. In the academic development school that was the context for this study, the design of the learning arrangement for teachers was almost entirely arranged within the

context of the school, with limited support from the university. The participating teachers were engaged in research projects that aimed to contribute to school development. The contribution to teacher development was more implicit, with an emphasis on developing the skills to conduct research. There were no explicit criteria for learning outcomes or explicit assessment procedures.

To answer the question in what way learning arrangements within an academic development school contribute both to teacher development and to school development, qualitative data were collected through semi-structured interviews with 11 teacher researchers in three schools. The study demonstrated that teacher engagement in research projects within the school can contribute to development at three levels: the individual teacher level, the teacher team level, and the overall school level. The extent to which teacher engagement in research projects both contributed to professional development and to school development varied strongly between the schools. In all three schools, professional development of individual teachers was reported, while in two of the three schools also collective learning within teams of teacher researchers was reported. In only one school the teacher researchers indicated that they contributed to the development of the school as a whole.

Participants within this school reported an increased awareness about the school as a complex organization; about the role of management in the school; and how their own passions, competences, and potential, along with their colleagues' qualities, could contribute to innovations.

Based on the differences between the three schools, some important school conditions have been identified that can contribute to connecting effective professional development for teachers and effective school development, and that can stimulate or hinder teachers' opportunities to exert their leadership at school. These conditions are:

- Collaboration within research teams and between research teams and school management;
- Shared ownership of teacher researchers and school management;
- A combined focus on research, design, and implementation;
- Recognition of the role of the teacher researchers;
- The availability of a platform for the teacher researchers to share the outcomes of research projects with colleagues within the school;
- Room for a new dynamic within the school that is based on focus, reflection, and careful analysis.

## Leadership development through Master's programs

In the *second Intermezzo* following Chapter 3, the second context for developing teacher leadership is introduced: accredited designs in formal Master's programs for teacher leadership.

The second case study, presented in *Chapter 4*, focused on an accredited

Master's program for teacher leadership, which was defined by the university and based on quality criteria given by the government, with limited school involvement. In answering the third research question on the way in which a formal Master's program contributes both to professional development and new leadership roles of individual teachers as well as to school development, special attention was given to the role of the organizational transfer climate in schools. This transfer climate was considered critical in enhancing or hindering the use of teacher leadership competences and their impact on school development.

In this case study, 18 graduates from the first two cohorts and their school supervisors were interviewed. The outcomes demonstrated that in the context of a Master's program with individual participants, the impact of the program on individual teacher development can be significant. Participants developed a strong motivation to use their new leadership qualities within their teams and the schools as a whole. However, the possibility to use their leadership qualities outside their classrooms and to contribute to team and school development depended on the extent to which organizational transfer climate aspects – such as strategic alignment, situational cues, use opportunities, and support from supervisors and peers – are supportive. When these aspects are supportive, a strategic partnership between the teacher leader and the supervisor can be created. When teacher leaders are isolated within their schools and when school management, supervisors, and colleagues are not responsive to their leadership, teacher leaders will have difficulty in trying to make a difference. A Master's program in teacher leadership may have limited impact on the school development when there is no strategic alignment between the school's reform agenda and the aims of the Master's program and when the Master's program participant is the only boundary crosser in the school.

*The third Intermezzo* following Chapter 4 elaborates how the findings of the second case study stimulated a rethinking of the design of the Master's program.

Based on the outcomes of the study reported in Chapter 4, six design principles were formulated for Master's programs that intend to increase boundary crossing between the university and the workplace, thereby stimulating stronger external curriculum consistency in the learning arrangement, based on strategic alignment between the aims of the university and school. These design principles focus on the design process (principle 1 and 2) and the program itself (principle 3 to 6).

1. Strategic alignment between the school's reform agenda and the aims of the Master's program;
2. Shared ownership of the university and the school;
3. A strong connection between program content and school issues;
4. Collective engaging of several teachers from one school in the program;
5. Engagement of school supervisors in boundary-crossing activities;
6. Engagement of university teachers in boundary-crossing activities.



Based on these design principles, a new design for the Master's program *Professioneel Meesterschap* was made, in close cooperation with three colleges for vocational education. This redesigned Master's program in which the activity systems of both the school and university were connected through various forms of boundary crossing was the context for the third empirical case study.

In *Chapter 5* the fourth research question on the way in which these forms of boundary crossing between school and university strengthened the connection between teacher development, new leadership roles and school development is answered. In this case study 42 senior teachers within three vocational colleges participated in the program. Data were collected through semi-structured interviews with eight senior teachers, their supervisors, and their university teachers. Additional data were collected through interviews with strategic management representatives from the vocational colleges and during focus group meetings with university teachers and with management, administrative staff and senior teachers from each vocational college.

The study revealed that the senior teachers had developed knowledge, skills, and a sense of self-efficacy relating to teaching, learning, organization, innovation and research. Although their formal roles within the schools had not changed, they performed their regular tasks differently. In this changed performance they used their new capacities, showing a deeper understanding of teaching and learning theories; a wider perspective on their team, curriculum, and organization; a more inquiring attitude; a stronger focus on sharing knowledge, and stronger self-confidence and authority. They were able to provide direction and exert influence toward their colleagues, teams, and supervisors and, collectively, toward management and staff at the school level. Through this new performance, they were able to have an impact on work practices at the team or unit level. This impact was reflected in new curricula, new didactic approaches, new tools and instruments, and in the way in which they were role models to their students. They were also able to influence leadership practices within the school by contributing to the teams' self-awareness, a more proactive team attitude, a stronger focus on team learning, and a greater openness to research, data, and theory.

The Master's program contributed effectively to school development, changing work practices and leadership practices within the schools. Decisive design elements that contributed to school development included strategic alignment, the program collectivity involving 42 teachers from three vocational colleges, and shared ownership by university teachers and strategic management of the three colleges.

While the Master's program was effective in connecting professional development of senior teachers and school development, and the participants created an effective critical mass within their schools that acted as a catalyst for innovation within the school, the program design has still room for

improvement. The ownership with respect to the program aims and program design was mainly at the level of strategic management, as it was not extended to supervisors of the senior teachers. This finding indicates the existence of internal boundaries within the vocational colleges that must be considered to strengthen the impact of the Master's program. Additionally, the program design did not support the engagement of supervisors and university teachers in boundary-crossing activities. Effective boundary objects that could act as interface for a shared and meaningful discourse were missing.

## Conclusions and suggestions for further research

The reflection on the outcomes of the three case studies leads to a number of wider-ranging conclusions for the design of learning arrangements and the implementation of teacher leadership in schools.

