TALIS
School Leadership for Learning
INSIGHTS FROM TALIS 2013

TEACHING AND LEARNING INTERNATIONAL SURVEY

OECD

TALIS

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Foreword

It is easy to know effective school leadership when you see it in action, but it is much harder to describe, define and measure it. To make a difference in school and student performance, school leaders need to be able to adapt teaching programmes to local needs, promote teamwork among teachers, and engage in teacher monitoring, evaluation and professional development. They need discretion in setting strategic direction, and the ability to develop school plans and monitor progress towards goals, using data to improve practice. They also need to have a say in who gets hired as teachers to improve the match between candidates and their school's needs. Last, but not least, they need to help build and participate in networks of schools to stimulate and spread innovation.

School Leadership for Learning: Insights from TALIS 2013 looks at different approaches to school leadership and the impact of school leadership on professional learning communities and on the learning environment in individual schools. Based on data from the OECD Teaching and Learning International Survey (TALIS), the volume notes that about one in three principals does not actively encourage collaboration among the teaching staff in his or her school. Additionally, about the same proportion of principals reported that they do not actively ensure that teachers take responsibility for improving their teaching skills or take responsibility for their students' learning.

Clearly, there is room for improvement; and both policy and practice can help achieve it. This report shows that a stronger focus on distributed leadership is associated with a greater sense of purpose within a school. And when principals take action to support co-operation among teachers to develop new teaching practices, teachers tend to be more inclined to collaborate. In fact, the evidence presented in the report shows that in schools where instructional leadership is more common, teachers tend to collaborate more.

This report takes us a step closer to defining effective school leadership – which, in turn, takes us that much closer to being able to create policies that help to establish effective school leadership across entire education systems. And that is a step in the right direction for our children and their teachers.

Andreas Schleicher

Andreas Schleicher
Director for Education and Skills

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The OECD Teaching and Learning International Survey (TALIS) 2013 is the outcome of collaboration among the TALIS participating countries and economies, the OECD Secretariat, the European Commission and an international consortium led by the International Association for the Evaluation of Educational Achievement (IEA).

This report was prepared by Ralf Maslowski, Lyset Rekers-Mombarg, Roel Bosker and Marij Veldman from the Groningen Institute for Educational Research (GION) of the University of Groningen. The report was completed under the oversight of the TALIS Team: Pablo Fraser, Katarzyna Kubacka, Karine Tremblay and Noémie Le Donné, with the help of Yuri Belfali, Montserrat Gomendio and Andreas Schleicher. The report was edited by John Pierce. Additional assistance was provided by Conny Lenderink from GION. Communications assistance was provided by Rachel Linden and Cassandra Davis. Administrative and editorial assistance was provided by Emily Groves. The report benefited from the review and comments on earlier drafts by members of the TALIS Governing Board.

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Executive summary

Instructional and distributed leadership are regarded as important for creating and sustaining professional learning communities and for creating a climate conducive to student learning. Instructional leadership comprises leadership practices that involve the planning, evaluation, co-ordination and improvement of teaching and learning. Distributed leadership in schools is not only a reflection of leadership being shown by the principal, but also of others acting as leaders in school.

Four types of leaders and leadership are identified in this study, based on their instructional and distributed leadership, as well as their involvement in educational activities with their school. The first type – "integrated leadership" – refers to principals who are attentive to both instructional and distributed leadership in their schools and spend considerable time on curriculum and teaching-related tasks in their school. "Inclusive leaders" engage staff, students and their parents or guardians in the decisions at school, but relatively less often take up a role as instructional leaders and spend less time on curriculum and teaching-related tasks in school. "Educational leaders" are strongly engaged in instructional leadership, but much less in involving stakeholders in the decisions at school. "Administrative leadership" refers to principals who spend a large portion of their time on school management and administrative issues and are, as a result, less engaged in distributed and instructional leadership activities than integrated leaders.

Further on, this study examines how these leadership types relate to the establishment of professional learning communities and a learning climate in schools. At the core of the emphasis on professional learning communities is the idea that knowledge is situated in the day-to-day experiences of teachers and is best understood through critical reflection with others who share the same experience. Moreover, teachers who actively engage in professional learning communities will be able to increase their professional knowledge, which might lead to the enhancement of student learning. In this study, professional learning communities are characterised by a reflective dialogue among staff, deprivatisation of practice, a collective focus on student learning, collaboration and a shared sense of purpose. "Learning climate" refers to the establishment of an orderly climate for learning and positive teacher-student relationships within the school.

The findings in this report are based on the data of the OECD Teaching and Learning International Survey (TALIS) 2013. The results, unless stated otherwise, relate to principals and teachers in lower secondary education.

KEY FINDINGS

Based on what principals reported, in most countries and economies, principals are actively engaged in instructional leadership actions, such as supporting co-operation among teachers to develop new teaching practices and ensuring that teachers take responsibility for the learning outcomes of their students and for improving their own teaching skills. Despite this widespread engagement in instructional leadership practices across systems, about one-third of all principals do not actively support these actions and further stimulation of leadership for learning is needed.

Instructional leadership is more common in schools with teacher collaboration. This suggests that when principals take action to support co-operation among teachers to develop new teaching practices, teachers may be more inclined to collaborate.

Instructional leadership seems to be a strong predictor of the establishment of reflective dialogues between teachers at all educational levels. This means that, in schools in which principals are more engaged in instructional leadership, teachers more often perceive a positive change in their instruction as a result of feedback on their classroom management practices, their teaching practices and their use of student assessments to improve learning.

Principals who participated in training or a course in instructional leadership were more engaged in instructional leadership actions in their school. This suggests that instructional leadership in schools can be fostered by including instructional leadership training in leadership preparation programmes, or by encouraging principals to take courses in which these skills are developed.

Across countries and economies, nearly all schools involve their staff in the decision-making process at school. Schools and systems differ, however, with regard to opportunities offered to students and their parents or guardians to be involved in school decisions.

A stronger focus on distributed leadership is related to a greater sense of purpose within a school, at all educational levels. This finding suggests that involving students and their parents or guardians, in addition to the staff of the school, creates a culture of shared responsibility for school issues, which is characterised by mutual support among all stakeholders. Teachers are more often involved in reflective dialogue and collaborative activities in lower secondary schools in which distributed leadership is more common.

Positive teacher-student relationships are more common in schools with distributed leadership in all educational levels. Schools creating opportunities for students and their parents or guardians to participate in school decisions means teachers are interested in what students have to say and are likely to be concerned with students' well being. Thus, distributed leadership may result in a greater sense of belonging among students and parents, as well as common responsibility for the functioning of the school among all key stakeholders.

Schools with principals showing integrated leadership, i.e. balancing elements of both distributed and instructional leadership, are more often associated with characteristics of professional learning communities – such as teachers engaging in reflective dialogue and collaboration – than schools with inclusive leaders. Similarly, schools with integrated leaders are linked, more often than schools with educational leaders, to a shared sense of purpose among their staff and a collective focus on student learning.

