

Distributed Leadership in practice

A descriptive analysis of distributed
leadership in European schools

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Abstract

In former times a school leader was the only person in charge of the day to day life of a school. In order to become promoted to this position it was usually because of their successful performance as a teacher in the classroom and promotion was often reserved for the member of staff whose seniority was determined by their length of time working in the school. Those days are clearly over. Developments within the educational sector have increased the roles and responsibilities of those who work in our schools, with increasing discussion about the range of different kinds of leadership style. One of these is distributed leadership. Due to the increasing complexity of school organisation(s) which is expressed in all kinds of political, administrative, educational, social and organizational requirements, today's school leaders need to enlarge their scope of leadership activity beyond the school alone. To establish this kind of 'system leadership' the leadership at the school itself has to be better distributed. Although this subject has had a lot written about it over the past decade by several researchers, most studies focussed on conceptualisations and theoretical models. Recently we see empirical studies appearing more and more frequently.

In May to September 2013 ESHA and ETUCE undertook large-scale research into distributed leadership roles and responsibilities. Both school leaders and teachers were invited to complete a survey questionnaire. The aim of the study was to investigate in detail to what extent leadership is actually distributed in European schools (more than 1000 respondents participated in this survey).

The overall results are dominated by responses from school leaders in the primary and secondary education sectors with respondents from eight countries strongly representing the north and (mid-)west parts of Europe. Within these dominant factors, it is clear that the majority perceive that school leadership is demonstrably distributive; with leadership style seeming to be more distributive in England, Scotland, Sweden and Norway, and much less so in Italy, France and Spain. The Netherlands, with a relatively strong perception of distributed leadership, are somewhere in between. Where there are exceptions this is explained by the moderate or even critical scores on school structures, values and beliefs, collaboration and an overall emphasis on top down initiatives. Furthermore, emerging distributive leadership roles and responsibilities are much more confidently recognised by school leaders than by teachers. This is in part because critical aspects according to many teachers are found where there are restrictive school structures and cultural aspects (such as giving feedback and the acceptance of mistakes) and the day to day behaviour of the school leader. Where there is a dominance of top down initiatives and where the decisions are ultimately made by formal leaders (indicated by the level of expertise by responders) it is not always a common basis for the assignment of tasks. It is this which appears to suppress a pattern of greater distributive leadership. Also, within the primary sector the perception of distributed leadership is more strongly perceived than in the secondary sector.

The consequences of the financial crisis are clear, especially in the Netherlands, Scotland and Spain where this is most often expressed in terms of a reduction in school supplies and services. In contrast to expectations, there was no causal relationship found with distributed leadership; however, the extent of such a relationship may be that where the more influence is evidenced and reported, the more likely leadership is to be distributed. Results show that in England the amount of school leader influence seems to be greater than in France and Spain.

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1 Introduction

Until the beginning of the twentieth century hierarchical, formal, leadership roles were dominant and allocated to few within an organization. Because of greater globalisation, the open internet, changes in the economic climate and societal changes we see that the work environment is shifting from efficiency, targets, control and formalised accountability structures towards greater autonomy and the recognition and empowerment of professionals as craftsmen. Where this is happening the sharing of responsibilities and knowledge throughout the organization alongside increased networking such activity transcends traditional borders. The dynamics in the wider educational landscape forces the redefinition and reorganisation of leadership in this context. Within the school environment, these forces aren't lagging behind: the environment has changed drastically in a few years and still does. Leadership activities have to change in line with these developments. Increasingly, for systems to be effective, leadership needs to be not for the few, but for the many – for all children and not just some in a school. This is the basic assumption of distributed leadership and the main focus for this empirical research.

This research project was commissioned by the European Policy Network of School Leaders (EPNoSL) and undertaken by ESHA (European School Heads Association) and ETUCE (European Trade Union Committee for Education). The research focused on distributed leadership in schools. It began in May 2013 and ended in September 2013. The aim of the study was to collect data at the European level in order to determine to what extent distributed leadership is present in schools and to identify and describe variations in leadership practice. Factors include those related to school life such as the financial context of the economic recession, the extent of influence of schools in their community, the type of education and national variations are explored together with the respondent's position in the school. The study sought to address the following four main questions:

1. *To what extent is leadership distributed in the schools?*
2. *What are the variations in the perceived extent of distributed leadership between subgroups of respondents based upon personal features?*
3. *What are the variations in perceived extent of distributed leadership between subgroups based upon school-related features?*
4. *How do the external factors relate to the perceived extent of distributed leadership?*

This report describes the results of this descriptive research.

In the next chapter (2) the research questions will be determined and earlier research findings will be presented and related to the questions. In Chapter 3 we will explain how this research study is conducted, followed by the research findings themselves. In the last chapter (4) some conclusions are drawn by answering the main questions outlined above.

2 Research questions and theory

Distributed leadership is a concept on which a lot has been written over the past decade. ESHA has written a position paper (2013) in which they formulate their vision and define this concept. ETUCE has also enunciated distributed leadership in its policy paper on school leadership (2012). Their views on this concept are the starting point for the further definition within this research. In this chapter we will formulate the main and sub-questions to this research, followed by a review of some earlier empirical and theoretical findings about distributed leadership. Next, the concept of distributed leadership is defined and evaluated in seven dimensions.

2.1 Research questions and definition of distributed leadership

Four main questions can be formulated with each main question consisting of several sub-questions:

1. *To what extent is leadership distributed in the European schools?*

- a. To what extent is leadership distributed according to school leaders and teachers?
- b. How do teachers perceive the behaviour of their school leader?
- c. How do school leaders perceive the behaviour of their professionals?

2. *What are the variations in the perceived extent of distributed leadership between subgroups of respondents based upon personal features?*

In this question three grouping variables are tested: position, gender and seniority.

- a. Do the grouping variables differ in terms of their means on the distributed leadership scale variables (of question 1) and what are the differences?
- b. Which of the grouping variables significantly explain possible differences? Are there main or interaction effects between these features that explain the differences?

3. *What are the variations in perceived extent of distributed leadership between subgroups based upon school related features?*

In this question seven grouping variables are tested: type of employment, school size, clusters of European countries, type of education, class room responsibilities for school leaders, educational structures and whether the education is free.

- a. Do the grouping variables differ in terms of their means on the distributed leadership scale variables, when controlling for seniority, gender and position?

- b. Which of the school related features significantly explain possible differences? Are there main or interaction effects between these features that explain the differences?

4. How do the external factors relate to the perceived extent of distributed leadership?

- a. What is the impact of the financial crisis on leadership practice? Is the crisis a possible predictor for a more or less distributive leadership practice?
- b. What is the impact of the extent of perceived influence of schools on their own policy development? Is this factor a possible predictor for a more or less distributive leadership practice?

The first question has a *descriptive character*. By asking school leaders and teachers at the European level about the leadership in their organizations we wanted to investigate how widespread this form of leadership is. In the past 15 years this new vision on leadership is developed, alongside system leadership. Whereas system leadership is about leadership that transcends the organization, distributed leadership deals with sharing responsibilities within the organization. But to what extent has this form become the reality in schools? Can leadership practice in schools, on average, be interpreted as distributive or is the overall and more traditional form the adage to *'follow the leader'*?

Regarding the second and third question, we wanted to identify whether there were differences between subgroups. One of the features is the formal position in the school. Are there differences between the perception of school leaders and teachers? Also, the effects of seniority and gender were examined. Regarding the third question, possible differences related to school features were investigated. In the latter, analysis accounted for the personal features (position, seniority and gender) as covariates to control for their influence to clarify the effects of position. In the second and third question *comparisons* are the point of focus.

Finally, the fourth question focuses on more environmental (outside the organizational context) as possible predictors of distributed leadership. Is there a relationship between the economic climate and political interference and the extent of distributed leadership in schools? Does the perception of more or less negative consequences of the financial crisis or of more or less influence on their own policy development, predict the extent of distribution of leadership in schools? Could these factors outside the organization be obstructive (or even stimulating)? Although we cannot ascertain that relations found in this research are *causal or predictive*, by statistically testing these relationships we can give indications for it. For empirical evidence of causal relations further longitudinal research is necessary.

2.2 A distributive perspective on leadership

Leadership and the criteria for effective leadership have changed over the years. It comes as no surprise, as the environment - in which leadership roles find their expression - has evolved and become more dynamic than ever. As Gronn (2002) formulated ten years ago, “schools now operate in complex, data-rich task environments as never before” (p. 18).¹ 21st century schooling necessitates a shift away from vertical, policy driven change to lateral, capacity building change. School leaders must still have sufficient knowledge of facilities, personnel, and finance management but effective leaders today must also foster learning environments where students and professionals in the school are encouraged to share knowledge, build trust and promote a sense of shared responsibility.

Challenges in school leadership

In 2012 ETUCE (European Trade Union Committee for Education) conducted a survey in eleven European countries to map out the school leadership situation. They investigated emerging issues, developments, school leadership policy and good practices to give insights for improving school leadership. ETUCE describes the different challenges the school leader faces. Examples of these challenges are the heavy workload among school leaders, vaguely defined and delimited responsibilities, low attractiveness of the profession and a decreasing number of (potential) school leaders (due to nearing retirement and a lack of qualified candidates who apply for school leadership positions) (ETUCE, 2012, p.6).²

Higher expectations of schools (because of external pressure of policy makers and society) as well as changes in the nature of the work of school leaders can be accounted for these and more leadership challenges.

Distributed leadership: a step towards system leadership

The need for distribution of leadership within the school is not only a pragmatic issue of proportionally dividing the school leaders workload, it has the positive impact on the self-efficacy of teachers and other staff members by encouraging them to show leadership based on their expertise and by supporting collaborative work cultures (Day et al., 2009; OECD, 2012). This in turn is one of the most important conditions for a culture of improvement being at the heart of the school.

The OECD’s comparative review of school leadership (2012) shows that an important role for school leaders is to enlarge the scope of their leadership beyond the school. This so-called ‘system leadership’ implies strengthening collaboration from networks and sharing resources across communities. To establish this larger system-level of leadership, leadership at the school itself must be more distributed.

¹ One of the initial and frequently cited theoretical conceptualisations of distributed leadership was developed by Gronn.

² Based on back ground research: OECD (2009), *Creating Effective Teaching and Learning Environments, First Results from TALIS* http://www.oecd.org/document/54/0,3746,en_2649_39263231_42980662_1_1_1_1,00.html

Distributed leadership differs from more managerial types of leadership, where 'control', efficiency and hierarchical fixed structures are dominant (Elmore, 2000; NCSL, 2004). Although some organizational functions in the school require control (e.g. finance), school improvement is a process that cannot be controlled fully, since most of the knowledge required for improvement must inevitably reside in the people who deliver instruction, not in the people who manage them (Elmore, 2000). It is known that more hierarchical and managerial kinds of leadership are often limited to a small proportion of formal leaders, a proportion that seldom grows larger than about one quarter or one third of the total population of classrooms, schools, or systems (Elmore, 2000). Pre-eminently in schools, there is no way to improve the quality of education in the school without widely distributing the responsibility for leadership among roles in the organization.

Everyone involved

Distribution of leadership in the school does not only apply to the professionals in the school, but stretches across several other groups and individuals. In line with the definition of the European Policy Network on School Leadership the term "school Leadership" refers to the process of strategically using the unique skills and knowledge of teachers, pupils, and parents, toward achieving common educational goals.³

Distributed leadership is primarily concerned with mobilizing leadership at all levels, not just relying on leadership from the top. The emphasis is upon leadership as *interaction and practice* rather than relying upon the actions associated those in formal leadership role or responsibilities. The interdependence of the individual and the environment means that human activity is *distributed in the interactive web of actors, artefacts and the situation* (Spillane, 2006).

Distributed leadership implies some degree of shared expertise and some degree of difference in the level and kind of expertise among individuals. According to Elmore (2000; 2004), guidance and direction need to be given by the school leader, following the contours of expertise in an organization, to make a coherent whole. "It is the *glue* of a common task or goal—improvement of teaching and learning—and a common frame of values for how to approach that task that keeps distributed leadership from becoming another version of loose coupling" (Elmore, 2000, p. 15).