In formal learning arrangements which are characterized by a separate learning context and work context – like the context of the second and third case studies – the gap between both contexts is often addressed by using the 'transfer' metaphor. In this metaphor, knowledge provided by one context must be applied in another context. The use of the 'transfer' metaphor in educational contexts actually increases the separation of the two contexts and emphasizes a separation between professional development and school development and between learning and innovation. To increase the impact of learning arrangements on school development, we must abandon segmented mental models in which teacher development and innovation are considered different and sequential tasks and in which schools and universities are considered as separate, albeit symbiotic, systems. Instead, new mental models are needed in which learning is understood as a boundary process in boundary zones with the use of boundary objects. Such mental models can support the development of strong and equal partnerships between universities and schools which focus on both teacher development as well as school development.

Aiming for external curriculum consistency, this boundary learning process can be strengthened through the mutual involvement of schools and universities in designing learning arrangements. Additionally, boundary crosser positions can be strengthened by engaging a larger group of boundary crossers and creating explicit positions for these boundary crossers within the school (e.g., as teacher researchers or senior teachers). Finally, boundary objects that engage stakeholders in shared discourse and exploration of contextual differences can support boundary learning. Within the case studies, several effective boundary objects (like the research projects of the participants in the Master's programs, and the monitor group) and less effective boundary objects (like the participation of supervisors during guest lectures) have been identified.

The case studies demonstrate that the separation between school and university assigns universities to the role of knowledge deliverers and advisors in schools'

reform processes. In this role, university teachers are expected to be teachers. Limited attention is given to their role as learners. As a result, expansive learning within university and school boundary zones is focused more on the impact on schools and less on the impact on universities. This fits in learning arrangements within market-oriented scenarios or bureaucratic scenarios that are still dominant. However, learning arrangements that are based on partnerships require a fundamentally different mental model in which expansive learning in boundary zones is considered as a mutual process. In such a new mental model boundary crossing activities will lead to professional development of both teachers and teacher educators. This process of mutual learning can eventually lead to both school development and development of the university.

The three case studies demonstrated how the development of teacher leadership qualities can contribute to the engagement of teachers in school development processes that extend beyond their own classes. However, an active role of school leaders is an important condition for actual enactment of that leadership. Through their leadership, teacher leaders are key in strengthening the profession's role in improving teaching and learning quality. The teacher leaders within our case studies were pioneers who had to build a foundation for teacher leadership practices in schools, exerting their leadership to innovate education and support colleagues while at the same time creating fertile grounds within their schools in which teacher leadership could flourish. Therefore, such pioneers face a complex task. To accomplish this task, development of leadership capacities is needed. This process of developing teacher leadership capacities will require time and opportunities to test new behaviors. In this development process, beginning teacher leaders will need support during their first stages of teacher leadership. In this manner, teacher leadership can be considered a professional development strategy that fits well within post-initial career paths.

For the schools that were part of this research project, teacher leadership was a new element within the schools. The school leaders in the first and third case studies made room for mandated leadership by appointing teacher leaders within their schools. Because of their position and their mandate, the teacher leaders were visible and could not be ignored within their schools. This mandate was considered a key condition for the successful implementation of teacher leadership within these schools. At the same time, this structurally distributed and mandated leadership has pitfalls, as it can create a static structure with teacher leadership as a managerial instrument based on school management assignments focusing on the school's general strategic issues. This structure might ignore teachers' concerns about their day-to-day struggles in supporting pupil learning. However, the case studies showed that formally mandated teacher leaders can also support teams' self-awareness, contributing to a type of leadership that is not based on formal and mandated structures but rather on a culture in which every teacher has the potential to assume a leadership role. In this manner, the leadership of a limited set of selected and

mandated teacher leaders might be a step in the developmental process of schools towards leadership and reform capacity of all teachers.

Although we were able to answer the main research questions, new questions arose which could be topic for further research:

- The research could be extended to other learning arrangements and contexts, including arrangements that fit in the professionalism scenario and are initiated by professional groups. Also, further research should include learning arrangements for teacher leadership in primary education.
- Further research should look more closely into personal characteristics of the participants and how these affect the impact of professional development on school development.
- Extension of the research to other learning arrangements, like other Master's programs, can help in identifying effective boundary objects that facilitate expansive learning.
- Further research can focus more strongly on internal boundaries within schools (including perceptions of colleagues and staff departments more explicitly in the process of data collection).
- The emphasis in this research project was on the impact of learning arrangements on schools. Further research on expansive learning in learning arrangements that are characterized by partnership models need to address more explicitly the impact of expansive learning on universities and teacher educators.
- Finally, further research can focus on the long term impact of teacher leadership and provide insight in the extent and way in which mandated leadership in schools can develop into forms of embedded leadership.

## Implications for practice and policy

The insights that result from this research project have several implications for schools, universities, teachers, and policy makers.

*Schools* can increase their capacity for innovation by recognizing the crucial role of teachers in innovation processes and by supporting the development of teachers' leadership and innovation capacities within their schools. In HRD policies geared toward strengthening that capacity, a connection needs to be made with the school's strategic agenda. While making this connection, internal boundaries between organizational levels and staff departments must be considered.

Introducing teacher leadership in schools will require clear positions and mandates for teacher leaders. However, it is important that both *school leaders* and *teacher leaders* recognize and address the tension between strategically distributed leadership and culturally distributed leadership. They need to strike a balance between structure and control on the one hand and teachers' trust, agency, and self-steering on the other hand.

*Universities* should consider to include the foundation for teacher leadership in the curricula for initial teacher education. Teacher educators can model this leadership for their students.

Within *school-university partnerships*, the mental model that is dominated by the transfer metaphor need to be challenged. Boundary objects can stimulate collaboration on an equal basis across institutional borders and agendas. Such partnerships create opportunities for collective in-service programs that focus on shared agendas, and on school development as well as university development. This focus requires a new university flexibility to adapt curricula and involve school supervisors and management in designing tailor-made curricula. This requires a change of mindset by universities and university teachers toward more flexibility and entrepreneurship.

In school-based learning arrangements, such as academic development schools, learning outcomes could be made more explicit so that they can be presented for assessment, thus contributing to formal qualifications.

*Teachers* can assume leadership roles, not only within their classrooms, but also beyond their classroom – in their schools and in their profession - using their voices and agency to develop teaching and learning in schools and the profession as a whole. This leadership role can be supported by developing leadership capacities. These leadership capacities must be included in the professional requirements for teachers (*Bekwaamheidseisen*). The impact of professional development initiatives that the teaching profession (the *Onderwijscoöperatie*) endorses (e.g., in connection to the *Lerarenregister*) can be improved by connecting them more explicitly to collaborative learning of school teams and school development.

The key role of teachers in leading and developing teaching and learning should be reflected in *national policies* and the policymaking process. Teacher development policies must include the development of leadership capacity while recognizing that this capacity can only flourish in schools that are responsive to new forms of distributed leadership within their schools.

*Governments* should stimulate partnership models that combine a focus on teacher development and school innovation. Teacher policies should avoid traditional transfer-based mental models of teacher learning that result in disconnected roles for universities and schools. Instead, steering mechanisms should take partnership models and collaboration between schools and providers of learning arrangements as a starting point, recognizing the interrelatedness of learning arrangements and school context, and stimulating strategic alignment between school innovation agendas and program aims.