Principals have only limited, and mostly indirect, influence on establishing a learning climate in their school. Learning climates are strongly dependent on teacher competencies and features of the school context and student population.

Specific types of school leadership are more prominent in certain countries and economies than others, which might indicate that leadership practices are idiosyncratic to each national context. Depending on the type of leadership, around 40-60% of principals' practices might be explained by system differences, which could indicate that principals' actions are particularly susceptible to the influence of national contexts, such as the legal framework in which a principal works, or a principal's working status.

POLICY IMPLICATIONS

Schools in lower secondary education function only partially as professional learning communities. There is still some potential to improve reflective practice, deprivatisation of practice, a collective focus on student learning, teacher collaboration and a shared sense of purpose in lower secondary schools. **Educational policy can point to the importance of these features in secondary education, thus creating necessary prerequisites for change.**

Integrated leadership, combining instructional and distributed leadership and using student outcomes to develop the school's goals, programme and professional development plan, appears to be the most favourable approach to establishing such a learning community at schools. **Countries and economies may adopt this view of leadership for their schools and can stimulate this through training programmes for principals and by encouraging principals to keep up to date with developments in their field through in-service training, attendance of leadership courses or other professional development activities.**

Professional learning communities may have less added value in systems with a highly qualified teacher force. In these countries and economies, professional learning communities may, nevertheless, safeguard continuous improvement better than relying only on teachers' individual competencies. At the same time, professional learning communities are based on the premise that teachers can learn from each other. This might be problematic in some schools with several or many less-competent teachers. **School leaders, school boards and governmental agencies, as well as providers of teacher training programmes and courses, have a role in shaping and sustaining teachers' professional development.**

Teacher and classroom factors, rather than the role of educational leaders, play a more important role in developing a learning climate in class. This is especially important in public-sector schools in larger cities, where there is likely to be a larger number of disadvantaged students. **In dealing with students from disadvantaged families and students with special educational needs, teachers might benefit from reflection on their practice by consulting colleagues in the school and by classroom observation of their colleagues to address these students effectively.**

Reader's guide

Statistics and analysis

This report presents statistics and analysis derived from the survey responses of principals in primary, lower secondary and upper secondary education levels (levels 1, 2 and 3 of the International Standard Classification of Education [ISCED 97]) and the teachers of their schools.

Classification of levels of education

The classification of the levels of education is based on the revised International Standard Classification of Education (ISCED 97). ISCED is an instrument for compiling statistics on education internationally and identifies six levels of education:

- Pre-primary education (ISCED level 0)
- Primary education (ISCED level 1)
- Lower secondary education (ISCED level 2)
- Upper secondary education (ISCED level 3)
- Post-secondary non-tertiary education (ISCED level 4)
- Tertiary-type A education (ISCED level 5A)
- Tertiary-type B education (ISCED level 5B)
- Advanced research qualifications (ISCED level 6)

While ISCED 2011 is now available, the first data collection based on the new classification began in 2014, meaning it was not available at the time of the TALIS 2013 data collection.

Data underlying the figures

The data tables are listed in Annex D and available on line. These additional tables either contain more detail than similar tables that are published in the report or refer to domains referred to but not examined in the report.

A *StatLink* URL is provided under most figures and tables. Readers using the PDF version of the report can simply click on the relevant *StatLink* URL to either open or download a Microsoft Excel® workbook containing the corresponding figures and tables. Readers of the print version of this report can access the Excel® workbook by typing the *Statlink* URL into their Internet browser.

Calculation of international average

TALIS averages were calculated for most indicators presented throughout this report. TALIS averages are calculated as the mean of the data values of the TALIS countries and economies included in the table. TALIS averages, therefore, refer to an average of data values at the level of the national systems or sub national entities.

Abbreviations used in this report

The following abbreviations are used in this report:

%	Percentage
ISCED	International Standard Classification of Education
OECD	Organisation for Economic Co-operation and Development
p	Significance probability
PISA	Programme for International Student Assessment
r	Correlation coefficient
S.E.	Standard error
SES	Socio-economic status
TALIS	Teaching and Learning International Survey
UAE	United Arab Emirates
UK	United Kingdom

Rounding of figures

Because of rounding, some figures in tables may not exactly add up to the totals. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation.

All standard errors in this publication have been rounded to one decimal place. Where the value 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.05.

Country coverage

This publication features data on 38 countries and economies, including 26 OECD countries and 12 partner countries and economies. The complete list of countries and economies that participated in TALIS 2013, plus the four entities that participated in an extended 2014 TALIS option is listed in Chapter 1, Table 1.1.

The data from the United States are located in the last row in selected tables in this report and are not included in the calculations for the TALIS average. This is because the United States did not meet the international standards for participation rates. See Annex A for more information.

The statistical data for Israel are supplied by and under the responsibility of relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

There are five subnational entities participating in TALIS 2013. They are referred to throughout the report in the following manner:

- The province of Alberta, in Canada, is referred to as Alberta, Canada in the text and as Alberta (Canada) in tables and figures.

- The Flemish Community of Belgium is referred to as Flanders, Belgium in the text and as Flanders (Belgium) in tables and figures.
- The nation of England is referred to as England, United Kingdom in the text and as England (United Kingdom) or (UK) in tables and figures.
- The emirate of Abu Dhabi is referred to as Abu Dhabi, United Arab Emirates in the text and as Abu Dhabi (United Arab Emirates) or (UAE) in tables and figures.
- The municipality of Shanghai is referred to as Shanghai, China in the text and as Shanghai (China) in tables and figures.

Further documentation

For further information on TALIS documentation, the instruments and methodology, see the *TALIS 2013 Technical Report* and the TALIS website (www.oecd.org/edu/school/talis.htm).

1

Leadership for learning at school

This overview presents the context of the report, its main findings and its policy implications. The first and second part present the research questions addressed in the report and the main characteristics of the Teaching and Learning International Survey (TALIS) 2013 study. The third section presents key findings of the report.

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Highlights

- Based on what principals reported, in most countries and economies, principals are actively engaged in instructional leadership actions, such as supporting co-operation among teachers to develop new teaching practices and ensuring that teachers take responsibility for the learning outcomes of their students and for improving their own teaching skills. Despite this widespread engagement in instructional leadership practices across systems, about one-third of all principals do not actively support these actions and further encouragement of leadership for learning is needed.
- Principals who participated in training or a course in instructional leadership were more engaged in instructional leadership actions in their school.
- Instructional leadership is more common in schools with teacher collaboration. This suggests that when principals take action to support co-operation among teachers to develop new teaching practices, teachers may be more inclined to collaborate.
- Instructional leadership seems to be a strong predictor of the establishment of reflective dialogues between teachers at all educational levels.
- Across countries and economies, nearly all schools involve their staff in the decision-making process at school. Schools and systems differ, however, with regard to opportunities offered to students and their parents or guardians to be involved in school decisions.
- A stronger focus on distributed leadership is related to a greater sense of purpose within a school. This finding suggests that involving students and their parents or guardians, in addition to the staff of the school, creates a culture of shared responsibility for school issues, which is characterised by mutual support among all stakeholders.
- Positive teacher-student relationships are more common in schools with distributed leadership in all educational levels.
- Schools with principals showing integrated leadership are more often associated with characteristics of professional learning communities – such as teachers engaging in reflective dialogue and collaboration – than schools with inclusive leaders.
- Principals have only limited, and mostly indirect, influence on establishing a learning climate in their school. Learning climates are strongly dependent on teacher competencies and features of the school context and student population.