Reciprocal responsibility and accountability

Involvement combines with responsibility and accountability. Distributed leadership does not mean that no one besides the school leaders is responsible for the overall performance of the organization. All individuals are responsible and accountable for their contributions to the collective result (Elmore, 2000). The formal authority of school leaders must have a complementary responsibility in creating a common culture of expectations, enhancing the

³ EPNoSL: www.schoolleadership.eu

talents, competences and knowledge of the professionals in the organization and establishing a coherent whole from the diverse qualities of its' staff members.

To be effective, school leaders need to understand how individuals vary, how the particular knowledge and skill of one person can be made to complement that of another, and how the competences of some can be shared with others (Elmore, 2000; 2004). Learning grows out of these differences in expertise rather than differences in formal authority and is both an individual and a social activity. Thus, all responsibility and accountability relationships are necessarily reciprocal (Elmore, 2000; 2004).

Policy usually states the aspect of accountability in which a person with formal authority requires another to do something he or she might not otherwise do except in the presence of such a requirement. Distributed leadership makes the reciprocal nature of these accountability relationships explicit.

Ways to distributed leadership

Top down approach

A number of studies, summarized by Bennett et al. (2003) suggested that an important starting point towards the development of distributed leadership may be found in a '*top down*' initiative from a strong leadership model where senior and formal leaders demonstrate significant influence on the school's culture. Distributed leadership, then, seems to contradict with strong senior leadership, but there is no necessary contradiction. Many staff do not wish to be given leadership roles or to have to take on responsibility beyond their own class teaching (NCSL, 2004). To distribute leadership a strong leader is required to provide guidance and direction, to make people feel confident (Elmore, 2000; NCSL, 2004). Formal leaders need to avoid overly controlling behaviour and actively encourage and value innovative ideas from all members of the school. This means providing time, space and opportunities and knowing when to step back to enable staff members to contribute and participate in decision making and to establish concerted action.⁴ Guidance is about weaving together people, materials and organizational structures in a common cause (Obadara, 2013).

Distributed leadership does not mean that everybody leads, but that everybody has the potential to lead at some time. The degree to which informal leaders are involved in the process of distributed leadership may vary. A '*top down*' initiative may acknowledge and incorporate the existing informal power of leadership relationships into more formal leadership structures in ways seen as appropriate by the senior staff who are creating the distributive structure or culture.

⁴ Concertive action, according to Gronn (2002), can be interpreted in three ways: spontaneous collaboration, intuitive working relations that emerge over time and are dependent on trust and institutionalised or regulated practices. Gronn regards distribution as a form of holistic and conjoint agency where actors influence and are influenced within a framework of authority.

In 2004 NCSL published a full report of their study on the distributed leadership practice in schools. They found six forms which distributed leadership can take without being prescriptive in terms of good or bad; effective forms will depend upon the specific context. Their taxonomy of distribution consists of: formal, pragmatic, strategic, incremental, opportunistic and cultural distribution. In the first four forms the top down initiative is more often the starting point. In the formal distribution pre-designated roles and job descriptions are leading where responsibility is delegated when necessary. In the pragmatic form distribution is temporary and ad hoc teams are constructed when external pressure forces a reaction. The distinguishing feature of strategic distribution is goal orientation and not, as with pragmatic distribution, about problem solving. Individuals as team players contribute to new appointments. Incremental distribution is more focused on professional development, by giving more responsibility to professionals in the school and where as people prove their ability to exercise leadership they are given more opportunity to lead. "When there is mutual confidence and a flow of innovative ideas, leadership becomes fluid" (NCSL, 2004, p. 40).

Bottom up approach

The initiative can also come from '*the bottom*' instead of top down. A 'bottom up' initiative is more likely to derive from individuals or groups within the organisation who already are seen by colleagues as having a leadership role or when there is a lack of strong leadership (Bennett et al., 2003). According to NCSL (2004), opportunistic and cultural distribution can be characterized as more 'bottom up' forms of distribution. In opportunistic distribution, leadership is taken rather than given or planned (NCSL, 2004). The success of such a bottom up initiative may depend upon an attempt to bring into line formal and informal leaders within the organisation. Cultural distribution is a form of distribution where leadership is not formally nor explicitly delegated, but a reflection of the entire school culture. This type of leadership is more intuitive, organic and spontaneous and is expressed in activities rather than in roles (NCSL, 2004).

Five aspects of distributed leadership

The sources of initiative cannot be marked out precisely in practice. In 2004 the Hay Group Education (UK) developed a *continuum* consisting of five aspects of distributed leadership. Their sliding scale shows accents in initiatives and scope of decision making as follows:

- *Instruct* – where initiatives and ideas come only from leaders at or near the top of a hierarchical organisational structure;
- *Consult* – where staff have the opportunity for input but decisions are still made at a distance from them by others near or at the top;
- *Delegate* – where staff take initiative and make decisions within predetermined boundaries of responsibility and accountability;
- *Facilitate* – where staff at all levels are able to initiate and champion ideas;

- *Neglect* – where staff are forced to take initiative and responsibility due to a lack of direction at the top.

Hargreaves and Fink (2006) also developed a continuum, configured as a thermometer. The facilitate point of the Hay Group continuum is split out by them in three forms of distributed leadership, namely guided distribution, emergent distribution and assertive distribution.

In contrast to other classifications, as mentioned earlier, this configuration implies a prescriptive one (Hargreaves and Fink, 2006; in Youngs, 2008, p.5).⁵

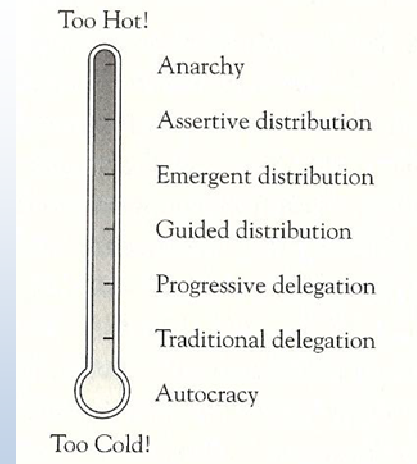


Figure 1: Raising the temperature of distributed leadership (Hargreaves & Fink, 2006, p. 113)

Formal and fluid leadership structures

Distributed leadership may be given form through formal positions and structures, like committees and working groups. But it also can be expressed in some kind of fluid leadership exercised through informal roles and actions, based upon expertise rather than position. This fluid leadership will only be possible within *an open climate, based on trust and mutual support and with strong shared common goals and values*, which becomes an integral part of the internal organisational social and cultural context. Moreover, such a climate implies a blurring of the distinction between ‘leaders’ and ‘followers’. It may therefore have to co-exist with any formal accountability structure that has been created within the organisation (Bennett et al., 2003).

The Impact of distributed leadership

Gradually the distributive perspective on leadership disseminates in different countries to become a general practice. Some OECD countries, and in particular Denmark, Finland, Norway and Sweden, have more of a history of teamwork and co-operation among their teaching staff, especially in primary schools. Others, such as Ireland, are shifting to encourage such practice in which this responsibility of school leaders is increasingly important and recognized (OECD, 2012).

⁵ See also: <http://www.edu.gov.on.ca/eng/policyfunding/leadership/pdfs/hargreaves.pdf>

In 2009 a large study was conducted in England in conjunction with NCSL to explore the relationship between school leadership and pupil learning outcomes (Day et al., 2009). The data showed that one of the most powerful dimensions of effective school leadership was the establishment of a *clear sense of long term vision and direction* for the school, which also heavily influenced the actions of the school leaders and of others in the school. The vision was shared widely and supported by all staff. Engaging staff in the *decision making* and evaluation of the school's development were noteworthy. School leaders encouraged staff members to be leaders in their own classrooms and to take informed decisions to extend their teaching approaches. Those who were in leadership roles were held *accountable* for the tasks they undertook.

Typical *values and beliefs* in the schools were trust and high expectations and a 'can do' culture. Also, the school leaders intentionally redesigned organizational structures and redefined and distributed more widely leadership and responsibilities to enlarge engagement and ownership in order to improve the student's learning. The ways of restructuring, role shifting and changes in responsibilities varied from school to school, but had a consistent pattern across schools. There was a change from vertical to horizontally structured schools. Responsibilities of management and staff members were clearly outlined and allocated on the basis of ability with recognition of *people's qualities* and organizational needs.

Developments in leadership also included pupils, who were provided opportunities to participate in decision making and given responsibilities such as leading projects. This was highly motivating for the pupils and had a positive impact on their learning. In 2006 research findings on collaborative learning showed that when students work collaboratively during learning, there is a positive influence on academic achievement. It should however be noted that individual learning has its own important value; collaborative and individual learning complement each other (OECD, 2010).⁶

As distributive leadership goes hand in hand with *learning organisations*, both are impelled by the dynamics in the environment (see also NCSL, 2004, p. 16). It is important for all professionals in the school to feel free to experiment and have the courage to make mistakes and to learn from them. In the above mentioned study (Day et al., 2009) participating school leaders provided an infrastructure where it was safe to try things out, to innovate with new ways of working. Staff responded to this opportunity positively. It affected the way they saw themselves as professionals and improved their sense of self-efficacy. This, in turn, had a positive impact on the way they interacted with pupils and other staff members in the schools.

⁶ Robert E. Slavin, "Co-operative Learning: What Makes Groupwork Work?", in OECD (2010), *The Nature of Learning: Using Research to Inspire Practice*, OECD Publishing.

In 2010 a descriptive survey design was used to investigate relationships between distributed leadership and sustainable school improvement.⁷ Significant relationships were found between distributed leadership and school goal achievement, teachers' professional development, instructional programme management, effective teaching and learning and the promotion of school climate (culture)(Obadara, 2013).

Influence to make decisions

Elmore (2004) highlights that effective leadership cannot be imposed through artificial constructs developed by outside policy-makers, but must begin from the inside focused on the teaching and learning processes in the school. School leaders can make a difference in school and student performance if they are granted the *autonomy* to make important decisions and especially when these decisions include promoting teamwork among teachers, building networks of schools, monitoring teachers, setting strategic direction and developing school plans and goals and engaging staff members, influencing teacher recruitment and matched with the school's needs.

Conclusion

The key concepts of distributed leadership can be grouped around four categories:

1- *Distributed leadership practice:*

Distributed leadership is about leadership activities and decision making exceeding the formal positions. It is expressed in cooperation, sharing expertise and knowledge, initiating, responsibility and accountability.

2- *Roles and tasks of the formal school leader and staff:*

- a. The formal school leader: the responsibility of the school leader is to provide guidance and direction, acknowledge abilities, encourage professionals to share knowledge, to make decisions and to show initiative. These tasks and related responsibilities are necessary to strengthen the engagement and empowerment of the professionals.
- b. Staff: professionals have a reciprocal responsibility to substantiate this by showing initiative and actively participate and contribute and take their responsibility.

3- *Cultural and formal school features:*

An open climate, trust, learning organization, respect, high standards, common values and a shared vision. Although cultural distribution seems to be the advanced model of distributed leadership, formal structures are not the opposite of distributed leadership because they could be helpful in distributing leadership. On the other hand, if formal structures suppress decision making and responsibilities throughout the school then widespread leadership opportunity is obstructed.

⁷ The study utilised two sets of questionnaire "Distributed Leadership Questionnaire (DLQ)" and "Sustainable School Improvement Questionnaire (SSIQ)". A sample of 200 public secondary schools out of a total of 595 schools in Lagos State was drawn for the study using proportionate stratified random sampling technique.

4- *Autonomy as a necessary condition:*

To make distributed leadership possible in schools, sufficient influence and a sufficient amount of autonomy is necessary in order that people can make their own policy choices. This can be seen as an important condition of distributed leadership practice.

2.3 Research model and variables

In this research the definition of distributed leadership as described in the position paper of ESHA was the starting point.

“Under Distributed Leadership, everyone is responsible and accountable for leadership within his or her area. Good ideas come from throughout the organisation, and many people will cooperate in creating change. Distributed Leadership is an environment where everyone feels free to develop, initiate and share new ideas.” (Position paper Distributive Leadership, ESHA, 2013, p.1).