## SAMENVATTING

# Het ontwikkelen van leiderschap van leraren en de invloed daarvan in scholen

### Inleiding

Succesvolle schoolinnovaties zijn afhankelijk van het vermogen van scholen om verandering en ontwikkeling te initiëren en te managen. Aangezien leraren sleutelspelers zijn in deze processen van verandering en ontwikkeling, kan het innovatievermogen van scholen vergroot worden door gebruik te maken van het verandervermogen van leraren en door dit vermogen te versterken. Dit verandervermogen van leraren heeft betrekking op hun capaciteit om – individueel of collectief en door ontwikkeling, inspiratie en onderzoek – richting te geven aan en invloed uit te oefenen op collega's, schoolleiders en andere leden van de schoolgemeenschap. In dit onderzoeksproject benoemen we dit richting geven en invloed uitoefenen – met het doel om scholen en leerresultaten van leerlingen te verbeteren – als 'leiderschap van leraren'.

Leiderschap van leraren vraagt specifieke kennis en vaardigheden. De initiële lerarenopleiding bereidt aankomende leraren echter nauwelijks voor op leiderschapsrollen, waardoor veel leraren slecht voorbereid zijn om niet alleen binnen de context van het eigen leslokaal leiderschap uit te oefenen, maar ook daarbuiten. Voor het ontwikkelen van leiderschap zijn daarom specifieke post-initiële leerarrangementen nodig. De relatie tussen leerarrangementen en hun uiteindelijke impact op de schoolpraktijk is echter complex. Die relatie veronderstelt een causale relatie tussen het ontwerp van het leerarrangement en de kennis en vaardigheden die de deelnemers aan dat arrangement ontwikkelen, een causale relatie tussen de ontwikkelde kennis en vaardigheden en een verandering in de feitelijke rollen en het handelen van leraren in de school, en een causale relatie tussen nieuwe rollen en ander handelen en de uiteindelijke uitkomsten in de school, in termen van leerresultaten van leerlingen of concrete schoolontwikkeling.

Dit onderzoeksproject richtte zich op twee zaken: op de behoefte aan leerarrangementen gericht op leiderschap van leraren, en op de complexe relatie tussen dergelijke leerarrangementen en het effect op de werkplek. Het hoofdoel van het onderzoeksproject was om meer inzicht te krijgen in de mate waarin en de wijze waarop post-initiële leerarrangementen gericht op het leiderschap van leraren, bijdragen aan ontwikkeling van leraren en scholen.

## Theoretisch raamwerk

Binnen dit onderzoek heeft de term 'leiderschap van leraren' betrekking op een actieve en verantwoordelijke rol voor leraren die het niveau van het individuele leraarschap in de context van het klaslokaal overstijgt. Leiderschap van leraren heeft betrekking op activiteiten die te maken hebben met onderzoek door leraren, innovatie en het inspireren van collega's en de school als geheel. Dit leiderschap kan vastgelegd worden in formele leiderschapsposities, gedelegeerd en gemandateerd vanuit de schoolleiding aan specifieke ervaren of excellente leraren (Harris, 2007; MacBeath, 2009; Yukl, 1999). Maar het kan ook dynamisch van karakter zijn, wanneer er vanuit gegaan wordt dat iedere leraar de potentie heeft om leiderschap uit te oefenen als onderdeel van zijn rol als leraar, wanneer leiderschap is verdeeld over het hele team en wanneer de rol van leiders en volgers over de tijd kan variëren (Frost, 2012; Kessels, 2012; Lambert, 2002).

Het effect van leerarrangementen op de werkplek wordt ook wel aangeduid met de term 'transfer van leren'. Onderzoek naar transfer van leren geeft aan dat het effect van leerarrangementen beïnvloed wordt door het ontwerp van het leerarrangement zelf, door de persoonlijke kwaliteiten en motivatie van de deelnemers, en door het 'transferklimaat op de werkplek' (Baldwin & Ford, 1988; Boshuizen, 2003; Gielen, Streumer, & Van der Klink, 2004; Van der Klink, 2012). Dit transferklimaat heeft betrekking op de voorwaarden op de werkplek die het toepassen van nieuw ontwikkelde competenties op de werkplek stimuleren of juist belemmeren (Hatala & Fleming, 2007; Lim & Morris, 2006; Rouiller & Goldstein, 1993).

Het besef dat het effect van leerarrangementen niet alleen bepaald wordt door de doelen en het ontwerp van het leerarrangement zelf, maar ook door de voorwaarden op de werkplek, heeft geleid tot aandacht voor 'externe curriculum consistentie': de homogeniteit van opvattingen van betrokkenen (bijv. de opleiders en leidinggevendenden) ten aanzien van de doelen en beoogde uitkomsten van het leerarrangement (Kessels, 1993). Om die homogeniteit te creëren is strategische afstemming (strategic alignment) tussen de kernelementen van het leerarrangement en de veranderagenda van de werkplek noodzakelijk.

Strategisch alignment vraagt om een dialoog tussen de betrokkenen vanuit verschillende contexten. Deze dialoog kan beschouwd worden als een proces van grensoverschrijdingen tussen twee activiteitssystemen (Akkerman & Bakker, 2011; Engeström, 2001; Tsui & Law, 2007). In dit proces van grensoverschrijdingen kan het leerarrangement beschouwd worden als een grenszone (boundary zone) en de deelnemers als grensgangers (boundary crossers). Specifieke activiteiten in het leerarrangement, zoals onderzoeksopdrachten, kunnen fungeren als concrete grensobjecten (boundary objects) die een gezamenlijke dialoog uitlokken en ondersteunen, waardoor verschillen tussen contexten (opleiding en werkplek) worden verkend en gezamenlijk leren kan ontstaan (Carlile, 2004; Star, 1989).



## Onderzoeksvragen

Om inzicht te krijgen in de mate waarin en wijze waarop post-initiële leerarrangementen gericht op het leiderschap van leraren bijdragen aan ontwikkeling van leraar en school, was het noodzakelijk om verschillende kenmerkende leerarrangementen te identificeren, die de context kunnen zijn voor empirisch onderzoek. Dat heeft geleid tot de eerste onderzoeksvraag:

1. Welke trends in samenleving en onderwijs hebben invloed op het ontwerp van leerarrangementen voor leraren, en wat is hun impact op de dynamiek en grensoverschrijdingen tussen school en opleiding?