INTRODUCTION

Instructional and distributed leadership are regarded as important for creating and sustaining professional learning communities and for creating a climate conducive to student learning. Instructional leadership comprises leadership practices that involve the planning, evaluation, co-ordination and improvement of teaching and learning. Distributed leadership in schools is not only a reflection of leadership being shown by the principal, but also of others acting as leaders in school.

This study examines how leadership relates to the establishment of professional learning communities and a learning climate in schools. At the core of the emphasis on professional learning communities is the idea that knowledge is situated in the day-to-day experiences of teachers and is best understood through critical reflection with others who share the same experience. Moreover, teachers who actively engage in professional learning communities will be able to increase their professional knowledge, which might lead to the enhancement of student learning. In this study, professional learning communities are characterised by a reflective dialogue among staff, deprivatisation of practice, a collective focus on student learning, collaboration and a shared sense of purpose.

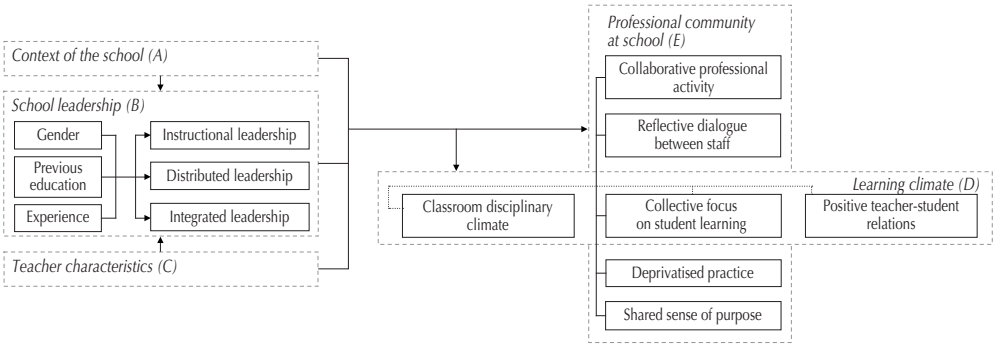
At the same time, developing a positive climate is one of the major assignments of instructional management – next to defining the school's mission and managing the instructional programme. Thus, the study looks to understand the association between instructional and distributed leadership with the development of a positive learning climate that indicates the establishment of an orderly climate for learning and positive teacher-student relationships in schools.

However, the frequency, the distribution and the impact of these different styles of leadership can vary considerably across locations. Indeed, institutional and cultural forces shaped by particular contexts can be a crucial determinant in the acquisition and the regularity of instructional and distributional leadership practices. The TALIS 2013 database (OECD, 2013) allows for the opportunity to study the relationship between principals' leadership practices and the key components of school quality. The database not only permits cross-national comparison by including information from 38 educational systems, but also permits cross-level comparisons by incorporating principals' and teachers' information from primary, lower secondary and upper secondary education.

Thus, the study begins with an exploration of the distribution of leadership practices across TALIS participants and their association with principals and school attributes. Taking account of the variation of practices, a latent class analysis was conducted in order to identify different types of practices, such as the balanced combination of instructional and distributional leadership: integrated leadership.

Next, the association of leadership styles with the implementation of professional learning communities and positive learning environments is described. However, the action of principals with these key outcomes does not happen in a vacuum. On the contrary, these associations take place in a school context where the characteristics of the teacher population, along with the institutional elements of the school, can have an influence in these outcomes as well (see Figure 1.1 to observe the conceptual relationship of these elements). Thus, it is crucial to take both school and teacher characteristics into account, while determining the association between the types of leadership with professional learning communities and positive learning environments.

■ Figure 1.1 ■
The report's conceptual framework



Note: Annex A shows the operationalisation of the variables included in the conceptual framework.

RESEARCH QUESTIONS

Four main research questions regarding school leadership, the development of a professional learning community and the establishment of a learning climate in schools were formulated:

1. What are determinants of distributed and instructional leadership, and to what degree do these differ across countries and economies?
2. To what extent are instructional and distributed leadership and educational leadership practices related to the development of a professional learning community in schools? What other school and teacher characteristics are related to the development of a professional learning community in schools, and what is the net effect of aspects of school leadership if accounting for these other school and teacher characteristics?
3. To what extent are instructional and distributed leadership and educational leadership practices related to the establishment of a positive learning climate in schools? What other school and teacher characteristics are related to the establishment of a positive learning climate in schools, and what is the net effect of aspects of school leadership after accounting for these other school and teacher characteristics?
4. To what extent does the relationship between school leadership and 1) the development of a professional learning community; and 2) the establishment of a positive learning climate in schools, differ across various stages of schooling (primary education, lower secondary education and upper secondary education)?

TALIS 2013 STUDY AND FOCUS OF THE REPORT

This report addresses the relationship between educational leadership and the establishment of professional learning communities and learning climate by using the TALIS 2013 database (OECD, 2013). TALIS is an international, large-scale survey that focuses on the working conditions of teachers, principals and the learning environment in schools. Recognising the important role that educational leadership plays in fostering an effective teaching and learning environment within schools, TALIS describes the role of school leaders and examines the support that they give their teachers. Next to the role of educational leadership, TALIS gathers school-context data that help to explain differences between schools and countries.

Box 1.1 **TALIS 2013 design**

International target population: Lower secondary education teachers and leaders of mainstream schools. For TALIS 2013, countries could opt for additional participation with teachers and school leaders in primary education and upper secondary education.

Target sample size: 200 schools per country and economy; 20 teachers and 1 school leader in each school.

School samples: Representative samples of schools and teachers within schools.

Target response rates: 75% of the sampled schools, together with a 75% response rate from all sampled teachers in the country and economy. A school is considered to have responded if 50% of sampled teachers respond.

Questionnaires: Separate questionnaires for teachers and school leaders, each requiring between 45 and 60 minutes to complete.

Mode of data collection: Questionnaires filled in on paper or on line.

Survey windows: September-December 2012 for Southern Hemisphere countries and economies and February-June 2013 for Northern Hemisphere countries and economies. Four education systems, of, respectively, Georgia, New Zealand, the Russian Federation and Shanghai (China), participated in TALIS in 2014.

Source: Adapted from Figure 1 of OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, http://dx.doi.org/10.1787/9789264196261-en.