ETUCE also takes “a broad view of school leadership, encompassing, not only the head or principal of the learning institution, but also other individuals with leadership roles such as deputy principals, departmental/subject heads, senior teachers and other individuals entrusted with leadership responsibilities. ETUCE believes in distributed leadership, shared or collaborative leadership involving teachers and the whole pedagogical community. Through such collaborative leadership, school principals can work with the whole pedagogical community to develop a shared vision for the school, to set the school goals and to work systematically towards their fulfilment.”(ETUCE, 2012, p.2)

Seven dimensions of distributed leadership

Based on the position paper and the literature review, seven dominant factors of distributed leadership were selected for a closer look at within this research:

1. *School structure:* the formal school structure provides everyone with the opportunity to participate in decision making; there is agreement about leadership roles; informal leadership and professional development are facilitated.
2. *Strategic vision:* a shared vision with common values for all, where ownership by both staff and pupils is found important and creating a learning organisation is one of the school goals.

3. *Values and beliefs*: underlying values typical for the culture of schools are mutual respect, confidence and high expectations. In such schools mistakes aren't punished, but are seen as a learning opportunity.
4. *Collaboration and cooperation*: in schools it is self-evident for staff to work collaboratively in order to improve school results, achieve the collective ambition and to solve problems. Knowledge is shared with one another.
5. *Decision making*: professionals in the school have sufficient space to make their own decisions related to the content and organization of their work. There is confidence in professionals to make informed decisions and everyone is involved with decisions about the school's ambition and expectations.
6. *Responsibility and accountability*: professionals are kept and feel accountable for their performance. In these schools it is common to give feedback to one another to help colleagues and improve the school with professionals expressing their opinion regardless of their formal position.
7. *Initiative*: based upon their level of expertise everyone is expected to contribute their own ideas and come up with initiatives.

Additionally, two sets of questions concerning the specific behaviour of the school leader and of staff in the school were withdrawn. These items included key features such as empowering, supporting, enabling behaviour of the school leader and participating, demonstrating responsibilities, helping one another by the staff members.

Research model

In the research model as presented below, the four main questions are incorporated. The middle of the model shows the chosen seven dimensions of distributed leadership. This block refers to the first sub- question (Question 1a). Sub-questions 1b and 1c are shown next to it in the block ‘perceived behaviour of professionals in the school, consisting of two variables. Besides describing mean scores on these variables, the relationships will be examined.

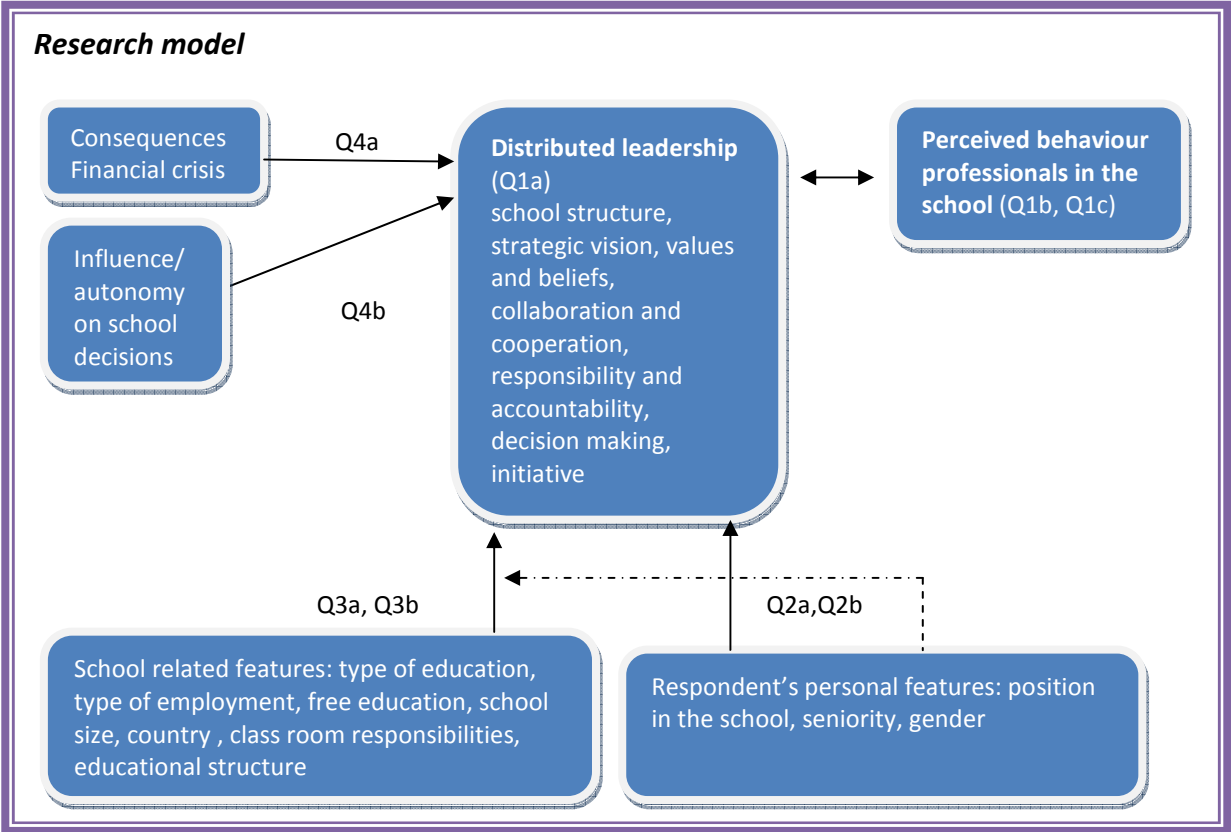


Figure 2: Research model Distributed Leadership

At the bottom of the model two blocks concerning the second and third main questions are shown. First a closer look at the differences in answers is based upon the position, gender and seniority of the respondent (Questions 2a, 2b).

Then, we examined the variations based on school related features. These variables were controlled for the personal features of the respondent (covariates) (Questions 3a, 3b). By making subgroups within these features variations in the extent of distributed leadership will be analyzed.

To the left of the model the consequences of the financial crisis and the perceived influence on school policy are mentioned with the assumption in this model that there is a single directional relationship between these factors and distributed leadership (Questions 4a, 4b).

3 Method

In this chapter we will describe how this study was conducted. The study can be characterized as a descriptive research. A survey was carried out to collect large scale data. In the following paragraphs we will pay attention to the instrument, the sample and response, the procedures and the method of analysis.

3.1 Instrument

For this study a web based questionnaire was developed consisting of four sections:

- Back ground questions about the respondent, e.g. seniority, formal position
- Questions about the school context and school features, e.g. the extent of perceived influence on policy and curriculum, the financial consequences of the economic crisis, school size, how teachers are employed
- Questions based on the operational definition of distributed leadership consisting of seven dimensions
- Questions answered by teachers about how they perceive their school leader regarding their behaviour to enable and encourage distributed leadership and questions answered by school leaders about how they perceive their teachers regarding the organizational behaviour which enables distributed leadership.

The questionnaire consisted of 20 close-ended questions (divided over 87 items), for the greater part with statements about distributed leadership (on a interval measurement level). Respondents were asked to denote to what extent they agreed with the statements (see appendix 1 for the whole questionnaire). Some answers in the questionnaire were half open-ended, e.g. when respondents had another position in school than school leader or teacher, they answered 'other position' and had the option to amplify their answer. Also, respondents could answer most of the questions with 'Non applicable' when none of the answers applied to their situation. Both types of answers are not represented in this chapter but in the separate Tables Report along with the relative frequencies on all questions.

3.2 Sample & Response

15 000 ESHA members (mainly school leaders) were invited to fill out the questionnaire. At the same time the questionnaire was distributed to 132 ETUCE national member organisations, which represent teachers and school leaders, who further distributed it to their members. In all, 1534 respondents filled out the questionnaire partially; 1088 respondents filled out the questionnaire completely. For the data-analysis the respondents

that completed at least the questions with the seven dimensions, were taken into account (in total, 1093 respondents).

76% of the respondents were school leaders, 14% were teachers and 11% have another position in the school, e.g. board member. Most respondents filled out the English version of the questionnaire (73%), followed by the French version (13%). Most people work in the north-west of Europe (e.g. England, the Netherlands, Scotland, France and Sweden). 49% of those surveyed are male, 51% female. More than 80% work either in the primary or secondary sector.

A relatively *small amount of responses* from teachers was taken note of (n=148), compared to the number of school leaders. Little response has come from more Eastern parts of Europe (e.g. no one from Azerbaijan, Romania, Russia, Czech Republic et cetera). Also a few respondents work in Early Childhood (2%) or Higher education (3%). For the data-analysis this means that some values of variables had to be clustered to make more reliable statements.

In conclusion, a response rate of more than 1000 respondents makes it – in general - possible to make statements with a reliability of 95% and a accuracy of 5%. Yet, these statements cover the whole group, but the differences between groups based on specific features are most probably significant: the response from specific subgroups (such as certain countries and sectors) weighed heavily in the overall findings. The findings of the extent of distributed leadership in Europe in this research need to be interpreted, considering the impact of dominant features of the response on the results.

A lot more school leaders than teachers filled out the questionnaire. Also, there were just eight countries with a response rate of 50 or higher. These countries (England, France, Italy, the Netherlands, Norway, Scotland, Sweden and Spain) mainly influence the findings in this research. As a consequence, in the presentation of the results (chapter three) the answers of school leaders and teachers will be described separately and, additionally, the results of the eight countries.

3.3 Procedure & time scale

In May 2013 the questionnaire was developed by Ton Duif, Chris Harrison, Nicole van Dartel (ESHA) and Dennis Sinyolo (ETUCE).

The English questionnaire was then translated by the translators of ESHA and ETUCE in five additional languages:

- Italian;
- German;
- Spanish;

- Russian;
- French.

Invitations and reminders were sent by ESHA and ETUCE during the field work. On the 18th of June the members of ESHA and ETUCE were contacted by E-mail and invited to fill out the questionnaire. A general web link was included.

A reminder was sent three times to the population during this period to increase the response rate. Attributed to summer holidays the response rate remained – as expected – moderate. We realized it would have been more valuable to conduct this research in another period, but restrictions were made to the research period.

The survey was closed on the 9th of September. The data were exported to SPSS, a statistical software program.

3.4 Method of analysis

In SPSS the data were first cleaned and then analyzed. Invalid cases (answers) were deleted, back ground variables on a ratio level were recoded into new variables with classes/ groups to compare subgroups. In appendix 2 the classifications of these new variables are presented. Some types of education were merged, because of a low response rate. For seniority and school size a classification based on quartiles and based on a normal distribution were made. Concerning the participating countries in the response a double classification was made: a geographical classification (North, South, East, West) and an education organizational classification: ⁸

- Single structure: education is provided in a continuous way from the beginning to the end of compulsory schooling, with no transition between primary and lower secondary education, and with general education provided in common for all pupils.
- Common core: after completion of primary education (ISCED 1), all students follow the same common core curriculum at lower secondary level (ISCED 2).
- Differentiated structure: after primary education, either at the beginning or some time during lower secondary education, students are enrolled in distinct educational pathways or specific types of schooling.

For regression analysis some variables measured on a nominal level were recoded into dummy-variables (values 0/1).

A Principal Components Analysis (PCA) with a Varimax rotation was executed to explore underlying components in a group of variables. The reliability of the variables of distributed

⁸ Eurydice (2013), p. 3: three model of organisation within compulsory education in European countries.

leadership, of the perceived behaviour by the professionals and of the perceived influence on school policy was tested. Provided a Cronbach's alpha of 0.70 or higher, scale variables were constructed, presenting the dimensions of distributed leadership. In table 1 the scale variables and related alpha-scores are presented.