Op basis van een literatuuronderzoek zijn vier prototypische leerarrangementen geïdentificeerd. Drie van deze leerarrangementen zijn terug te vinden in de Nederlandse context. Drie concrete voorbeelden van dergelijke leerarrangementen zijn vervolgens gebruikt als context voor empirische casestudies aan de hand van de volgende drie onderzoeksvragen:

2. In welke mate en op welke wijze dragen leerarrangementen binnen een academische opleidingsschool bij aan de ontwikkeling van leraar en school, en welke aspecten van de schoolcultuur en de schoolorganisatie spelen daar een rol in?
3. In welke mate en op welke wijze draagt een masteropleiding voor leraren bij aan ontwikkeling van leraren, nieuwe leiderschapsrollen van leraren en aan schoolontwikkeling, en welke elementen van het transferklimaat van de school stimuleren of hinderen deze ontwikkeling?
4. In welke mate en op welke wijze versterkt een opleidingsontwerp dat grensoverschrijdingen tussen de activiteitssystemen van school en opleiding bevordert, het effect van een op leiderschap van leraren gerichte masteropleiding, op de ontwikkeling van leraren, op nieuwe leiderschapsrollen van leraren en op schoolontwikkeling?

## Contexten voor leiderschapsontwikkeling

In Hoofdstuk 2 van dit proefschrift wordt de eerste onderzoeksvraag beantwoord. Om zicht te krijgen op de mate waarin post-initiële leerarrangementen gericht op leiderschap van leraren bijdragen aan ontwikkeling van leraar en school, is het noodzakelijk om geschikte contexten voor empirisch onderzoek te identificeren. Aan de hand van een analyse van 48 documenten met toekomstscenario's voor onderwijs en lerarenopleidingen zijn belangrijke trends en onzekerheden geïdentificeerd die invloed zullen hebben op het ontwerp van post-initiële leerarrangementen voor leraren. De analyse liet bovendien de rol van de sleutelactoren zien: overheid, scholen, (beroepsorganisaties van) leraren, en lerarenopleidingen. Deze sleutelactoren maken deel uit van verschillende activiteitssystemen. De scenario's die in de documenten beschreven zijn, laten zien dat de relaties tussen deze sleutelactoren en de grensoverschrijdingen tussen de activiteitssystemen waar ze deel van uit maken, grote invloed hebben op het ontwerp van leerarrangementen. Op basis van een nadere analyse van de interacties tussen

de sleutelactoren in de verschillende scenario-documenten, kwamen vier prototypische scenario's voor de toekomst van de lerarenopleiding naar voren.

- Het *marktscenario* is een scenario waarin leerarrangementen het resultaat zijn van klant-aanbieder relaties. De nadruk in dit scenario ligt op het inspelen op de vragen en behoeften van de school als klant, terwijl hogescholen, universiteiten en andere aanbieders onderling concurreren in het aanbieden van hun diensten aan de school. De hoofdspeler is de school waarbij de nadruk ligt op schoolontwikkeling.
- Het *bureaucratische scenario* is een scenario voor (post-initiële) ontwikkeling van leraren, waarbij de overheid en het beleidssysteem dominant zijn en het speelveld bepalen voor de andere sleutelactoren en hun activiteitssystemen. Grensactiviteiten krijgen vooral vorm door middel van opgelegde regelingen en onderhandelingen tussen beleidsmakers en belangengroepen vanuit de andere activiteitssystemen. De nadruk binnen dit scenario ligt op individuele professionele ontwikkeling in de context van formele kwalificatie-eisen.
- Het *netwerkscenario* is een scenario waarin grenzen tussen de activiteitssystemen van school en opleiding overschreden worden. Institutionele grenzen worden vervangen door netwerkstructuren die gekenmerkt worden door gemengde communities of practice van leraren, schoolleiders, opleiders en onderzoekers. In dit scenario ligt de nadruk op het verbinden van individuele professionele ontwikkeling en schoolontwikkeling.
- Binnen het *professionalisme scenario* ligt de belangrijkste rol bij professionele groepen van leraren en lerarenopleiders die verantwoordelijkheid nemen voor hun professionele kwaliteit.

De analyse van de scenario-documenten laat zien dat de toekomst van de lerarenopleidingen voor een belangrijk deel bepaald wordt door de mate waarin de sleutelactoren en hun activiteitssystemen open staan voor grensoverschrijdingen en de bereidheid van de sleutelactoren om institutionele grenzen te overbruggen.

Het *Intermezzo* na hoofdstuk 2 analyseert in welke mate de vier prototypische scenario's te herkennen zijn in de Nederlandse context voor ontwikkeling van leraren. Op basis van deze vergelijking zijn drie typen leerarrangementen voor leraren geïdentificeerd die de context vormen voor de drie empirische casestudies: De academische opleidingsschool als schoolgestuurd leerarrangement (aansluitend bij het marktscenario), een masterprogramma rond leiderschap van leraren als opleidingsgestuurd leerarrangement (aansluitend bij het bureaucratische scenario), en een masterprogramma rond leiderschap van leraren dat tot stand is gekomen in een partnerschap tussen hogeschool/universiteit en scholen (aansluitend bij het netwerkscenario). Op dit moment zijn er nog geen leerarrangementen rond leiderschap van leraren te vinden die aansluiten bij het professionalisme scenario.

## Leiderschapontwikkeling binnen een academische opleidingsschool

In *Hoofdstuk 3* wordt de tweede onderzoeksvraag beantwoord. Hier wordt de eerste empirische casestudy gepresenteerd, waarbij de academische opleidingsschool als context en leerarrangement voor leraren centraal staat. Binnen de academische opleidingsschool die in deze casestudy centraal stond, is het ontwerp van het leerarrangement vrijwel uitsluitend georganiseerd vanuit de context van de school, met beperkte ondersteuning vanuit de lerarenopleiding. De deelnemende leraren zijn betrokken in onderzoeksprojecten met als doel om bij te dragen aan schoolontwikkeling. De bijdrage aan professionele ontwikkeling van leraren is meer impliciet, waarbij de nadruk ligt op het ontwikkelen van onderzoeksvaardigheden. Er zijn noch expliciete criteria en doelen ten aanzien van leeruitkomsten, noch expliciete assessmentsprocedures.

Voor de beantwoording van de vraag op welke wijze leerarrangementen binnen een academische opleidingsschool zowel bijdragen aan ontwikkeling van individuele leraren als aan ontwikkeling van de school zijn kwalitatieve data verzameld door middel van semi-gestructureerde interviews met 11 docent-onderzoekers in drie scholen. Het onderzoek laat zien dat de betrokkenheid van leraren bij onderzoeksprojecten binnen de school kan bijdragen aan ontwikkeling op drie niveaus: dat van de individuele leraren, dat van teams en dat van de school als geheel. De mate waarin de betrokkenheid van leraren in onderzoeksprojecten zowel bijdroeg aan professionele ontwikkeling van de onderzoeksdocenten als aan schoolontwikkeling verschilde echter sterk tussen de scholen. In alle drie de scholen was sprake van professionele ontwikkeling van de individuele onderzoeksdocenten, in twee van de scholen was ook sprake van collectief leren binnen het team van onderzoeksdocenten. In slechts één school hadden de onderzoeksdocenten het gevoel concreet bij te dragen aan de ontwikkeling van de school als geheel. De deelnemers binnen deze school gaven aan dat hun bewustzijn versterkt was ten aanzien van de school als complexe organisatie, ten aanzien van de rol die het management daarbinnen speelt, en hoe hun eigen passies, competenties en potentieel en de kwaliteiten van collega's kunnen bijdragen aan innovaties.