The target population of TALIS is teachers and school leaders in lower secondary education[1]. Teachers and principals from lower secondary education from a total of 34 OECD and partner countries and economies originally participated in the study (see Table 1.1). The findings from this study are published in the OECD's *TALIS 2013 Results: An International Perspective on Teaching and Learning* (OECD, 2014a). Georgia; New Zealand; the Russian Federation; and Shanghai, China, joined TALIS 2013 at a later stage. This report is based on the TALIS database, including these four additional countries and economies.

For TALIS 2013, systems could opt for an additional survey of primary (ISCED level 1) and upper secondary (ISCED level 3) schools. Next to their participation in the main study, six countries and economies participated in the TALIS 2013 primary education study, and ten participated in the TALIS 2013 upper secondary education study. In five countries, primary, lower secondary and upper secondary schools participated in TALIS 2013 (see Table 1.1). Chapter 6 of this report addresses the relationship between educational leadership and the establishment of professional learning communities and a learning climate in primary and upper secondary education.

Table 1.1 Countries and economies participating in TALIS 2013

OECD Countries and Economies			Partner Countries and Economies
Alberta (Canada)	Flanders (Belgium)[1, 3]	Netherlands	Abu Dhabi (United Arab Emirates)[2]
Australia[2]	France	Norway[1, 2]	Brazil
Chile	Iceland[2]	Poland[1, 2]	Bulgaria
Czech Republic	Israel[3]	Portugal[3]	Croatia
Denmark[1, 2]	Italy[2]	Slovak Republic	Cyprus[4]
England (UK)	Japan[3]	Spain	Latvia
Estonia	Korea[3]	Sweden	Malaysia[3]
Finland[1, 2]	Mexico[1, 2, 3]	United States[3]	Romania
			Serbia[3]
			Singapore[2, 3]
Supplementary participating countries and economies			
New Zealand			Georgia[2]
			Russian Federation
			Shanghai (China)

Notes:

1. Countries and economies that also participated in the TALIS 2013 primary education (ISCED1) study.
2. Countries and economies that also participated in the TALIS 2013 upper secondary education (ISCED3) study.
3. See Annex A for notes about interpreting the data from these countries and economies
4. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

MAIN FINDINGS

Principal and school characteristics related to instructional and distributed leadership

In most countries and economies, a vast majority of principals act as instructional leaders, but about one-third still rarely engages in instructional leadership actions

A majority of principals are actively engaged in instructional leadership actions, such as supporting co-operation among teachers to develop new teaching practices and ensuring that teachers take responsibility for the learning outcomes of their students and for improving their own teaching skills. Despite this widespread engagement in instructional leadership practices across systems, about one-third of all principals do not actively support these actions and further stimulation of leadership for learning is needed.

Principals who participated in training or a course in instructional leadership were more engaged in instructional leadership actions in their school

Principals who acquired instructional leadership competencies in their educational leadership training or in a separate course were more engaged in instructional leadership actions in their school. This suggests that instructional leadership in schools can be fostered by including instructional leadership skills in leadership preparation programmes or by encouraging principals to take courses in which these skills are developed. Although in most countries and economies principals who received training

in instructional leadership seem to be more likely support instructional leadership actions, such as co-operation among teachers to develop new teaching practices and to ensure that teachers take responsibility for their students' learning outcomes and their own teaching skills, this does not apply to all systems. In some countries and economies, no effect of training in instructional leadership was observed regarding the activities taken by principals (see Table 3.5).

Schools with principals showing integrated leadership, i.e. balancing elements of both distributed and instructional leadership, are more often associated with characteristics of professional learning communities – such teachers engaging in reflective dialogue and collaboration – than schools with inclusive leaders

Similarly, schools with integrated leaders are linked, more often than schools with educational leaders, to a shared sense of purpose among their staff and a collective focus on student learning.

Principals' experience or involvement in teaching does not affect their instructional leadership

In about one-third of all countries and economies it is common that many, or even all, principals have a teaching obligation. In all other systems, only a minority of principals have a teaching obligation, although in all systems principals are involved in teaching in addition to their administrative duties. Having a teaching obligation seems not to affect a principal's engagement in instructional leadership. Across countries and economies, instructional leadership is not enhanced or weakened by having a teaching obligation (see Table 3.6). Similarly, a principal's previous experience as a teacher is not related to their instructional leadership practices in school (see Table 3.4).

Nearly all schools involve their staff in the decision-making process at school. Schools and systems differ, however, with regard to opportunities offered to students and their parents or guardians to be involved in school decisions

Distributed leadership refers to creating opportunities for staff, students and parents or guardians to participate in school decisions. Across countries, nearly all principals reported the involvement of their staff in the decision-making process at the school. Schools and countries differ, however, with regard to opportunities offered to students and their parents or guardians to be involved in school decisions. In most countries, lower secondary schools take account of the views and opinions of their main stakeholders. On average, in more than two-thirds of all participating countries, more than 75% of principals indicate that students and parents or guardians have a say in the decisions taken at their school. In nearly one-third of participating systems, participation of students and their parents or guardians is less common, although, in nearly every country and economy, more than half of the schools involve students and parents to some extent in decisions taken at their school (Table 1.3). It is important to clarify that including staff, parents or guardians and students in the decision-making process of the school may not depend solely in the willingness and actions of a school principal, but also on the regulations and framework imposed by local, regional or national legislation. For more information about the principal's role in each entity, see Annex C.

Distributed leadership is less affected by the school context and teacher characteristics than by the principal's participation in professional development

Distributed leadership was expected to be more prominent in larger schools, as school leaders will experience more difficulties in steering the school themselves. Similarly, as distributed leadership requires the professional skills of those involved, distributed leadership was anticipated to be more common in schools where teachers are skilful in taking over responsibilities. School size was not related

to distributed leadership. Moreover, the distributed leadership as reported by principals seems not to be affected by the formal education they received. Principals who participate in professional development activities, however, are more often engaged in distributed leadership, although the kinds of professional development activities that are related to distributed leadership differ widely across countries and economies (see Table 3.8).

Unclear how greater staff involvement is to be achieved

Distributed leadership includes the participation of students and their parents or guardians in school decisions. One of the benefits of including students and parents or guardians is the explicit focus on getting support for school decisions among all stakeholders in and around the school. Through the participation of students and their parents or guardians, not only are various perspectives taken into consideration that might positively influence the quality of the decisions taken, but also a shared view is supported among all stakeholders towards the aims to be achieved. On the other hand, teachers and other staff play an important role as they put these aims into practice. Creating support among staff for the main objectives of the school and for the implementation of improvements is therefore one of the core conditions for engaging teachers in professional development activities and school innovation. The current index for distributed leadership does not allow the identification of the various forms and the degree of staff participation in the decision-making process at schools. As a consequence, to what extent the various determinants of distributed leadership may affect the participation of teachers and other professional staff in school decisions still needs further exploration.