Table 1 : Scale variables distributed leadership questionnaire

Construct label	Cronbach's alpha	Number of items	Items removed
Influence	0.82	7	0
School structure	0.83	6	1
Strategic vision	0.84	5	0
Values and beliefs	0.86	4	0
Collaboration and cooperation	0.90	6	0
Decision making	0.85	4	2
Responsibility and accountability	0.76	6	0
Initiatives *	0.28	4	4
Distributed Leadership total	0.95	38	0
Perception teachers of school leader	0.93	9	0
Perception school leader of professionals	0.88	5	0

*construct not reliable, items are analyzed separately.

To answer the research questions, several statistical analyses were executed. To examine relationships and variations between variables in order to answer the research questions the following tests were executed:

- Chi Square test;
- General Linear Model/ UNI-ANCOVA's to determine main and interaction effects;
- Independent T-tests and ONEWAY-ANOVA's with post hoc comparisons (Bonferroni) to determine mean scores and mean differences;
- Correlation test (Pearson product-Moment) to investigate linear relationships;
- Linear Regression Analysis (Hierarchical) to examine causal relationships.

In all tests a significant level of $p \leq 0.05$ was applied and indicated with an asterisk *. Only significant mean differences with a minimum mean difference of 0.3 are described in this report. Furthermore, limit values were applied by the researcher to the mean scores:

≤2.9 : Critical/ negative zone

3.0-3.5 : Neutral zone

≥3,5 : Positive zone

4 Findings

More than 1000 people filled out the questionnaire. The differences in opinion between school leaders and teachers are sometimes striking. On average, teachers are more critical about the leadership practice and the financial consequences of the economic crisis. Because of these substantial differences, the findings of both groups will be presented separately in this chapter. Results of the countries with a sufficient number of respondents are described separately.

We will start with a look at the general findings (§ 4.1). In § 4.2 the comparisons between subgroups based upon personal and school related features are described. Finally, in §4.3, the relationships between several variables will be mentioned with significant results indicated with an asterisk.

4.1 General findings

Firstly, we will start with a look at the perceived consequences of the financial crisis and the influence on school policy. Then we will discuss the results of the issues related to the content of distributed leadership. In this section we will also describe the results of the countries where the condition of a minimum of 50 respondents is met. These countries are: England, Scotland, Italy, the Netherlands, Norway, Sweden, Spain and France.

Financial crisis

More than 75% of all respondents experienced a reduction of the school budget since the start of the financial crisis in 2008-9: 34% a drastic reduction, 44% a slight reduction. It is noteworthy that among these respondents, a drastic reduction is mentioned more often by teachers than by school leaders. In just 5% of the cases an increase in the school budget is mentioned and 17% say the budget has remained the same. Respondents were asked which consequences emerged in the case of reduction of the school budget. In the figure below, these consequences are presented.

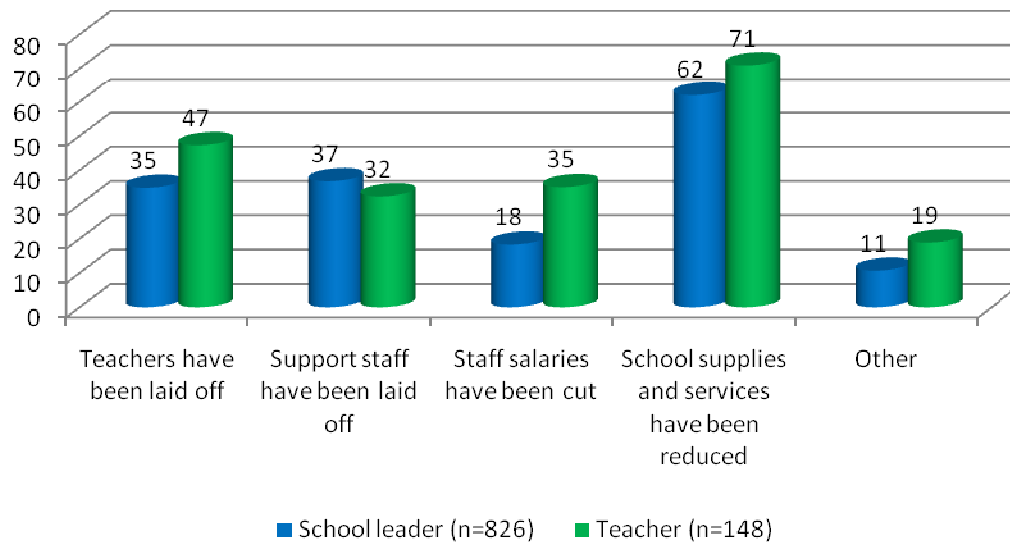


Figure 3 : *Consequences of financial crisis, relative frequencies school leaders and teachers*

Significantly, the reduction of school supplies and services is most frequently mentioned as a consequence. It is significant that more teachers than school leaders reported that teachers have been laid off, staff salaries have been cut and school supplies and services have been reduced. In all, many schools have had to manage with a smaller budget.

In looking at the various countries: Spain, Scotland and the Netherlands recorded more than 90% mentioning a reduction of the school budget since the financial crisis. In Norway the consequences seem to be on a smaller scale.

Reduction of school services and supplies and teachers being laid off are in various countries also most frequently mentioned. In Sweden and Scotland, the laying off of support staff is more often mentioned than the laying off of teachers. A clear distinction in consequences compared to the other countries, is seen in Spain, where 96% of the respondents indicate a lowering of staff salaries. 67% of the respondents in Italy mention a reduction of the school budget and 90% within this group say that staff salaries have been cut.

Table 2: Reduction school budget (relative frequencies) and most frequently mentioned consequence of financial crisis, countries (n=927)

Country	% reduction (% drastic)	Top 2 most frequently mentioned consequences
England (n=82)	70 (17%)	51% services and supplies reduced, 21% support staff have been laid off
France (n=115)	69 (16%)	49% services and supplies reduced, 36% teachers have been laid off
The Netherlands (n=269)	91 (42%)	71% services and supplies reduced, 65% teachers have been laid off
Italy (n=59)	67 (33%)	90% services and supplies reduced, 53% staff salaries have been cut
Norway (n=109)	33 (3%)	30% services and supplies, 17% teachers have been laid off
Scotland (n=118)	92 (51%)	88% services and supplies, 47% support staff have been laid off
Sweden (n=99)	64 (10%)	51% services and supplies reduced, 50% support staff have been laid off
Spain (n=76)	96 (53%)	96% staff salaries have been cut 75% teachers have been laid off

Influence on school policy

Another question was the amount of influence on school policy. In the table below, the mean scores of school leaders and teachers are presented.

Both school leaders and teachers experience a limited influence on the curriculum content. Regarding curriculum delivery this view is much less critical; school leaders are even significantly more positive about the extent of influence on this topic. Furthermore, little influence is experienced concerning the school budget by both respondent groups. On the other hand, a relatively great deal of influence is mentioned regarding the organizational structure and strategic development planning by both school leaders and teachers. Additionally, a sufficient amount is perceived in professional development by the school leaders, but not by the teachers (significant mean difference). On average, both school leaders and teachers take a neutral position about the amount of influence: in general, neither very little influence, nor a great deal of influence is perceived.

Table 3 : Influence, mean scores school leaders and teachers (n=961)

	School leader	Teacher
Curriculum Content	2.8	2.8
Curriculum Delivery *	3.6	3.3
The school budget (Financial)	2.8	2.8
HR Policy (e.g. employment conditions, recruitment, selection)	3.0	3.0
Organizational structure	3.5	3.5
Strategic development planning	3.7	3.5
Professional development *	3.6	3.2
<i>Influence (scale variable)</i>	3.3	3.2

* Significant at 0.05 level

In the figure below, the mean scores of influence on the various items are visible. England has the highest mean score on the overall scale variable of influence (4.0); France (2.6) and Spain (2.8) the lowest.

Respondents from England feel, on average, on all topics an equal (and great deal) amount of influence. Noteworthy, France does not perceive much influence on the curriculum content, neither does Norway. Regarding the school budget, most countries perceive a relatively limited influence. France, Italy, Scotland and Spain experience little influence on HR policy, compared to the other countries. Except for Spain and France, a great deal of influence seems to be perceived on professional development.

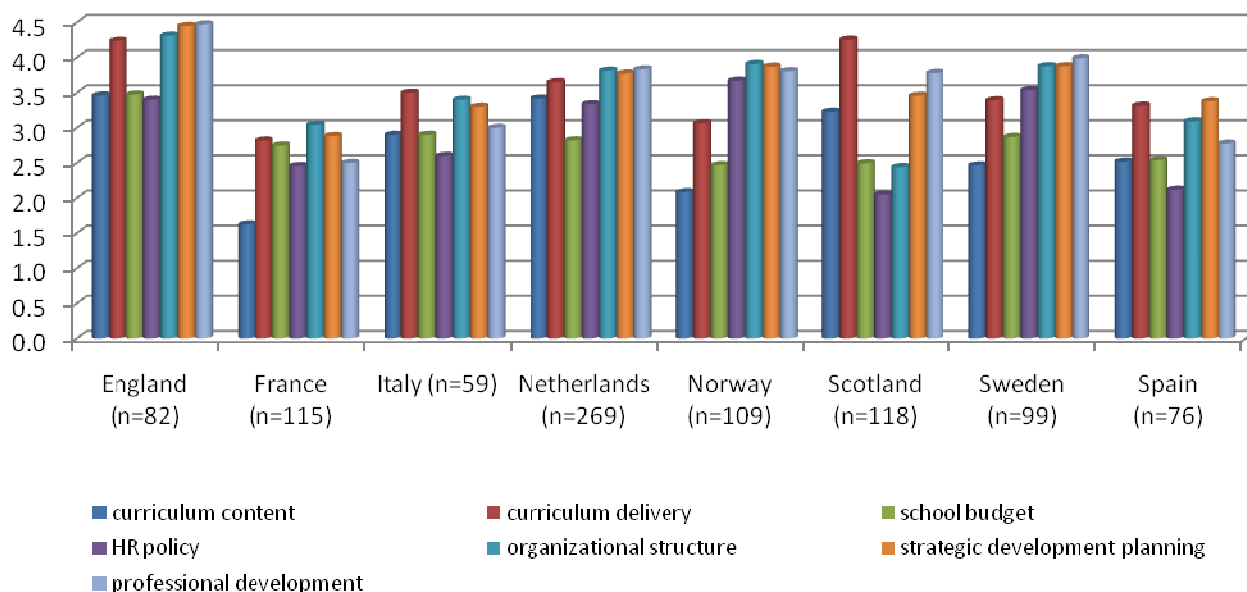


Figure 4 : Influence, mean scores countries (n=912)

Differences per subscale distributed leadership

School structure

There seems to be little agreement about the school structure providing distributed leadership activities. Teachers are much more negative than school leaders are (significant mean differenced). This applies particularly to the opportunities to participate in decision making and the mobilization of informal leadership at multiple levels in the school. Teachers seem to experience a more limited freedom to make decisions.

Table 4 : *School structure, mean scores school leaders and teachers (n=969)*

	School leader	Teacher
Hierarchically decided tasks and responsibilities	3.4	3.3
Formally agreed leadership roles *	4.0	3.8
Decision making by professionals within predetermined boundaries of responsibility and accountability *	4.0	3.6
Formally provided opportunities to participate in decision making by the school structure *	4.0	2.9
Informal leadership at all levels facilitated by the school structure *	3.7	2.9
Regular consultation meeting *	4.3	3.3
By the school supported professional development *	4.2	3.1
<i>School structure (scale variable) *</i>	4.0	3.3

* Significant at 0.05 level

Of all further examined countries, only France and Italy adopt a neutral position; the other countries are positive about the school structure.

Strategic vision

One of the frequently mentioned important factors of distributed leadership in literature is a shared vision in the school. A clear distinction can be noticed between school leaders and teachers: school leaders score on every item very high, whereas teachers scores are more neutral. Although teachers are not negative, it could be questioned whether teachers need more sharing than school leaders presume.

Table 5: *Strategic vision, mean scores (n=973)*

	School leader	Teacher
Shared vision *	4.1	3.2
Common values for all *	4.2	3.2
Staff take ownership *	4.1	3.4
Students take ownership *	3.5	3.1
Learning organisation as one of the school goals *	4.2	3.2
<i>Strategic vision (scale variable) *</i>	4.0	3.2

* Significant at 0.05 level

All countries have a high (3.5+) mean score on this subscale.