Op basis van de verschil tussen de scholen zijn enkele belangrijke voorwaarden geïdentificeerd die het verbinden van effectieve professionele ontwikkeling van leraren en effectieve schoolontwikkeling faciliteren en die het uitoefenen van leiderschap door de onderzoeksdocenten stimuleren of belemmeren. Deze sleutelvoorwaarden zijn:

- Samenwerking in onderzoeksteams en tussen onderzoeksteams en schoolmanagement;
- Gedeeld eigenaarschap van onderzoeksdocenten en schoolmanagement;
- Een gecombineerde focus op onderzoek, ontwerp en implementatie;
- Erkenning van de rol van de onderzoeksdocenten;

- De beschikbaarheid van een platform voor de onderzoeksdocenten om de uitkomsten van hun onderzoek te delen met anderen binnen de school;
- Ruimte voor een andere dynamiek binnen de school, gebaseerd op focus, reflectie en zorgvuldige analyse.

## Leiderschapontwikkeling door middel van een masteropleiding

In het *tweede Intermezzo* dat volgt op Hoofdstuk 3, wordt de tweede context voor het ontwikkelen van leiderschap van leraren geïntroduceerd: geaccrediteerde arrangementen in de vorm van masteropleidingen gericht op het leiderschap van leraren.

De tweede empirische casestudy die gepresenteerd wordt in *Hoofdstuk 4*, heeft betrekking op de geaccrediteerde masteropleiding *Professioneel Meesterschap* waarvan het ontwerp is bepaald door een samenwerkingsverband van universiteiten en hogeschool en gebaseerd op de kwaliteitseisen die gedefinieerd zijn door de overheid, met een beperkte betrokkenheid van de school. Bij de beantwoording van de derde onderzoeksvraag naar de wijze waarop een masteropleiding zowel bijdraagt aan professionele ontwikkeling en nieuwe leiderschapsrollen van individuele leraren als aan schoolontwikkeling, wordt met name aandacht besteed aan de rol van het transferklimaat binnen de school. De veronderstelling is dat het transferklimaat bepalend is voor het gebruik van leiderschapscompetenties door leraren binnen de school en voor hun impact op schoolontwikkeling.

In de casestudy zijn 18 afgestudeerde masterdocenten uit de eerste twee lichtingen van de opleiding en hun leidinggevendens geïnterviewd. De uitkomsten laten zien dat in de context van een masteropleiding met individuele deelnemers, de impact van het programma op individuele professionele ontwikkeling groot kan zijn. De deelnemers hadden een sterke motivatie om hun nieuwe kwaliteiten toe te passen binnen hun teams en de school als geheel. Echter, de mogelijkheden om hun leiderschapskwaliteiten toe te passen buiten het leslokaal en bij te dragen aan teamontwikkeling en schoolontwikkeling, was afhankelijk van de mate waarin aspecten van het organisatieklimaat, zoals strategisch alignment, stimulansen in de werkcontext, mogelijkheden om leiderschap toe te passen, en ondersteuning van leidinggevendens en collega's, ondersteunend zijn. Als deze ondersteunend zijn, kan dat er toe leiden dat er een strategisch partnerschap tussen de masterleraar en zijn/haar leidinggevende ontstaat. Wanneer leraren met leiderschapskwaliteiten geïsoleerd zijn binnen hun school, en wanneer het schoolmanagement, leidinggevendens en collega's niet open staan voor hun leiderschap, zullen 'teacher leaders' echter moeizaam verschil kunnen maken in de school. Als er geen afstemming is tussen de veranderagenda van de school en de doelen van de masteropleiding, en wanneer de deelnemers aan de masteropleiding de enige grensgangers zijn binnen de school, dan zal een masteropleiding die gericht is op leiderschap van leraren weinig impact hebben op schoolontwikkeling.

Het *derde Intermezzo* na Hoofdstuk 4 beschrijft hoe de tweede casestudy geleid heeft tot het opnieuw overdenken van het ontwerp van de masteropleiding. Op basis van de uitkomsten van de casestudy van Hoofdstuk 4 zijn zes ontwerpprincipes voor masteropleidingen geformuleerd die tot doel hebben om grensoverschrijdingen tussen opleiding en werkplek te versterken om daarmee bij te dragen aan een sterkere externe curriculumconsistentie en een sterke strategische afstemming tussen de doelen van de opleiding en de doelen van de school. Deze ontwerpprincipes hebben zowel betrekking op het ontwerpproces (principe 1 en 2) als op het design van de masteropleiding zelf (principe 3 tot 6).

1. Strategisch alignment tussen de veranderagenda van de school en de doelen van de opleiding;
2. Gedeeld eigenaarschap vanuit de opleiding en de school;
3. Een sterke verbinding tussen programma-inhoud en thema's vanuit de school;
4. Collectief betrekken van meerdere leraren uit één school in de opleiding;
5. Betrokkenheid van leidinggevendenden bij grensoverschrijdende activiteiten;
6. Betrokkenheid van lerarenopleiders bij grensoverschrijdende activiteiten.

Aan de hand van deze ontwerpprincipes is in nauwe samenwerking met drie Regionale Opleidingscentra (ROCs) een nieuw ontwerp gemaakt van de masteropleiding *Professioneel Meesterschap*. Dit nieuwe ontwerp waarin het activiteitssysteem van de school en de opleiding door verschillende vormen van grensoverschrijdingen verbonden worden, is de basis voor de derde casestudy.

In *Hoofdstuk 5* wordt de vierde onderzoeksvraag beantwoord naar de wijze waarop deze grensoverschrijdingen tussen opleiding en school leiden tot versterking van de verbinding tussen ontwikkeling van leraren, nieuwe leiderschapsrollen en schoolontwikkeling. Het leerarrangement dat centraal staat in de derde casestudy is het herontwerp van de masteropleiding *Professioneel Meesterschap* met 42 deelnemers die zijn aangesteld als LD-leraren (senior teachers) binnen drie ROCs. De onderzoeksgegevens zijn verzameld door middel van semi-gestructureerde interviews met 8 LD-docenten, hun leidinggevendenden en hun opleiders. Aanvullende data zijn verzameld door middel van interviews met strategische sleutelpersonen uit het schoolmanagement en door middel van focusgesprekken met de opleiders en met management, staf en docenten uit de ROCs.