Specific types of school leadership are more prominent in certain countries and economies than others, which might indicate that leadership practices are idiosyncratic to each national context

Depending of the type of leadership, around 40 to 60% of principals' practices might be explained by country/economy differences, which could indicate that principals' actions are particularly susceptible to the influence of national contexts, such as a the legal framework in which a principal works, or a principal's working status (Table 1.4).

Educational leadership and the establishment of professional learning communities[2]

Instructional leadership is more common in schools with teacher collaboration

Principals who show greater instructional leadership work in schools in which teachers are more engaged in collaboration, which is a key dimension of professional learning communities. This suggests that when principals take action to support co-operation among teachers to develop new teaching practices, teachers are, indeed, more inclined to collaborate. In these schools, teachers more often exchange teaching materials with colleagues, engage in discussions about the development of specific students, work together to ensure common standards in evaluations for assessing student progress and attend team conferences. This may indicate that the steps principals take to develop co-operation and to promote teachers' responsibility for their instruction affect teachers' collaboration in their school. On the other hand, when teachers are engaged in exchanging practices and co-operation, it is probably much easier for principals to stimulate collaboration among the staff (Table 1.6).

Instructional leadership seems to be a strong predictor of the establishment of reflective dialogues between teachers at all educational levels

Instructional leadership is related to greater reflective dialogue between teachers in primary, lower secondary and upper secondary education. In schools in which principals are more engaged in

instructional leadership, teachers more often perceive a positive change in their instruction as a result of feedback on their classroom management practices, their teaching practices and their use of student assessments to improve learning.

The development of professional learning communities in lower secondary schools may be promoted by more instructional leadership

In countries and economies in which primary as well as lower secondary schools participated in TALIS 2013, primary schools operate to a greater extent as professional learning communities than do lower secondary schools. In primary schools in which principals are engaged in instructional leadership action, teachers more often collaborate and engage in reflective dialogue, as well as in deprivatised practices (i.e. having teachers observe other teachers' classes), and have a shared sense of purpose. This association is stronger in primary school than lower secondary schools. Moreover, having teachers observe other teachers' classes is more common in primary schools with a stronger engagement of the principal in instructional leadership. On average, these schools also more often demonstrate a shared sense of purpose among the school staff. The effect of instructional leadership on building a professional learning community, however, is relatively stronger in lower secondary than in primary education. This indicates that principals in lower secondary education can make a difference in building a professional learning community at their school (Table 1.6).

A stronger focus on distributed leadership leads to a greater sense of purpose in schools at all educational levels

Distributed leadership is positively related to a shared sense of purpose in schools. This finding, which is reported for primary, lower secondary and upper secondary education, suggests that involving students and their parents or guardians, along with the staff of the school, creates a culture of shared responsibility for school issues, which is characterised by mutual support among all stakeholders.

Schools with principals demonstrating integrated leadership are more often associated with characteristics of professional learning communities

Four types of leaders and leadership are identified in this study. The first type, termed "integrated leadership", refers to principals who pay a lot of attention to both instructional and distributed leadership in their schools and spend relatively more time on curriculum and teaching-related tasks in their schools. Nearly half of all principals can be characterised as integrated leaders. "Inclusive leaders" refers to principals who engage staff, students and their parents or guardians in the decisions at school, but they take up a role as instructional leaders relatively less often and spend less time on curriculum and teaching-related tasks in schools. "Educational leaders" are strongly engaged in instructional leadership, but much less in involving other stakeholders in the decisions at school. "Administrative leaders" are less engaged in distributed and instructional leadership than are integrated leaders (Table 1.4 and Table 1.5). Schools with principals demonstrating integrated leadership, i.e. balancing elements of both distributed and instructional leadership, are more often associated with characteristics of professional learning communities – such as teachers engaging in reflective dialogue and collaboration – than schools with inclusive leaders. Similarly, schools with integrated leaders are linked, more often than schools with educational leaders, to a shared sense of purpose among their staff and a collective focus on student learning (see Tables 4.7, 4.8, 4.9, 4.10, and 4.11).

Educational leadership and the establishment of a learning climate[3]

Positive teacher-student relationships are more common in schools with distributed leadership

A stronger engagement of principals in distributed leadership is related to more positive teacher student relationships in primary, lower secondary and upper secondary schools. Creating opportunities for students and their parents or guardians to participate in school decisions means teachers are interested in what students have to say and are likely to be concerned with students' well being. Thus, distributed leadership may result in a greater sense of belonging among students and parents, as well as common responsibility for the functioning of the school among all key stakeholders.

Principals have only marginal influence on a disciplinary classroom climate and positive teacher student relationships

Taking action to support co-operation among teachers to develop new teaching practices, as well as stimulating teachers' responsibility for their teaching skills and students' learning outcomes are not related to an orderly classroom climate. This finding suggests that the classroom climate is merely outside the sphere of influence of principals. Because principals generally set conditions for teachers to perform well and to engage in further professional development, their impact on classroom climate is mainly indirect and therefore likely to be relatively weak. Other factors, like teacher characteristics, are more directly related to establishing a disciplinary classroom climate (Table 1.7).

The impact of school context and teacher characteristics on the establishment of professional learning communities and learning climate in schools

Teachers' self-efficacy in instruction and student engagement is strongly related to teachers' reflective practice, a shared sense of purpose, collaboration and a collective focus on student learning

Teachers who are efficacious in instruction and student engagement are, more often, engaged in reflective practice, share a common sense of purpose, collaborate with other staff and report a greater focus on student learning in their school. This could indicate that when teachers feel confident in teaching and engaging students in their classroom, they might experience fewer barriers to sharing their practices with their colleagues and to exploring ways for further improvement. Consequently, teachers who are less self-efficacious in instruction might feel threatened if others confront them with their shortcomings. A reverse mechanism could be at play as well, as observing teachers and providing them with feedback might stimulate a teacher's self-efficacy in teaching. Particularly, enhancing the visibility of classroom practice through observations by peers increases teachers' self-efficacy and teachers' attitudes toward professional development, among others (see Tables 4.2, 4.5 and 4.6).

Teachers' self-efficacy in classroom management and student engagement is strongly related to an orderly classroom climate and positive teacher-student relationships in schools

Teachers' self-efficacy is also one of the main predictors of a positive learning climate in schools. Particularly, teachers' self-efficacy in classroom management and student engagement is closely related to teachers reporting a disciplinary classroom climate and positive teacher-student relationships. However, as self-efficacy, disciplinary classroom climate and positive teacher-student relationships are all based on teacher self-reporting, this link could be a spurious one. Teachers might, for instance, interpret the disciplinary climate at their school in a more positive way if they

believe that they have more favourable classroom management competencies. In cases where the findings reflect a substantial relationship between self-efficacy and a positive learning climate, the interpretation of this finding is complicated by the causality of the relationship. Being more self-efficacious in classroom management or student engagement is likely to result in actions that are adequate for maintaining a disciplinary climate in class and creating positive teacher student interactions, but, just as likely, a more disciplinary climate and positive relationship will result in greater self-efficacy (see Tables 5.2 and 5.3).