Values and beliefs

The same tendency can be seen on values and beliefs. All items differ significantly between school leaders and teachers. Noteworthy here, is the critical opinion of teachers on the acceptance of mistakes. The in literature mentioned ‘can do’ culture, freedom to experiment – which goes hand in hand with making mistakes – is not a dominant cultural feature according to many teachers.

Table 6: Values and beliefs, mean scores (n=973)

	School leader	Teacher
Mistakes as a learning opportunity *	4.0	2.9
Confidence in each other’s abilities *	3.9	3.1
Mutual respect *	4.1	3.2
High standards for professionals *	4.1	3.2
Values and beliefs (scale variable) *	4.0	3.1

* Significant at 0.05 level

France, Italy and Spain have a ‘neutral’ score. The other countries have a higher mean score.

Collaboration and cooperation

The sub scale collaboration and cooperation deals with sharing, helping and giving feedback in order to achieve the collective ambition. Again, school leaders perceive this significantly more positive than teachers. Both teachers and school leaders believe that professionals in the school work collaboratively to deliver school results and to help one another. Time is, especially according to teachers, a critical aspect.

Table 7: Collaboration and cooperation, mean scores (n=972)

	School leader	Teacher
Working collaboratively to deliver school results *	4.1	3.5
Expressing opinions on a regularly basis *	4.2	3.2
Sharing knowledge and experiences with one another *	4.0	3.3
Helping one another to solve problems *	4.1	3.5
Sufficient time to collaborate *	3.4	2.5
Cooperation to achieve the collective ambition *	3.9	3.1
Collaboration and cooperation (scale variable) *	3.9	3.2

* Significant at 0.05 level

Only France, Italy and Spain have a ‘neutral’ score. The other countries have a higher mean score.

Decision making

The sub scale decision making consists of one negatively formulated item. To interpret all items in the same direction (2.9 or less is negative, 3.5 or higher is positive) this item is

recoded (reverse). Overall, school leaders as well as teachers, perceive this scale positively: there are opportunities for professionals in the school to make decisions in their work. However, it does not appear to be common practice, according to teachers, that everyone is involved in the decision making process and both respondent groups believe that eventually most decisions still come from the top. It looks as though decision making is possible but limited to the work itself and professionals regard this as sufficient.

Table 8: Decision making, mean scores (n=969)

	School leader	Teacher
Opportunity to make decisions related to the content of my work *	4.1	3.5
Opportunity to make decisions in how to organise work *	4.4	3.6
Opportunity to make decisions regarding professional development *	4.1	3.3
Opportunity to make decisions on a sufficient range of aspects in work *	4.1	3.5
It's common that everyone is involved with decision making *	3.7	2.5
Decision making from the top * (1)	2.5	2.1
Decision making (scale variable) *	4.2	3.5

* Significant at 0.05 level

(1) for a one-direction interpretation (the higher the mean score, the more positive the meaning), this item is recoded.

All countries have a mean score of 3.5 or higher.

Responsibility and accountability

School leaders as well as teachers are positive about their responsibilities and accountabilities. But the perception of school leaders is significantly more positive. A critical aspect is perceived by the teachers regarding the encouragement: teachers seem to experience relatively little encouragement to express their opinion.

Table 9: Responsibility and accountability, mean scores (n=969)

	School leader	Teacher
Being accountable to superior	4.1	3.9
Kept accountable	4.2	4.0
Felt responsibility	4.6	4.4
Taking responsibility without asking *	4.1	3.3
Sharing collected responsibilities for each other's behaviour *	3.9	3.0
Encouragement to express opinion regardless of formal status *	4.1	2.8
Responsibility and accountability (scale variable) *	4.2	3.5

* Significant at 0.05 level

All countries have a mean score of 3.5 or higher.

Initiative

A significant difference is found between school leaders and teachers: school leaders are, again, more positive about the opportunities and space for the professionals to take the initiative than teachers. But, in all, school leaders are not strongly positive (neutral zone). Teachers, on the other hand, are more critical. A striking difference is the necessity to take the initiative due to a lack of direction. As we have seen earlier in the literature review, guidance and direction is an important task of the school leader. School leaders, on average, do not think there is a lack of direction in their school. Teachers, however, believe that there is (somewhat) lack of direction. This low score within the group of teachers could not be explained by school related features or respondent features in this research. Also, it does not correlate with other sub scales of distributed leadership. So, it cannot be explained by specific dimensions of distributed leadership used in this research.

Table 10: Initiative, mean scores (n=962)

	School leader	Teacher
Initiatives and ideas mainly from the top * (1)	3.1	2.7
Sufficient amount of freedom to contribute own ideas to improve the work *	4.0	3.1
Necessity to take the initiative and responsibility due to a lack of direction and lead * (1)	3.5	2.8
Assignment all tasks based upon the level of expertise *	3.4	2.9

* Significant at 0.05 level

(1) for a one-direction interpretation (the higher the mean score, the more positive the meaning), this item is recoded.

The amount of freedom to contribute their own ideas seems to be the expectation in almost all countries and is reported as relatively high, whereas initiatives from the top have got a low score in several countries. England, France, Italy and Spain score as critical on the amount of initiatives from the top (mean scores ≤ 2.9). Sweden has a high mean score. A striking result is the critical score in the Netherlands regarding the necessity to take the initiative due to a lack of direction (mean score= 2.9).

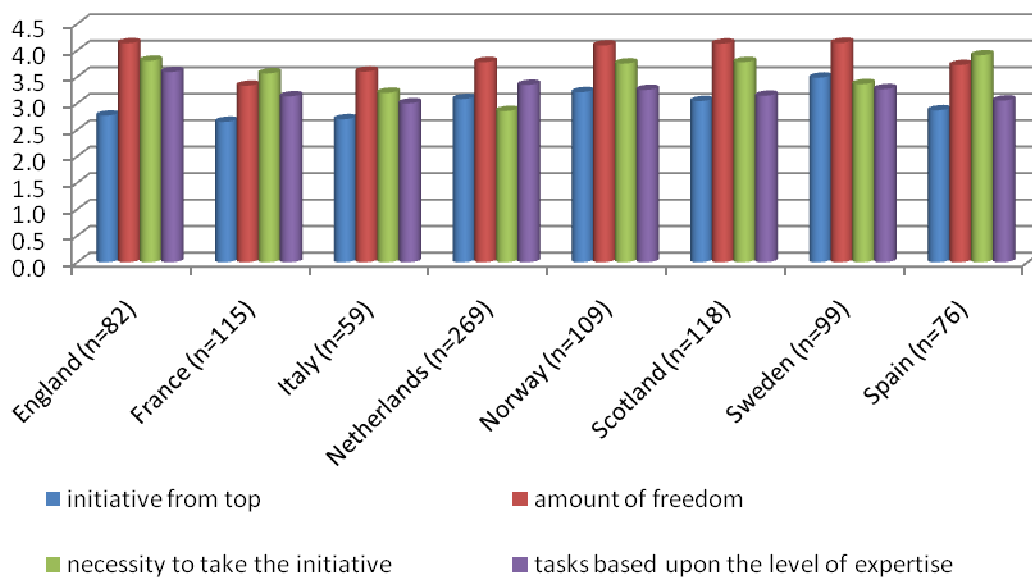


Figure 5: Initiative, mean scores (n=927)

Perception behaviour school leader and teachers

Teachers were asked to give their opinion about the school leader's behaviour. Nine statements were submitted. In general terms, teachers are not very positive and neither very negative. Nevertheless, a few critical aspects should be noticed: the provision of information, incentives to self-reflection, support in decision making and the provision of advice and guidance regarding their own development.

Table 11: Perception school leader's behaviour by teachers, mean scores (n=147)

The school leader at our school....	Teacher
enables me to make meaningful contributions to the school	3.2
encourages me to share my expertise with my colleagues	3.2
welcomes me to take the initiative	3.1
formally acknowledges my teaching abilities	3.1
brings me into contact with information that helps me to create new ideas	2.7
stimulates me to reflect on my work in order to improve	2.9
has high expectations regarding my professional standards	3.4
supports me to make my own decisions in my work	2.9
empowers me by giving advice and guidance on my own development	2.7
Perception behaviour of school leader (scale variable)	3.0

No results of the various countries could be given because of a low number of teachers.

Also, school leaders were asked to give their opinion on the behaviour of the professionals in the school with another set of statements being submitted to them. In the table below,

these statements are presented. The finding that, once more, school leaders are more positive, is noteworthy.

Table 12: Perception professional’s behaviour by school leaders, mean scores (n=820)

The professionals at our school...	School leader
are engaged in and committed to participating in school leadership roles	3.6
actively participate in decision making	3.8
actively show initiative related to school improvement	3.9
demonstrate their responsibilities in their work	4.0
help one another by sharing knowledge	3.9
Perception behaviour of professionals (scale variable)	3.8

Regarding the eight countries all of them score positive, except for France (mean score 3.2). This means that in most countries, according to the school leaders, the professionals show positive behaviour (in terms of expressing distributional behaviour in the school).

Overall scales Distributed Leadership and perception behaviour school leader and teachers

School leaders and teachers appear to differ in their perception on many aspects of distributed leadership. In the figure below, the differences of all (sub)scales and the items related to the initiative are shown. School leaders believe significantly stronger than teachers that the leadership practice is distributive (resp. mean scores 3.9; 3.2) and also perceive a stronger distributive behaviour among their professionals at the school (3.8). Teachers, on the other hand, are moderate when it comes to the behaviour of the school leader (3.0).

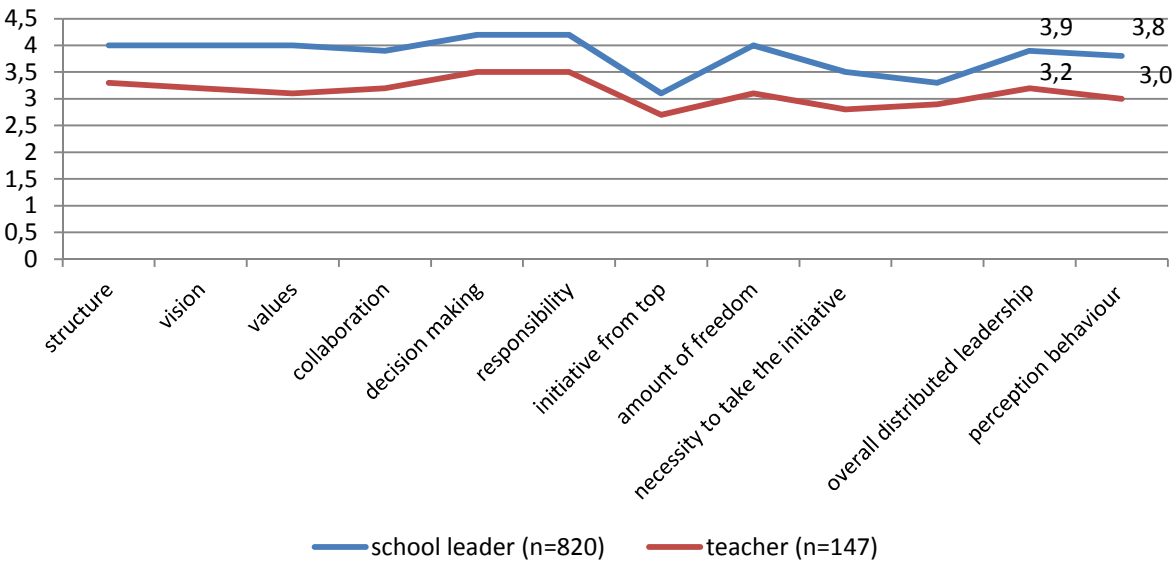


Figure 6: Differences between school leaders and teachers in the perceived distributed leadership practice

In the figure below three subgroups are presented. The calculated mean scores on the distributed leadership scale are clustered in three sections: a ‘negative cluster’ with a low

mean score (2.5), a 'neutral cluster' with a moderate mean score (3.2) and a 'positive cluster' with a high mean score (4.0). More than 80% of the school leaders belongs to the positive cluster and 39% within the group of teachers. The three clusters are more or less equally divided within the group of teachers, as visualized in figure 7: 29% of the teachers belong to the critical group and 33% score neutral. Whereas within the group of school leaders only 3% scores critical and 10% neutral.