Het onderzoek laat zien dat de LD-docenten hun kennis, vaardigheden en zelfvertrouwen hebben ontwikkeld met betrekking tot leren, lesgeven, organisatie, innovatie en onderzoek. Hoewel hun formele rol binnen de organisatie nog niet veranderde, leidden hun nieuwe capaciteiten tot een andere invulling van hun rol. Daarbij maakten ze gebruik van een dieper begrip van theorieën rond leren en lesgeven, een breder perspectief op hun curriculum, hun team en hun organisatie, een meer onderzoekende houding, een sterkere focus op het delen van kennis, en, door dit alles, een sterker zelfvertrouwen en grotere autoriteit. Ze waren in staat om richting te geven aan en invloed uit te oefenen op collega's, team, leidinggevendenden en, gezamenlijk,

op het management en beleidsafdelingen op schoolniveau. Deze nieuwe invulling van hun handelen leidde tot verandering van werkpraktijken op het niveau van teams of units. Die veranderingen werden zichtbaar in nieuwe curricula, nieuwe didactische aanpakken, nieuwe instrumenten, en in de manier waarop ze rolmodel waren voor hun leerlingen. Ze waren ook in staat om invloed uit te oefenen op leiderschapspraktijken binnen de school, door binnen teams bij te dragen aan een sterker zelfbewustzijn, een meer proactieve houding, een sterkere gerichtheid op teamleren en een grotere openheid voor onderzoek, data en theorie.

Het masterprogramma droeg effectief bij aan schoolontwikkeling, zichtbaar in een verandering van werkpraktijken en leiderschapspraktijken binnen de school. Beslissende elementen uit het ontwerp die bijdroegen aan schoolontwikkeling betroffen de strategische afstemming, het collectieve ontwerp waarbij 42 LD-docenten van drie ROCs betrokken waren, en het gedeelde eigenaarschap van de opleiders en het strategisch management van de drie ROCs.

Hoewel de masteropleiding effectief blijkt in het verbinden van professionele ontwikkeling van deelnemers en schoolontwikkeling, en de deelnemers binnen hun organisatie een kritische massa vormen die een katalysator voor vernieuwing in hun scholen is, zijn er nog punten waar verbetering op mogelijk is. Het eigenaarschap ten aanzien van het programma lag vooral op het niveau van het strategisch management, maar was niet verbreed naar de leidinggevendenden van de LD-docenten. Dit geeft aan dat er binnen de ROCs interne grenzen bestaan waarmee rekening gehouden moet worden als we de impact van masterprogramma's willen vergroten. Het ontwerp van de opleiding bood daarnaast onvoldoende handvatten om de betrokkenheid van leidinggevendenden en opleiders in grensoverschrijdende activiteiten te ondersteunen doordat geschikte grensobjecten ontbraken die hen actief konden betrekken bij een gedeelde en betekenisvolle dialoog tussen opleiding en school.

## **Conclusies en suggesties voor verder onderzoek**

De reflectie op de uitkomsten van de drie casestudies levert de basis voor een aantal bredere conclusies met betrekking tot het ontwerp van leeromgevingen en het implementeren van leiderschap van leraren in scholen.

In formele opleidingstrajecten waarbij sprake is van een opleidingscontext en een werkcontext, zoals bijvoorbeeld in de masteropleidingen van casestudies 2 en 3, wordt de kloof tussen beide contexten vaak beschreven met behulp van de metafoer van 'transfer'. In deze metafoer wordt kennis ontwikkeld binnen één context om vervolgens te worden toegepast in een andere context. Het gebruik van de transfermetafoer in onderwijscontexten versterkt feitelijk de scheiding tussen de twee contexten en benadrukt de scheiding tussen professionele ontwikkeling en schoolontwikkeling, tussen leren en innoveren. Om het effect van leerarrangementen op schoolontwikkeling te vergroten is het

belangrijk om los te komen van mentale modellen die uitgaan van segmentatie, waarin professionele ontwikkeling en innovatie gezien worden als gescheiden taken en waarin school en lerarenopleiding als gescheiden systemen naast elkaar bestaan. Dit vereist de ontwikkeling van sterke en gelijkwaardige partnerschappen tussen lerarenopleidingen en scholen, gericht op zowel professionele ontwikkeling als schoolontwikkeling en gebaseerd op mentale modellen waarin leren beschouwd wordt als een grensoverschrijdende activiteit in grenszones waarbinnen boundary objecten ingezet worden.

Dit proces van grensoverschrijdend leren kan versterkt worden door gezamenlijke inzet van lerarenopleiding en school bij het ontwerpen van leerarrangementen, gericht op het versterken van externe curriculumconsistentie. Daarnaast kan de positie van grensgangers versterkt worden, door meerdere grensgangers vanuit één school te betrekken en door deze grensgangers expliciete posities binnen de school te geven (bijvoorbeeld als onderzoeksdocent of LD-docent). Ten slotte kunnen grensoverschrijdingen ondersteund worden door het gebruik van boundary objecten die de verschillende betrokkenen uitnodigen om deel te nemen in een gezamenlijke dialoog waarbinnen verschillen tussen de contexten van school en opleiding verkend worden, en waarbinnen collectief leren kan plaats vinden. Binnen de casestudies zijn we verschillende effectieve boundary objecten (zoals de onderzoeksprojecten en de monitorgroep) en minder effectieve boundary objecten (zoals deelname van leidinggevendenden aan hoorcolleges) tegengekomen.

De casestudies laten zien dat de scheiding tussen school en lerarenopleiding de lerarenopleiding in de rol zet van leverancier van kennis en adviseur bij ontwikkelprocessen in scholen. In deze rol zijn de lerarenopleiders vooral docent en expert. Veel minder aandacht is er voor de rol van de opleider als lerende. Gevolg is dat expansief leren binnen de grenszone vooral gericht is op het effect voor de school en minder op het effect voor de lerarenopleiding. Dit past bij leerarrangementen die aansluiten bij de marktscenario's of bureaucratische scenario's die nu nog dominant zijn. Leerarrangementen die ontworpen zijn vanuit partnerschappen vragen echter een fundamenteel ander mentaal model waarbij expansief leren in grenszones wederzijds is. In een dergelijk nieuw mentaal model leiden grensoverschrijdende activiteiten zowel tot professionele ontwikkeling van leraren als van lerarenopleiders. Dit proces van wederzijds leren kan vervolgens leiden tot zowel ontwikkeling van de school als van de lerarenopleiding.

De drie casestudies laten zien hoe het ontwikkelen van leiderschapskwaliteiten van leraren op een krachtige manier kan bijdragen aan de betrokkenheid van leraren bij processen van schoolontwikkeling die het niveau van de eigen klas overstijgen. Een actieve rol van de schoolleiding is echter een belangrijke voorwaarde voor de daadwerkelijke uitoefening van dat leiderschap. Door hun leiderschap zijn 'teacher leaders' de sleutel in het versterken van de rol van de beroepsgroep bij de verbetering van de kwaliteit van onderwijs.