The student population at a school may enhance or hamper professional learning among the staff and the establishment of a learning climate at the school

Schools with higher numbers of foreign language students, students with special educational needs and students from disadvantaged homes report on average more difficulties in creating a positive learning climate at the school. Particularly, maintaining an orderly classroom climate is perceived as problematic in classes in which several or a lot of students need extra support (see Table 5.2). With regard to creating positive teacher-student relationships in a school, the impact of higher numbers of foreign language students and students with special educational needs is mixed.

REFLECTION ON KEY FINDINGS

This report reveals that leaders do have an impact on the establishment of professional learning communities in their schools. Through instructional leadership, principals can stimulate teacher collaboration and teachers' use of feedback to change their practices. These are at the core of professional learning in schools. Moreover, by engaging not only staff, but also students and their parents or guardians in school decisions, principals can stimulate a shared sense of purpose among all stakeholders. Principals may use certain context factors around which to build their efforts to enhance professional learning, or may have to counter context factors that might complicate professional learning, such as characteristics of the student population or the size of the school.

This report is based on the presumption, first, that professional learning communities can be consistently identified across systems, and second, that establishing a professional learning community will enhance the quality of schooling. With regard to the concept of professional learning communities, this report – like any other secondary analysis of international comparative data – suffered from the fact that all aspects of the identified factors were not equally represented in the underlying constructs. Some constructs, like teacher collaboration, equalled specific factors measured in TALIS 2013. As a result, the items included represent the construct well and were tested for reliability and validity across countries and economies in TALIS 2013. Other constructs, like reflective dialogue, were not measured explicitly in TALIS 2013. Reflective dialogue was created based on teachers' perceived positive change in their practices based on the feedback they received. Underlying this perceived change is the idea that teachers engaged in professional conversations about specific educational issues led them to further improve their teaching. Still other constructs, like a collective focus on student learning, were operationalised as the feedback teachers get on student performance and on characteristics that are seen as important prerequisites for student achievement, such as teachers' subject knowledge, their pedagogical competencies, their assessment practices and their classroom management skills. These elements reflect a strong focus on student performance, whereas student learning might be conceived, as least in some countries and economies, as more comprehensive.

The operationalisation of some of the aspects of professional learning communities might explain why schools in some systems reflect these features to a larger extent than do schools in other systems. As a consequence, many countries and economies differ greatly regarding the features of professional learning communities found in their schools. For instance, while teachers in Georgia report a relatively strong collective focus on student learning and a high shared sense of purpose, they also report that they receive feedback considerably less often from other teachers following classroom observations (see Table 4.1). On the other hand, deprivatised practice, reflective dialogue and teacher collaboration reflect core characteristics of professional learning communities. Discrepancies in the factors within systems, therefore, are not likely to be the result of the operationalisations used in this study. This suggests that schools have not, so far, attempted to implement the various features of professional learning communities in their schools or have not yet succeeded in implementing these features.

Moreover, the findings presented in the following chapters suggest that many schools across countries and economies are adopting elements of a professional learning community, but focus mostly on one or a few specific features of learning communities. As the literature review in Chapter 2 will highlight, implementing these features is promising, as previous studies have shown that these are likely to enhance student learning. However, it can be argued that focusing on teacher collaboration and not creating a school culture in which teachers visit each other's classrooms and provide their colleagues with feedback might restrain collaboration from being effective – or at least inhibit the full potential of professional learning communities for teachers' professional learning, and ultimately student learning. Integral implementation of professional learning communities in a school deserves further attention, and the school leader is best suited to guide and facilitate these improvements. However, this presupposes that school leaders know where they are heading.

This touches upon the second assumption that professional learning communities are conducive to student learning. It is striking to note that the classification of countries and economies based on various features of professional learning communities in lower secondary schools is not reflective of, or, at best, hardly reflects, the PISA ranking of countries (OECD, 2014b). Although this might be due, to some extent, to difficulties in operationalising the various features of professional learning communities, as discussed before, it also challenges the notion presented in this report that student achievement is enhanced when schools operate as professional learning communities. The possibility of linking PISA and TALIS offers some interesting opportunities to investigate this relationship, although such a study would benefit from an increasing number of countries for which such a linkage can be established and a stronger alignment with features of professional learning communities in TALIS 2013. Although the knowledge base on professional learning communities and student achievement is quite strong, studies so far have been limited mainly to Western countries. A comparative study could indicate to what extent the relationships are to be generalised to other education systems.

The divergence with PISA results might be due to the fact that professional learning communities may have less added value in systems with a highly qualified teacher force. In these systems, teachers are likely to benefit less from their colleagues' experiences as they are able to deal with many day-to-day challenges adequately themselves. Principals in these schools might guide teachers less as there is less need for further professional development. In these systems, professional learning communities may, nevertheless, safeguard continuous improvement better than relying only on teachers' individual competencies. Even in schools with highly qualified teachers, teacher collaboration can encourage

teachers to improve their own teaching and keep track of new developments. Further research is needed regarding the effect of differences between schools and the value professional learning communities can add to student achievement in these schools.

POLICY IMPLICATIONS

Notwithstanding these limitations, this report clearly points out that educational leadership may play an important role in shaping a professional learning community at a school. School leaders are the most likely actors to initiate the further development of professional learning communities. This report shows that educational leadership is clearly related to the development of such communities. In countries and economies in which principals employ more distributed leadership, teachers report a greater sense of purpose. In schools with principals who show greater instructional leadership, teacher collaboration is also more common. Moreover, integrated leadership, combining instructional and distributed leadership and using student outcomes to develop the school's goals, programme and professional development plan, appears to be the most favourable approach to establishing such a learning community within a school. Although a large number of principals demonstrate forms of integrated leadership, some school leaders mainly rely on instructional leadership while only partly involving other stakeholders in the decision-making process, or they do not explicitly focus on their role as educational leaders. For developing professional learning communities, a more integrated role for the school leader seems appropriate.

Furthermore, developing stronger professional learning communities could play an important role in creating a structure in which staff engage in professional development activities, and in fostering a culture in which continuous professional development becomes the social norm for staff. Particularly, the comparison of features of professional learning communities between primary and lower secondary education reveals that primary schools might already have created an environment in which teachers collaborate, engage with each other in a reflective dialogue and have a shared sense of purpose on what they want to achieve with their students. In the countries and economies that participated in the TALIS 2013 primary education study, these features are much less common in lower secondary education. Although the findings cannot be generalised to other systems participating in TALIS 2013, they nevertheless suggest that the implementation of professional learning communities can be improved in secondary education.

A further finding is that schools in most countries and economies seem to have implemented some features of professional learning communities, have put less emphasis on others, or may have even discarded other characteristics of professional learning communities. A coherent approach to professional learning communities is missing, despite the fact that the several elements of professional learning communities are likely to reinforce each other, and sometimes may even function as prerequisites for other elements to some extent. This further indicates that the implementation of professional learning communities does not reach the full potential these communities might have in secondary education.