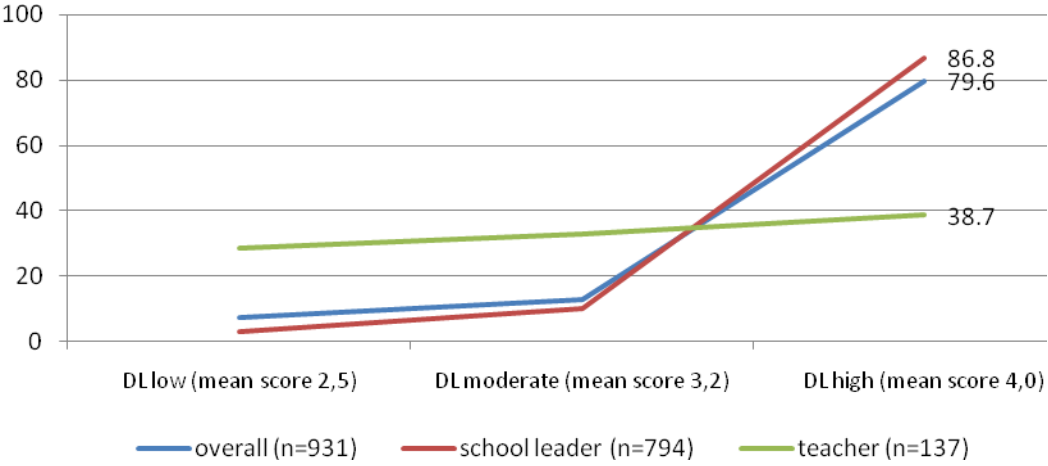


Figure 7: Groups perception Distributed Leadership classified in low, moderate and high mean scores, school leaders and teachers, relative frequencies

Not a single country scores critical on the overall scale. England and Scotland distinguish themselves by their high mean scores (4.0+). Only France and Italy are questioning on the extent of distributed leadership in the schools.

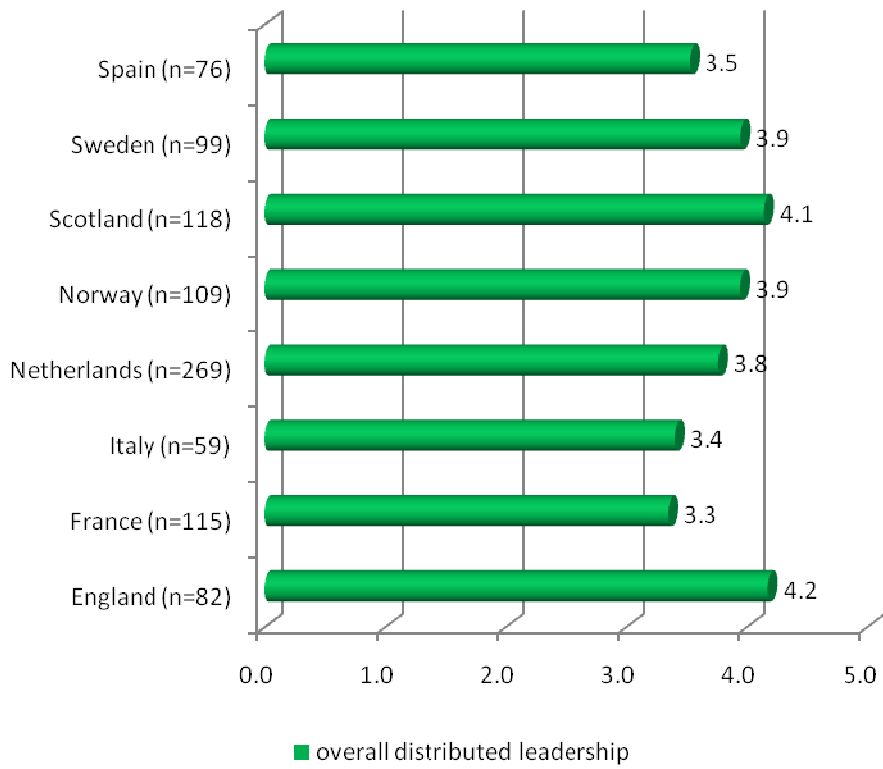


Figure 8: *Distributed Leadership, overall scale, countries, mean scores (n=902)*

4.2 Between subjects comparisons

First, the results of the comparisons based on personal features of the respondents are described. Next, the comparisons based on school related features are presented.

Comparisons based on personal features of the respondent

As we have seen earlier, there is a very strong and significant difference between teachers and school leaders. Position in the school point out to have a significant effect on Distributed Leadership perception ($\sigma=0.000$). Gender interacts with this factor, within the group of school leaders ($\sigma= 0.021$): women school leaders appear to perceive the leadership practice as a little more distributed than men do (figure 9). Gender alone does not make a significant difference.

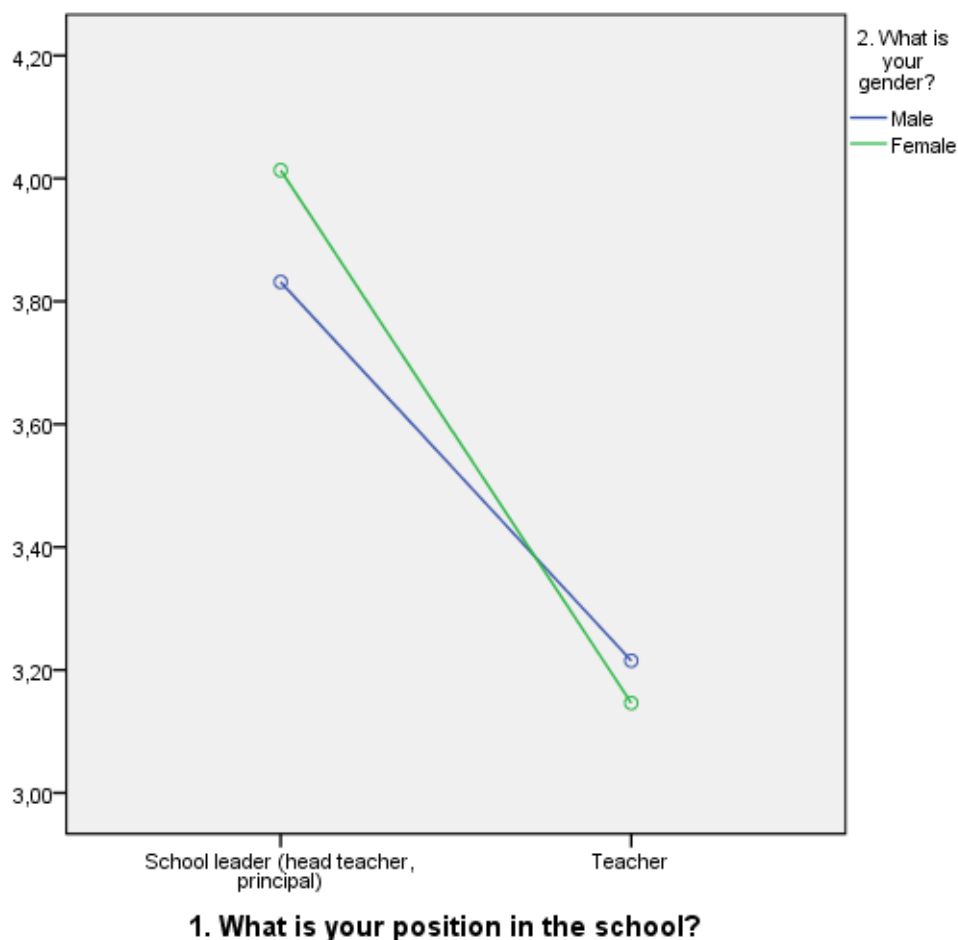


Figure 9: Differences between male and female school leaders and teachers of the perceived distributed leadership practice, mean score (significant at 0.05 level).

There is also a main effect from seniority on the perception of distributed leadership ($\sigma=0.023$). In other words, people who work relatively short in the school (0-2.5 years) are more 'negative' about the extent of distribution of leadership than people who work longer in the school, particularly the professionals who work approximately 10 to 30 years.

Comparisons based on school related features

It is interesting to gain insight in the factors that contribute to the perception of distributed leadership. The results of the analyses of the following school related features will be shown: country groups, educational structures, type of employment, type of education, school size, class room responsibilities of the school leader and costs of education for children. Earlier we have found that some personal features of the respondent are of influence on this perception. When controlled for these influences, what are the effects of some school related features on the perception of the leadership practice?

Geographical parts of Europe

There are significant variations between different parts of Europe in the perception of distributed leadership: the northern part of Europe perceives the leadership practice as more distributed than other parts in Europe, especially compared to the south ($\sigma=0.000$). This also applies to the perception of school leader about the behaviour of their professionals in the school. Concerning teachers' perceived behaviour of their school leader, there are no significant differences found.

In the figure below, the mean scores are shown divided in subgroups of respondents working in different parts of Europe (see appendix 2 for information on the grouping of the countries).

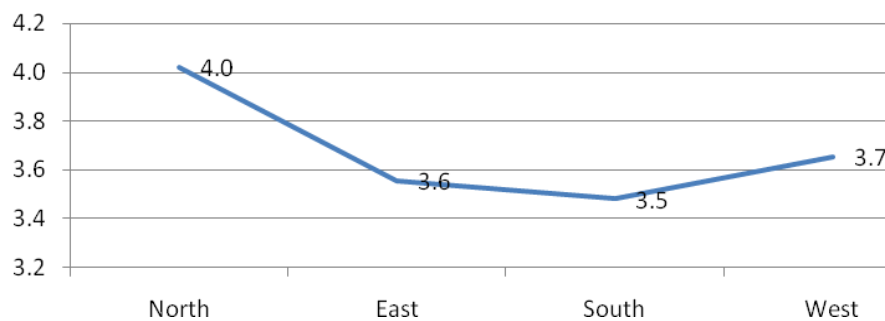


Figure 10: Mean scores distributed leadership by geographical parts of Europe, without covariates (significant at 0.05 level) (n=1050)

Deepening analyses on the Distributed leadership scale

So, the geographical classification of *countries* has a strong effect, but there is also a strong interaction effect with the *educational structure* in these parts of Europe ($\sigma=0.000$). In all types of educational structures (single structure, common core and differentiated structure⁹) the northern part of Europe scores a higher perception of distributed leadership, but in the western regions, schools with a common core structure gave a much lower score on the

⁹ For a definition see section 3.4 Method of Analysis, page 22.

distributed leadership scale than schools with a differentiated structure in that region. Looking at educational structure only (all regional groups together), the mean differences are small (less than 0.2).

Sector

A higher education level (type of education) goes hand in hand with a less perceived extent of distributed leadership ($r=-0.36$). This is shown in the table below.

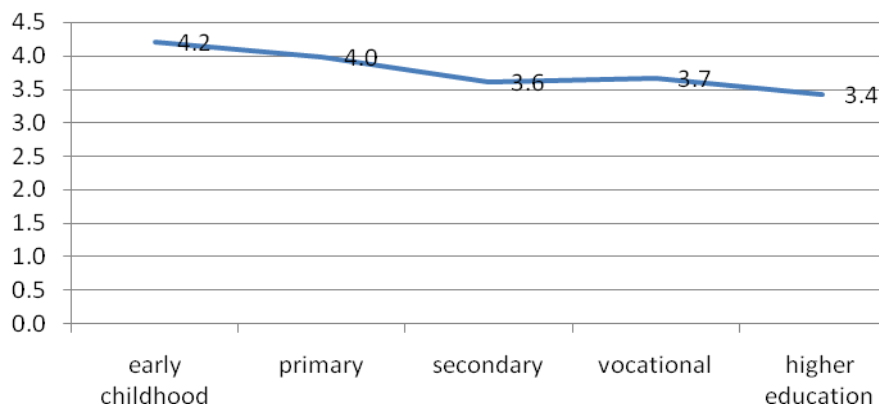


Figure 11: Mean scores distributed leadership by type of education, without covariates (significant at 0.05 level) ($n=978$)

The early childhood and primary schools (4.0-4.2) score higher than secondary or vocational types of schools (3.6-3.7) and higher education (3.4), but in the same way three (relatively small) interaction effects occur which influence this effect: type of education interacts with the educational structure in Europe, the geographical classification of Europe and with the type of employment.