De leraren in onze casestudies waren pioniers, niet alleen door hun leiderschap uit te oefenen bij onderwijsontwikkeling en het ondersteunen van collega's, maar ook door binnen hun scholen een vruchtbare bodem te creëren waarbinnen een andere leiderschapscultuur zich kan ontwikkelen. Zulke pioniers staan daarmee voor een complexe taak. Daarvoor is het noodzakelijk om leiderschapsvaardigheden te ontwikkelen. Dat proces van leiderschapsontwikkeling vraagt tijd en de mogelijkheid om leiderschap in de praktijk uit te proberen. In dit ontwikkelproces hebben leraren ondersteuning nodig bij de eerste stappen als 'teacher leader'. Het ontwikkelen van leiderschap van leraren kan zo beschouwd worden als een strategie voor professionele ontwikkeling die goed past in post-initiële carrièrepaden van leraren.

Voor de scholen die participeerden in de casestudies was leiderschap van leraren een nieuw element binnen hun organisatie. De leidinggevendenden van de scholen uit de eerste en derde casestudy creëerden ruimte voor gemandateerd leiderschap van leraren door 'teacher leaders' te selecteren en aan te stellen. Door hun positie en mandaat waren de 'teacher leaders' zichtbaar en konden ze niet genegeerd worden binnen de school. Dit was één van de sleutelementen voor de succesvolle implementatie van leiderschap van leraren binnen deze scholen. Tegelijkertijd kent deze vorm van strategisch gespreid en gemandateerd leiderschap valkuilen, doordat het een statische structuur van leiderschap creëert waarbij leiderschap van leraren een strategisch instrument is vanuit de schoolleiding, door middel van opdrachten vanuit het management en gericht op schoolbrede strategische thema's. Dit kan ten koste gaan van de aandacht voor dagelijkse concerns van leraren. De 'teacher leaders' in de school droegen binnen hun teams echter actief bij aan het versterken van het zelfbewustzijn en zelfsturend vermogen van de teams. Daarmee droegen ze bij aan een vorm van leiderschap die niet gebaseerd was op formele en gemandateerde posities, maar op een cultuur waarin iedere leraar in potentie een leiderschapsrol kon oppakken. Op deze wijze kan het formeel aanstellen van een kleine groep gemandateerde 'teacher leaders' een stap zijn in een ontwikkelproces richting scholen die zich kenmerken door leiderschap en verandercapaciteit van alle leraren.

Hoewel we in staat waren om de onderzoeksvragen te beantwoorden, kwamen er ook weer nieuwe vragen op die onderwerp kunnen zijn voor vervolgonderzoek:

- Het onderzoek zou uitgebreid kunnen worden naar andere leerarrangementen en contexten. Voorbeelden zijn masteropleidingen gericht op leiderschap in het basisonderwijs, en leerarrangementen die passen binnen het professionalisme-scenario en die geïnitieerd zijn vanuit professionele groepen.
- Vervolgonderzoek zou meer nadrukkelijk moeten kijken naar persoonlijke kwaliteiten van leraren en de mate waarin die invloed hebben op het effect van professionele ontwikkeling op schoolontwikkeling.
- Uitbreiding van het onderzoek naar andere leerarrangementen, zoals andere masteropleidingen, kan helpen om effectieve boundary objecten te vinden die bijdragen aan expansief leren.



- Vervolgonderzoek kan meer nadrukkelijk kijken naar interne grenzen binnen scholen (en collega's en stafafdelingen meer expliciet meenemen in de dataverzameling).
- De nadruk in dit onderzoek lag op de impact van leerarrangementen op scholen. Vervolgonderzoek naar expansief leren in leerarrangementen die zich kenmerken door partnerschap zou meer nadrukkelijk ook moeten kijken naar de impact van expansief leren voor lerarenopleiders en lerarenopleidingen.
- Tenslotte kan vervolgonderzoek inzicht geven in het lange-termijn effect van leiderschap van leraren en of en op welke wijze gemandateerd leiderschap zich kan ontwikkelen tot een vorm van leiderschap dat meer ingebed is in de cultuur van de school.

## Implicaties voor praktijk en beleid

De inzichten die in dit onderzoeksproject ontwikkeld zijn, hebben verschillende implicaties voor scholen, lerarenopleidingen, (de beroepsgroep van) leraren en de overheid.

*Scholen* kunnen hun innovatiecapaciteit vergroten door de cruciale rol van leraren bij innovatieprocessen te erkennen en door de ontwikkeling van leiderschap en innovatiecapaciteit van leraren binnen scholen te stimuleren en te ondersteunen. Door personeelsbeleid expliciet te verbinden aan de strategische agenda van de school, worden schoolontwikkeling en professionele ontwikkeling van individuen sterker gekoppeld. Daarbij moet rekening gehouden worden met interne grenzen tussen organisatieniveaus en beleidsafdelingen.

Het introduceren van leiderschap van leraren in scholen die daar weinig ervaring mee hebben, vraagt om heldere posities en een duidelijk mandaat voor 'teacher leaders'. Daarbij zullen zowel *schoolleiders* als 'teacher leaders' zich bewust moeten zijn van en aandacht moeten besteden aan de spanning tussen strategisch gespreid leiderschap en cultureel ingebed leiderschap. Dit kan helpen om een balans te vinden tussen structuur en controle aan de ene kant en vertrouwen en zelfsturing aan de andere kant.

Basiselementen van leiderschap kunnen al in de curricula voor de initiële *lerarenopleidingen* een plek krijgen. Bovendien kunnen lerarenopleiders ook op het terrein van leiderschap rolmodel zijn voor hun studenten.

*Partnerschappen tussen scholen en lerarenopleidingen* kunnen meer vorm krijgen aan de hand van de metafoor van 'boundary crossing' in plaats van de metafoor van 'transfer'. Daarbij is behoefte aan boundary objecten die gelijkwaardige samenwerking stimuleren over institutionele grenzen heen. Deze partnerschappen bieden mogelijkheden voor collectieve post-initiële leerarrangementen waarbij de focus ligt op gezamenlijke agenda's die zich niet beperken tot schoolontwikkeling, maar ook de ontwikkeling van de opleiding meenemen. Dit vereist een nieuwe flexibiliteit van lerarenopleidingen om meer

open curricula te ontwikkelen en om leidinggevend en managers binnen scholen te betrekken bij het ontwerpen van maatwerkprogramma's. Daarvoor is een verandering in mentale modellen van opleiders nodig, uitgaande van flexibiliteit en ondernemerschap.

In interne leerarrangementen zoals academische opleidingsscholen zouden leeropbrengsten van leraren meer expliciet gemaakt kunnen worden op zo'n wijze dat ze beoordeeld kunnen worden en kunnen leiden tot formele kwalificaties.

*Leraren* kunnen de professionele ruimte nemen om niet alleen invloed uit te oefenen op hun eigen handelen met hun leerlingen, maar ook op het onderwijs en leren in de school en op het beroep als geheel. Die leiderschapsrol kan ondersteund worden door de ontwikkeling van leiderschapskwaliteiten. In de bekwaamheidseisen voor leraren zou daarom meer expliciete aandacht moeten komen voor leiderschapscompetenties van leraren. Initiatieven vanuit de *beroepsgroep van leraren*, de Onderwijscoöperatie, moeten individuele professionele ontwikkeling (bijvoorbeeld in relatie tot het Lerarenregister) meer expliciet verbinden met schoolontwikkeling. Dit kan de impact van individuele professionaliseringstrajecten op schoolontwikkeling versterken.