This report indicates that integrated leadership competencies may be gained through training. Principals who receive formal training in instructional leadership or attend courses and seminars on educational leadership are likely to put their newly acquired skills into practice. By encouraging principals to take notice of developments in their field through in-service training, or attendance of leadership courses or other professional development activities, awareness of their role as a school leader can be fostered.

However, although in most systems principals who received training in instructional leadership were more likely to support teachers co-operating among themselves to develop new teaching practices, and also to ensure that teachers take responsibility for their students' learning outcomes and their own teaching skills, this does not apply to all systems. In some countries and economies, no effect of instructional leadership training was observed on the practices taken by principals. These recommendations, therefore, should always be tailored to the needs and the specific context of the participating system.

Along with creating training programmes for principals on integrated leadership and encouraging principals' participation in in-service professional development activities, educational policy may place greater emphasis on the importance of teacher collaboration and a learning attitude among school staff. Although in nearly all countries and economies more teachers agree than disagree that they engage in collaborative activities with other teachers in their school, still a considerable number of teachers indicate their involvement in teacher collaboration to only some degree. Similarly, in various systems, a considerable minority of teachers report that their school has no culture of shared responsibility. Educational policy, developed by systems across the world, can point to the importance of these features, thus creating necessary prerequisites for change.

Teacher involvement in decision-making processes at their school is one of the key factors in adopting and sustaining educational improvements. At the same time, schools differ with regard to what degree and in what way to involve staff in school decisions. Given the complexity and the dynamics of educational change, these subtle differences in engaging staff in the decision-making process determine whether schools actually have the capacity to improve their education effectively. The results from TALIS 2013 suggest, therefore, that in each of the participating countries and economies, the basis for educational improvement exists. However, to what extent the type and amount of teacher participation in school decisions is beneficial for school improvement needs to be examined further.

With regard to creating and sustaining a learning climate at a school, the role of educational leaders is, at best, marginal. Although schools who provide opportunities for staff, students and their parents or guardians to be involved in school decisions work in schools with more positive teacher-student relationships, overall, few effects for either instructional or distributed leadership on learning climate were reported. Teacher and classroom factors play a more important role in developing a learning climate in class. Particularly, teachers' self-efficacy and the student population are related to creating a disciplinary classroom climate and positive teacher-student relationships. The effects of student population on the learning climate are further corroborated in the report, as problems with the learning climate are more often reported for larger cities, in which a relatively larger number of disadvantaged students reside, and less in private schools, which often have a more advantaged student population.

Along with the characteristics of the student population, teachers' self-efficacy is strongly related to creating a learning climate that is conducive to student outcomes. Although the relationship between teachers' self-efficacy and the learning climate is probably reciprocal, it nevertheless indicates that teachers who feel competent to deal with all the challenges to creating a positive learning environment for their students are more likely to achieve this in practice. Teachers' self-efficacy is rooted in their professional skills and their daily experiences with their students in class. Providing teachers with teacher training programmes or in-service training that supplies the necessary competencies to create a classroom climate that is conducive to student learning seems, therefore, to be of the

utmost importance. This implies creating effective facilities for teacher training and establishing a culture of continuous professional development among school staff. School leaders, school boards, governmental agencies, as well as providers of teacher training programmes and courses, in addition to teachers as professionals themselves, have a role in shaping and sustaining teachers' professional development.

STRUCTURE OF THE REPORT

Chapter 2 presents a revision of the current literature concerning the relevance of different styles of educational leadership for the improvement of student outcomes. The section will also explore the conceptual relationship of educational leadership with the implementation of professional learning communities and a positive learning climate. The discussion explored in the section will guide the analyses in the following chapters.

Chapter 3 examines determinants of educational leadership, the relationship between principals' background factors, as well as school context and teacher variables. Moreover, using latent class analysis, types of educational leadership are identified based on patterns in school leaders' scores on instructional leadership and distributed leadership.

In Chapter 4, countries and economies are characterised by their engagement with professional learning communities. The characterisation of systems is based on the five factors of professional learning communities as identified in this chapter: reflective dialogue; deprivatisation of practice or feedback on instruction; collaborative activity; a shared sense of purpose; and a collective focus on student learning. In addition to a description of the characteristics, the chapter explores to what extent instructional and distributed leadership, as well as the various types of leadership from the latent class analysis, are related to the development of professional learning communities.

Chapter 5 focuses on the characteristics of a learning climate in schools across countries and economies. Next to a description of learning climates across systems, this chapter also examines to what extent instructional and distributed leadership, as well as the various types of leadership from the latent class analysis, are related to the learning climate in schools.

Chapter 6 presents instructional and distributed leadership scores, as well as the various dimensions of professional learning communities and the learning climate, for systems that are also engaged in the primary education study or the upper secondary education study of TALIS 2013. These results in primary and upper secondary education are compared to the results from Chapters 3 to 5 to identify whether these levels of education differ.

Principals' engagement in instructional leadership activities in lower secondary education

Percentage of lower secondary education principals who report having engaged "often" or "very often" in the following instructional leadership activities during the 12 months prior to the survey