Looking within the secondary sector, schools with a common core structure score significantly lower than schools with other educational structures in this sector (respectively common core: 3.6; single structure: 3.9 and differentiated structure: 4.0; $\sigma=0.000$). We have seen earlier that relatively many common core schools score lower in the west. It is not surprising that a significant lower score arises within the secondary sector in the west of Europe ($\sigma=0.002$).

Another interaction effect was found with type of employment: again, within the secondary sector. Secondary schools with teachers who are employed by the government perceive the leadership practice to be much less distributive than schools where teachers are employed by the school board (respectively by the government 3.5; by the school board 3.9; $\sigma=0.000$). The type of employment and the educational structure relate with each other: schools following a common core structure have significantly more teachers employed by the government.

There was also a small interaction effect with class room responsibilities on perceived distributed leadership: school leaders with class room responsibilities in the early childhood and primary schools score somewhat lower on distributed leadership than school leaders

without this responsibility in this sector. However, the difference is very small, about 0.2 ($\beta = 0.035$).

School size

The larger the school, the lower the score on the distributed leadership scale. Small schools (less than 14 teachers) score on average 4.0 on the distributed leadership scale, whereas larger schools (100 or more teachers) have a mean score of 3.6; this also is the case with small schools in terms of number of children (180 or less children) versus school with 1050 children or more. But the correlation between size and the perception of distributed leadership is (although significant) rather weak and has no significant predictive value. An explanation for this could be the influence of the type of education: in primary schools and in early childhood the organizations are much smaller than in secondary or higher education. The school size covariates with the type of education. When controlled for sector, the main effect of school size disappears.

4.3 Analyses of types of relationships

In this section, two issues will be further analysed. First, the correlations between all subscales will be described. Next, more causal types of relationships will be discussed.

Correlations between subscales and items distributed leadership

In table 13 the correlations between each subscale/ item and the overall scale are shown in the first column. In the second and third column the correlations of the subscales/ items with the perceived behaviour in the school are presented. There are very strong and significant relationships between all factors, except for two items about the initiative. The item about the initiative from the top is significant but has a weak negative relation with the perceived behaviour. This means that to a limited extent more initiatives from the top relates to less distributive behaviour. The same tendency but even weaker can be mentioned about the lack of direction and lead.

Table 13: Correlations between (sub) scales and items of distributed leadership

Subscale/ item	Scale Distributed Leadership	Perception by teachers	Perception by school leader
Subscales			
(Overall) Scale Distributed leadership	1	0.76**	0.78**
School structure	0.85**	0.63**	0.57**
Vision	0.86**	0.56**	0.68**
Values and beliefs	0.87**	0.63**	0.72**
Collaboration	0.88**	0.68**	0.74**
Decision making	0.68**	0.45**	0.44**
Responsibility	0.82**	0.58**	0.58**
Items Initiative			
Initiatives and ideas mainly come from the leaders at the top	-0.30**	-0.17*	-0.25**
There is sufficient amount of freedom to contribute your own ideas to improve the work	0.66**	0.62**	0.43**
Professionals have to take the initiative and responsibility due to a lack of direction and lead	-0.25**	-0.08	-0.03
All tasks are assigned to the professionals based upon the level of expertise	0.41**	0.55**	0.28**

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Looking at the relationships between the different factors, nearly all subscales and items relate significantly with the perception by the teachers as well as the school leaders.

The perception by teachers of the school leader's behaviour has a very strong significant relationship with the perceived distributed leadership practice in the school ($r=0.76$). Within the group of teachers at subscale-level the strongest relationships are found with the 'school structure' ($r=0.63$) and 'collaboration' ($r=0.68$). Concerning the perception by the school leaders we can see that there is also a very strong relationship ($r=0.78$). Within this group the strongest relationships are present with 'values', 'collaboration' and 'vision'. So, in both groups 'collaboration' is the most related sub scale, for the school leaders more 'soft' factors relate strongly to the perceived behaviour of professionals by the school leader, whereas for the teachers a more 'hard' factor seems to relate the strongest with their perception of the behaviour.

The predictive value of the financial crisis and the amount of policy influence

To determine whether the consequences of the financial crisis and the perceived influence on school policy are possible predictors of the extent of distributed leadership, a regression analysis was executed. In the analyses it became clear that respondent's features as position and gender influenced the outcomes. Also concerning the school related features effects were found. To investigate if financial crisis and influence by itself predict the leadership extent, a hierarchical regression analysis was chosen with three blocks.

The perceived influence does have a significant (predictive) contribution. However, the consequences of the crisis were not significant. The explained variance in the regression model is about 46% (adjusted $R^2= 0.458$). In table 14 the separate contributions of each factor is presented.

A moderate strong relationship was found between influence and distributed leadership ($r=0.38$). Adding all the other factors the predictive value of influence decreases ($\beta=0.22$). But the contribution of influence remains significant. The more influence professionals (especially school leaders) have, the more leadership seems to be distributive. Besides influence, early childhood and primary schools contribute, too. Personal features that influence the outcome in terms of a higher distributed leadership are the position of the school leader and within this subgroup are females. When selecting only the eight countries, the overall view stays the same, although the beta-weights are a bit higher (with an adjusted $R^2= 0.494$).

Table 14: Standardized Beta weights hierarchical regression analysis factors (independent variables) with distributed leadership scale (dependent variable) (n=686)

Factors	Std. β
Block 1	
Position (1=school leader)	0.438 **
Gender (1=male)	-0.087 **
Seniority	0.045
Block 2	
Number of teachers	0.091
Number of children/ students	-0.105
Secondary education (=1,0)	-0.084
Early childhood and primary schools (=1,0)	0.161 **
Type of Employment (1,0= by the government)	-0.072 *
Block 3	
Budget Financial crisis	-0.166
Extent of influence school policies	0.222 **
Interaction variable Financial crisis/ extent of influence	0.238

* significant at 0.05 level

** significant at 0.01 level

5 Conclusions and limitations of the study

In this chapter the four research questions will be answered. These answers cannot be interpreted as hard facts. A survey measures a perception. Also, there have been some limitations in this study. In § 5.2 these limitations will be discussed. However, the findings of the survey give some relevant indications about the presence of distributed leadership in schools and reveal a striking variety of perceptions.

5.1 Conclusions

1. To what extent is leadership distributed in the schools?

The leadership practice in schools can be regarded as distributive in more than 75% of the cases. Around 8% score low on distributed leadership and 13% of the respondents have a moderate mean score. There are big differences between school leaders and teachers.

Among teachers the number of critical, neutral and positive respondents regarding the perception of distributed leadership are almost equally divided over the total group of teachers. Within the group of school leaders 87% perceive the leadership practice as distributive (only 3% do not).

Looking at all dimensions of distributed leadership in this research, the teachers score significantly more negative than school leaders on several aspects.

Critical factors according to the teachers concentrate upon the following aspects:

- formally provided opportunities to participate in decision making;
- by the school structure facilitating informal leadership at all levels;
- the acceptance of mistakes; mistakes being seen as learning opportunities;
- time to collaborate;
- involving everyone in decision making;
- encouragement to express opinions;
- initiative from the top;
- direction and lead from the top;
- tasks based upon expertise;
- behavioural aspects of the school leader: bringing professionals into contact with information to help create new ideas, stimulating to reflect, supporting decision making and empowering by giving advice and guidance.

Teachers are relatively positive on the following aspects:

- there are formally agreed leadership roles;
- decision making is possible within predetermined boundaries;
- professionals work collaboratively together to deliver results;

- professionals help one another to solve problems;
- a sufficient amount of freedom is felt in decision making; this freedom is mainly focused on the content and organization of their work;
- professionals are, feel and are kept accountable.

School leaders on the other hand are highly positive on every dimension of distributed leadership, except for initiative. One critical aspect can be mentioned within the group of school leaders: decisions eventually are mainly made from the top.

Very high scores (mean scores ≥ 4.0) given by the school leaders on dimensions of distributed leadership are: school structure, vision, values and beliefs, decision making and responsibilities and accountabilities. School leaders are also very positive of the behaviour of the professionals.

Specific behaviour of the school leader – perceived by the teachers – relates positively to the dimensions of distributed leadership. Within the group of teachers, especially school structure and collaboration in the school have a very strong relationship with the school leader's behaviour. Within the group of school leaders, besides collaboration, values and vision also have a strong relationship with the perception of the professional's behaviour in the schools.

In all, there seems to be a reasonable extent of distributive leadership. Yet for many schools this leadership is still categorised into predetermined boundaries and not involving and mobilizing everyone. Formal structures seem to be more dominant than fluid structures. Furthermore, leadership activities seems to be retained or restricted to the professional's own specific work. The formal leader appears to make the ultimate decisions on school related issues. Professionals could be given more guidance and direction instead, to empower them. Related to the literature, many school leaders still incline to control and impose restrictions to the amount of involvement. In line with the continuum developed by the Hay Group it looks as though distributed leadership is focused on 'consult' and 'delegate'. In terms of reciprocal responsibilities, as Elmore described, teachers can be facilitated and encouraged much more to create new ideas, to take the initiative and to make decisions. This requires a further development of the school as a learning organization and manifesting trust in the expertise of professionals to undertake their leadership role.

There are differences between the eight further examined countries. England, Scotland, Norway and Sweden score on average higher on distributed leadership than other countries, especially compared to France, Italy and Spain. This result is in line with the study of NCSL, conducted in 2004. Concerning the Netherlands the mean score lies between the highest and the lowest score. Initiative is a critical topic, particularly in England, France, Italy and Spain; Sweden, on the other hand, has a relatively high score.

2. *What are the variations in the perceived extent of distributed leadership between subgroups of respondents based upon personal features?*

The differences in perception depend highly on the position in the school: in other words, position alone has an effect on the perception (main effect). Other features of the respondent could explain these differences as well. In this research gender and seniority were analyzed. Gender interacts with the position in the school: female leaders perceive the leadership practice as more distributive than male leaders. Additionally, seniority seems to have an influence on the perception of all groups independently of position or gender: people who work approximately a few months to 2,5 years in the school are significantly more critical than people who work longer in the organization, especially compared with those professionals with a seniority of 10 to 30 years. However, this main effect is not nearly as strong as the overall position in the school.

The effect of position raises questions about the leadership in practice. Our expectation was that there is a difference, because of the differences in respective tasks. On the other hand, we can then ask ourselves how true is leadership distributed when it is mainly perceived as distributive by school leaders? Doesn't distribution itself imply that everyone experiences this type of leadership because it involves all professionals in the school? A survey with a larger number of teachers is recommended to confirm and further investigate the rationale of these differences. Also in depth interviews could give more insight into the various perceptions.

3. *What are the variations in the perceived extent of distributed leadership between subgroups based upon school related features?*

To answer this question seven grouping variables were tested: type of employment, educational structure, school size, type of education, geographical clusters of countries in Europe, whether the school leader has class room responsibilities and whether the education is free for children or not.

In conclusion we found that a small group of factors causes a significant effect with several small interaction effects. In conclusion:

Schools.....

- in early childhood and the primary sector (especially the latter),
- in the northern part of Europe (dominated by England, Scotland, Sweden, Norway)

perceive a more distributive leadership practice than schools.....

- in the secondary sector (moderated by a common core structure and employment of teachers by the government),
- in the south-west of Europe (moderated by a common core structure).

The impression existed that school size also affects the extent of distributed leadership, but this factor correlates highly with the educational sector. After controlling for this, the effect of school size disappears. Furthermore, there are no significant main or interaction effects found on distributed leadership whether education is free or not.