*Nationaal beleid* rond onderwijs kan bijdragen aan het versterken van de sleutelrol van leraren in het sturen en ontwikkelen van onderwijs en leren, door leraren expliciet te betrekken in het proces van beleidsontwikkeling. Beleid ten aanzien van de kwaliteit en ontwikkeling van leraren zal niet alleen aandacht moeten besteden aan de ontwikkeling van leiderschapscapaciteiten van leraren (bijvoorbeeld door het stimuleren van masteropleidingen voor leraren), maar ook expliciet rekening moeten houden met het feit dat deze capaciteiten alleen tot hun recht kunnen komen in scholen die open staan voor nieuwe vormen van gedeeld leiderschap.

De *overheid* kan het partnerschap tussen lerarenopleidingen en scholen gericht op ontwikkeling van leraren én schoolontwikkeling verder stimuleren. Dat kan door het lerarenbeleid niet te baseren op mentale modellen die gebaseerd zijn op 'transfer' en die leiden tot gescheiden rollen en verantwoordelijkheden voor lerarenopleidingen en scholen. In plaats daarvan zouden sturingsmechanismen de partnerschappen tussen opleiding en school als vertrekpunt moeten nemen, de onderlinge verbondenheid van leerarrangementen en schoolcontext moeten erkennen, en het strategisch alignment van opleidingsdoelen en innovatieagenda's van scholen sterker moeten stimuleren.





## About the author

I am born on 12 February 1961 in Zaandam, the Netherlands. After finishing my secondary school at Pascal College, Zaandam in 1980, I studied Physics at the Free University Amsterdam, majoring in physics education. After graduation in 1988, I started at the Hogeschool Holland as teacher educator physics. In that role I got involved in several curriculum development projects for the science teacher education programs. In 1993 I was appointed as project coordinator for developing and implementing a new faculty wide design for the teacher education curriculum. My involvement in the design of teacher education curricula resulted in a role of policy advisor and in several project coordination roles within the university of applied sciences Hogeschool van Amsterdam and at a national level during 1996-2003.

Since 2003 I am appointed as '*lector*', a professorate at the university of applied sciences HvA. The lectorship is focused on the teacher as a change agent and on teacher leadership. With my research group research projects have been set up on a variety of topics, covering teacher inquiry, (initial and post-initial) professional development of teachers, assessment of teachers, self-steering teams, and the quality of teacher educators. Most research projects aim to contribute both to the knowledge base on teacher development and to the development and improvement of (teacher) education in university and schools. Therefore, the research projects are set up in close cooperation with teachers in schools and teacher educators within universities. Through our research projects we contributed to the development of Bachelor's, Honour's and Master's programs for teachers.

In my work I have been inspired by the opportunity to cooperate with many experts (who became close friends) in several national and international networks like the Dutch association of teacher educators VELON (as a member of the editorial board and a member of the board), the Association of Teacher Education in Europe ATEE (as chair of the Research and Development Center Curricula in Teacher Education and as a member of the Administrative Council of ATEE), European Commission's Thematic Working Group Teachers' Professional Development (as a representative for the Dutch Ministry of Education), and the professional body of teachers *Onderwijscoöperatie* (as an external expert).

This research project that is reported in this book has been embedded in my work as lector and reflects the themes that have been important in my work of the past few years.

The idea of using future scenarios to analyze developments in teacher education (Chapter 2), draws back to 1997 when I had my first experience in working with future scenarios during a training on change management. For me, working with future scenarios was exciting, creative and transformative. In 2000, I first used the methodology of scenario writing with ATEE's Research and Development Center on curricula in teacher education, which resulted in future scenarios for teacher education in Europe and a thematic issue of the European Journal of Teacher Education in 2003 (Snoek, 2003a). After that, we developed scenario writing as a method for reflection and learning for teachers and teachers educators (Snoek, 2005) and for students in higher education (Benammer et al., 2006). Since then I have used scenario writing in different contexts, including Masters' programs (see for example [www.leraar2020.nl](http://www.leraar2020.nl) and <http://www.surf.nl/kennis-en-innovatie/kennisbank/ouder/rapport-toekomstscenarios-digitale-leer-en-werkomgeving-2020.html>)

Chapter 3 covers work done by Erica Moens and me in 2007 and 2008 in the context of the AcOA, the Amsterdam academic development school involving Montessori College Amsterdam, Montessori College Oost en Open Schoolgemeenschap Bijlmer who had just started setting up research activities in their schools in 2006. It has been the start of my involvement with academic development schools and teacher inquiry, which after AcOA involved the ASKO schools for Catholic primary education in Amsterdam and the Academic Development School Noord Holland West and resulted in several publications on teacher inquiry (Snoek & Van den Herik, 2012; Snoek, 2012).

My involvement in Master's programs that are the context for Chapters 4 and 5, dates back to 2003, when the Council of Universities for Applied Sciences (*HBO-raad*, now *Vereniging Hogescholen*) started a working group on MEd-programs in response to the Bologna declaration. For me, one of the main motivators was to create opportunities for teachers in primary and lower secondary education to develop their teacher professionalism. Up till that moment the only opportunity for teachers to enhance their expertise through Master courses or to advance in their career was to change sector (from primary to lower secondary or from lower secondary to higher secondary education) or to leave the teaching profession (by promotion as a school leader or educational advisor). A new Master's program focusing on teacher leadership could create formal opportunities to recognize excellent teachers, while keeping them in their teacher job and in their schools. Within the context of this working group we developed a general qualification framework for MEd programs and the outline of a new Masters' program focusing on developing teacher leaders, who were excellent teachers in their subject and sector, who could initiate innovations at school level and who could support colleagues in this: the MEd Learning and Innovation (Snoek & Teune, 2006).

When secondary schools, participating in the Netherlands Institute for Masters in Education NIME, challenged the established universities by launching a

tender procedure for a tailor-made Masters' program in 2008, I participated in the design of the Masters' program *Professioneel Meesterschap*, which was accredited by the NIME and started in Amsterdam in 2009. During the first run of this program, I was involved in fine tuning the program and worked closely with both the teaching staff of the program and the first cohort of students. Towards the end of the program, it became clear that for a large part of the participants, the impact of the program on their work and position in their school was unsatisfactory. It appeared that we had been too naive in expecting the schools who initiated the NIME programs to create the necessary internal conditions in the school for maximum impact of the Masters' program. To get a clearer understanding of the factors influencing the transfer of leadership competences to the workplace, a more elaborate understanding of the actual impact, problems and dynamics was needed. This was the motivation for the studies reported in Chapter 4 and 5.





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