4. *How do the external factors relate to the perceived extent of distributed leadership?*

Answering this question implies a statement of causality. Yet, we cannot ascertain that relations found in this research are *causal or predictive*; by statistically testing the relations we can give *indications* for it. For empirical evidence of causal relations longitudinal research is necessary. Hypotheses can be formulated to test in longitudinal research. The aim was to figure out whether the financial crisis and the amount of influence on school policy influence the leadership practice.

About 75% of the respondents give notice of a slight or drastic reduction of the school budget since the financial crisis. Approximately one third mention a drastic reduction. Spain, the Netherlands and Scotland experience the most drastic reduction. Reduction of school budget is reflected in multiple aspects. The far most frequently mentioned aspect is the reduction of school supplies and services. The consequences of the financial crisis, however, do not significantly 'predict' the extent of distributed leadership, nor does this factor interact with the felt influence on school policy.

Regarding the influence on school policy, school leaders experience a relatively great deal of influence on the curriculum delivery, the organizational structure, strategic development planning and the professional development. Little influence is perceived on the curriculum content and the school budget. Comparing the countries, England perceives relatively much more influence on the policy topics than France and Spain do. As Elmore (2004) described, schools need to have sufficient autonomy to establish a distributive leadership practice. A moderate strong relationship is found between influence and distributed leadership. But, adding all school related features, the height of the predictive value decreases, though still significant. Influence seems, to a limited extent, to 'predict' the distributive leadership practice.

5.2 Limitations

Several limitations should be taken note of regarding the interpretation and importance of the findings in this research.

The survey took place in a period of summer holidays for many schools. This factor reduced the potential (and desired) response rate. Although more than a thousand respondents is relatively high taking this unfortunate period into account, this response rate forced to cluster the respondents on several variables into subgroups in order to gain a sufficient

number of respondents on each value and to execute analyses for reliable statements. This meant a loss of information on a more detailed level.

So maintaining all the original variables was not an option, since analyzing multiple factors together would lead to a decrease of the number of respondents for each value. For instance, countries were grouped, realizing that there are most likely relevant differences between these countries. In short, is it possible to generalize the findings of this research to all European countries? No, it is not. To give some insight in the presence of distributed leadership in countries, a limited number of countries are further examined, provided there was a response rate of 50 or higher.

Despite the necessary merging of countries a step forward is made, which needs to be confirmed or adjusted in follow up research. With the greatest of care, choices are made to confine the extent of loss of information and still have sufficient number of respondents in each subgroup.

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Websites

European School Heads Association <http://www.esha.org/>

European Trade Union Committee for Education http://etuce.homestead.com/ETUCE_en.html

European Policy Network on School Leadership <http://www.schoolleadership.eu/>

Appendix

1- Measurement Instrument Distributed Leadership [English version]

Variable label	Values																																																			
Choose your language	English German French Spanish Italian Russian																																																			
What is your (formal) function?	School leader Teacher Other.....																																																			
What is your gender?	Male Female																																																			
In what type of education do you work?	Early Childhood Education Primary Secondary (lower or upper secondary) Vocational Higher education Other.....																																																			
In what country or federal state do you work?	<table border="1"> <tr> <td>Albania</td> <td>France Georgia</td> <td>Norway</td> </tr> <tr> <td>Armenia</td> <td>Germany, in which</td> <td>Poland</td> </tr> <tr> <td>Austria</td> <td>federal state?</td> <td>Portugal</td> </tr> <tr> <td>Azerbaijan</td> <td>Greece</td> <td>Romania</td> </tr> <tr> <td>Belarus</td> <td>Hungary</td> <td>Russia</td> </tr> <tr> <td>Belgium</td> <td>Iceland</td> <td>Scotland</td> </tr> <tr> <td>Bosnia</td> <td>Ireland (not UK)</td> <td>Serbia</td> </tr> <tr> <td>Herzegovina</td> <td>Italy</td> <td>Slovakia</td> </tr> <tr> <td>Bulgaria</td> <td>Latvia</td> <td>Slovenia</td> </tr> <tr> <td>Croatia</td> <td>Lithuania</td> <td>Sweden</td> </tr> <tr> <td>Cyprus</td> <td>Luxembourg</td> <td>Spain</td> </tr> <tr> <td>Czech</td> <td>Macedonia</td> <td>Switzerland</td> </tr> <tr> <td>Republic</td> <td>Malta</td> <td>Turkey</td> </tr> <tr> <td>Denmark</td> <td>Moldova</td> <td>Ukraine</td> </tr> <tr> <td>England</td> <td>Montenegro</td> <td>Other, in</td> </tr> <tr> <td>Estonia</td> <td>Netherlands</td> <td>which</td> </tr> <tr> <td>Finland</td> <td>Northern Ireland</td> <td>country?</td> </tr> </table>	Albania	France Georgia	Norway	Armenia	Germany, in which	Poland	Austria	federal state?	Portugal	Azerbaijan	Greece	Romania	Belarus	Hungary	Russia	Belgium	Iceland	Scotland	Bosnia	Ireland (not UK)	Serbia	Herzegovina	Italy	Slovakia	Bulgaria	Latvia	Slovenia	Croatia	Lithuania	Sweden	Cyprus	Luxembourg	Spain	Czech	Macedonia	Switzerland	Republic	Malta	Turkey	Denmark	Moldova	Ukraine	England	Montenegro	Other, in	Estonia	Netherlands	which	Finland	Northern Ireland	country?
Albania	France Georgia	Norway																																																		
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England	Montenegro	Other, in																																																		
Estonia	Netherlands	which																																																		
Finland	Northern Ireland	country?																																																		
How many teachers are there in your school?																																																			
How many children/ students go to the school?																																																			
Does the school leader have class room responsibilities?	Yes- No																																																			
How long do you work at this school?years/months																																																			

Variable label	Values
Is education free in your school?	Yes, for all children Yes, for most of the children Yes, for some children No N/A
Since the advent of the financial crisis in 2008, the school budget has.....	been drastically reduced been slightly reduced remained the same increased N/A
If the school budget has been cut, which of the following have been affected? Choose up to three	Teachers have been laid off Support staff have been laid off Staff salaries have been cut School supplies and services have been reduced Other N/A
To what extent does your school organization have influence on the following aspects? a. Curriculum content b. Curriculum delivery c. The school budget (financial) d. HR policy e. Organizational structure f. Strategic development planning g. Professional development h. Other	No influence Little influence Reasonable influence A great deal of influence Full influence N/A
How are teachers employed?	By the government By the school board Other
School structure To what extent do you agree with the following statements about your school? a. Tasks and responsibilities are hierarchically decided by the professionals in our school b. At our school there are formally agreed leadership roles c. Professionals make decisions within predetermined boundaries of responsibility and accountability d. The school structure formally provides everyone with opportunities to participate in decision making e. The formal structure in our organization facilitates informal leadership at all levels in the organization f. At our school we have regular consultation meetings g. The school supports professional development/opportunity	Strongly disagree Disagree Neutral Agree Strongly agree N/A

Variable label	Values
<p>Vision To what extent do you agree with the following statements about your school?</p> <ul style="list-style-type: none"> a. At our school we have a shared Vision b. At our school we have common values for all c. Staff take ownership of their own tasks and activities d. Students take ownership of their own tasks and activities e. Strategic development as a learning organisation is one of our school goals 	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>Values and beliefs To what extent do you agree with the following statements about your school?</p> <ul style="list-style-type: none"> a. Mistakes are seen as a learning opportunity b. Colleagues have confidence in each other's abilities c. There is mutual respect among the professionals in our school d. At our school we set high standards for professionals 	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>Collaboration and cooperation To what extent do you agree with the following statements about your school?</p> <ul style="list-style-type: none"> a. We work collaboratively to deliver school results b. We express our opinions on a regularly basis c. We share our knowledge and experiences with one another d. We help one another to solve problems e. We are provided sufficient time to collaborate with our colleagues on work related issues f. In our organization we cooperate with each other to achieve the collective ambition 	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>Decision making To what extent do you agree with the following statements about your school?</p> <ul style="list-style-type: none"> a. I can make my own decisions related to the content of my work b. I can make my own decisions in how to organise my work c. I can make my own decisions regarding my professional development d. I can make my own decisions on a sufficient range of aspects in my work e. In our organisation it's common that everyone is involved with decision making f. Although the professionals in our organization have the opportunity for input, the decisions are still made from the leaders at the top 	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>

Variable label	Values
<p>Responsibility and accountability To what extent do you agree with the following statements about your school?</p> <p>a. I am accountable to my superior for my performance b. I am kept accountable c. I feel responsible for my performance c. I feel responsible for my performance d. We can take responsibility without asking e. We share collected responsibilities for each other's behaviour f. All staff are encouraged to express their opinion regardless of their formal status)</p>	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>Initiatives To what extent do you agree with the following statements about your school?</p> <p>a. Initiatives and ideas mainly come from the leaders at the top b. There is sufficient amount of freedom to contribute your own ideas to improve the work c Professionals have to take the initiative and responsibility due to a lack of direction and lead d. All tasks are assigned to the professionals based upon the level of expertise</p>	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>The school leader at our school.....</p> <p>a. enables me to make meaningful contributions to the school b. encourages me to share my expertise with my colleagues c. welcomes me to take the initiative d. formally acknowledges my teaching abilities e. brings me into contact with information that helps me to create new ideas f. stimulates me to reflect on my work in order to improve g. has high expectations regarding my professional standards h. supports me to make my own decisions in my work i. empowers me by giving advice and guidance on my own development</p>	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>
<p>The professionals at our school.....</p> <p>a. are engaged in and committed to participating in school leadership roles b. actively participate in decision making c. actively show initiative related to school improvement d. demonstrate their responsibilities in their work e. help one another by sharing knowledge</p>	<p>Strongly disagree Disagree Neutral Agree Strongly agree N/A</p>

2- Recoded variables

Seniority	Labels based on normal distribution	Labels ranked in quartiles
1	± 0 -2,5 years	± 0 - 4 years
2	± 2,5-10 years	± 4 - 10 years
3	± 10-30 years	± 10 - 23 years
4	± 30-58 years	± 23 - 58 years

Type of education	Labels
1	Early Childhood and Education & Primary education
2	Secondary (lower or upper secondary)
3	Vocational & Higher education

School size: number of teachers	Labels based on normal distribution	Labels ranked in quartiles
1	1-14	0 -19
2	15-37	20-37
3	38-99	38-70
4	100-2000	71-5.000

School size: number of children	Labels based on normal curve	Labels ranked in quartiles
1	1-180	0 t/m 232
2	181-437	235 t/m 437
3	438-1050	440 t/m 756
4	1051-30000	760 t/m 62.000

Countries	Educational Structure	Geographical
Albania	East	Unknown
Armenia	East	Common core
Austria	West	Differentiated
Azerbaijan	East	Common core
Belarous	East	Common core
Belgium	West	Common core
Bosnia Herzegovina	East	Unknown
Bulgaria	East	Single structure
Croatia	East	Single structure
Cyprus	East	Common core
Czech Republic	East	Single structure
Denmark	North	Single structure
England	North	Common core
Estonia	North	Single structure
Finland	North	Single structure
France	West	Common core
Georgia	East	Common core
Germany	West	Differentiated
Greece	East	Common core
Hungary	East	Single structure
Iceland	North	Single structure
Ireland (not UK)	North	Common core
Italy	South	Common core
Latvia	North	Single structure
Lithuania	North	Differentiated
Luxembourg	West	Common core
Macedonia	East	Unknown
Malta	East	Common core
Moldova	East	Unknown
Montenegro	East	Unknown
Netherlands	West	Differentiated
Northern Ireland	North	Common core
Norway	North	Single structure
Poland	East	Common core
Portugal	South	Common core
Romania	East	Common core
Russia	East	Unknown
Scotland	North	Common core
Serbia	East	Single structure
Slovakia	East	Single structure
Slovenia	East	Single structure
Sweden	North	Single structure
Spain	South	Common core
Switzerland	West	Differentiated
Turkey	East	Common core
Ukraine	East	Unknown
Other	-	-