Table 1.2

	Take action to support co-operation among teachers to develop new teaching practices		Take action to ensure that teachers take responsibility for improving their teaching skills		Take action to ensure that teachers feel responsible for their students' learning outcomes	
	often/very often		often/very often		often/very often	
	%	S.E.	%	S.E.	%	S.E.
Malaysia	97.9	(1.1)	95.5	(1.6)	99.6	(0.4)
Abu Dhabi (United Arab Emirates)	91.3	(2.9)	93.4	(2.4)	93.2	(2.6)
Shanghai (China)	91.0	(2.2)	90.0	(2.0)	88.0	(2.4)
Chile	84.5	(2.8)	87.9	(2.6)	92.9	(2.1)
Romania	79.8	(3.5)	85.4	(2.5)	90.2	(2.3)
Bulgaria	69.4	(3.8)	88.3	(2.7)	96.9	(1.3)
Serbia	85.7	(3.0)	81.5	(3.2)	82.1	(2.9)
Slovak Republic	81.5	(3.3)	79.3	(3.3)	82.7	(3.2)
Singapore	65.4	(4.4)	84.4	(3.0)	91.1	(2.5)
Alberta (Canada)	71.1	(3.0)	79.1	(3.5)	84.8	(3.1)
Brazil	75.3	(2.1)	75.3	(2.0)	83.7	(1.9)
Mexico	72.2	(4.1)	75.1	(3.6)	86.1	(2.6)
Korea	73.6	(4.6)	77.8	(3.8)	80.5	(3.9)
Poland	62.8	(4.3)	72.0	(4.4)	91.6	(3.0)
Israel	67.6	(6.2)	76.0	(4.4)	81.8	(3.5)
Russian Federation	55.3	(5.2)	85.2	(4.0)	84.8	(3.5)
Australia	64.0	(5.6)	76.1	(5.1)	82.5	(5.2)
Latvia	63.4	(5.6)	74.8	(4.6)	83.6	(4.1)
England (United Kingdom)	61.4	(3.9)	75.3	(4.3)	82.9	(4.9)
Georgia	49.5	(3.7)	82.6	(2.8)	87.3	(2.6)
New Zealand	60.2	(4.9)	74.8	(5.2)	81.6	(2.9)
Czech Republic	69.0	(3.5)	70.1	(3.4)	72.6	(3.4)
Portugal	61.0	(4.2)	63.3	(4.4)	74.5	(4.1)
Netherlands	42.8	(7.1)	69.1	(6.6)	86.9	(3.3)
Croatia	61.7	(3.6)	64.8	(3.7)	72.1	(3.4)
Italy	64.9	(4.8)	59.8	(5.1)	71.0	(4.4)
Iceland	56.7	(4.3)	57.5	(5.2)	76.4	(4.4)
Spain	59.4	(5.1)	55.8	(4.8)	69.3	(4.3)
France	59.9	(4.1)	51.6	(4.8)	64.2	(4.0)
Sweden	53.9	(4.9)	44.1	(4.9)	63.9	(4.5)
Estonia	41.3	(3.7)	52.0	(3.3)	53.0	(3.5)
Norway	55.6	(8.0)	47.5	(7.4)	41.1	(6.8)
Denmark	43.9	(4.4)	53.6	(4.3)	45.5	(4.5)
Finland	56.6	(3.8)	40.0	(3.6)	44.0	(4.4)
Flanders (Belgium)	36.5	(4.8)	41.5	(4.8)	57.0	(3.7)
Japan	33.9	(4.3)	38.9	(4.0)	32.6	(3.5)
Average	64.1	(0.7)	70.2	(0.7)	76.6	(0.6)
United States[1]	75.0	(4.9)	78.2	(5.5)	87.0	(4.9)

Notes:

1. The data from the United States is located in the last row of the table in this report and are not included in the calculations for the international average. This is because the United States did not meet the international standards for participation rates.

2. Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "often" or "very often" engage in instructional leadership actions.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.1.

StatLink http://dx.doi.org/10.1787/888933369918

Principals' engagement in distributional leadership activities in lower secondary education

Table 1.3 *Percentage of lower secondary education principals who report that they "agree" or "strongly agree" with the following distributed leadership statements about their school*

	This school provides staff with opportunities to actively participate in school decisions		This school provides parents or guardians with opportunities to actively participate in school decisions		This school provides students with opportunities to actively participate in school decisions	
	agree/strongly agree		agree/strongly agree		agree/strongly agree	
	%	S.E.	%	S.E.	%	S.E.
Latvia	99.3	(0.7)	100.0	(0.0)	98.0	(0.6)
Shanghai (China)	98.9	(0.8)	98.5	(0.9)	96.5	(1.4)
Poland	99.7	(0.3)	95.7	(2.8)	95.2	(2.2)
Korea	100.0	(0.0)	98.2	(1.1)	91.2	(3.0)
Estonia	100.0	(0.0)	94.4	(1.5)	90.8	(2.1)
Georgia	98.3	(1.0)	94.4	(1.4)	92.3	(2.0)
Serbia	99.1	(0.6)	97.3	(1.4)	88.5	(2.7)
Russian Federation	100.0	(0.0)	94.5	(2.7)	88.8	(3.3)
Norway	100.0	(0.0)	91.4	(3.8)	89.9	(4.1)
Flanders (Belgium)	98.5	(1.0)	88.9	(2.8)	89.6	(2.7)
Brazil	96.3	(1.3)	91.1	(1.4)	87.5	(2.1)
Czech Republic	99.9	(0.1)	90.0	(2.1)	84.7	(2.7)
Croatia	99.5	(0.5)	93.6	(1.6)	80.3	(2.8)
Portugal	99.3	(0.7)	91.5	(2.7)	78.2	(3.8)
Alberta (Canada)	96.7	(1.1)	89.5	(2.3)	79.5	(3.2)
New Zealand	99.5	(0.3)	84.2	(3.8)	80.1	(5.4)
Spain	97.3	(1.4)	88.0	(2.8)	77.4	(4.0)
Australia	98.4	(1.0)	84.7	(3.7)	79.5	(4.4)
Mexico	97.8	(1.1)	83.9	(3.4)	80.4	(3.2)
England (United Kingdom)	96.7	(2.5)	73.1	(5.1)	91.8	(3.3)
Romania	97.7	(1.3)	91.6	(2.5)	71.7	(3.9)
Iceland	100.0	(0.0)	84.0	(3.4)	75.5	(4.2)
Bulgaria	99.1	(0.9)	81.5	(3.4)	73.7	(3.3)
Chile	93.6	(2.1)	82.7	(3.1)	77.2	(3.5)
Denmark	97.6	(1.4)	73.6	(4.1)	77.8	(4.1)
Abu Dhabi (United Arab Emirates)	92.0	(2.4)	80.0	(3.5)	73.6	(3.8)
Netherlands	96.9	(1.9)	79.3	(4.8)	68.4	(5.5)
Singapore	99.3	(0.7)	60.8	(3.6)	83.8	(2.8)
France	96.8	(1.5)	80.5	(2.7)	66.3	(4.0)
Malaysia	95.8	(1.1)	90.5	(3.0)	56.7	(4.1)
Slovak Republic	99.6	(0.4)	87.7	(2.9)	48.3	(3.9)
Sweden	98.5	(1.1)	53.2	(4.9)	74.1	(4.1)
Finland	98.1	(1.1)	52.7	(3.9)	69.0	(3.8)
Italy	97.7	(1.1)	81.3	(4.1)	38.2	(4.3)
Israel	98.0	(1.0)	55.4	(6.6)	53.4	(5.9)
Japan	95.7	(1.5)	52.1	(3.7)	38.5	(3.6)
Average	98.0	(0.2)	83.4	(0.5)	77.6	(0.6)
United States[1]	95.8	(2.4)	76.0	(6.2)	56.3	(6.1)

Notes:

1. The data from the United States is located in the last row of the table in this report and are not included in the calculations for the international average. This is because the United States did not meet the international standards for participation rates.

2. Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "agree" or "strongly agree" with distributed leadership statements about their school.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.2.

StatLink http://dx.doi.org/10.1787/888933369925

Table 1.4 **Distribution of types of leadership in lower secondary education by country and economy**
Percentage of lower secondary education principals classified under each leadership type category

	Types of leadership							
	Integrated leadership		Educational leadership		Inclusive leadership		Administrative leadership	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.
Australia	61.5	(5.7)	26.8	(4.8)	11.3	(4.6)	0.5	(0.5)
Brazil	76.7	(2.4)	10.8	(1.8)	8.3	(1.6)	4.2	(1.0)
Bulgaria	64.9	(3.7)	30.7	(3.7)	3.6	(1.6)	0.8	(0.8)
Chile	70.7	(4.1)	24.5	(3.7)	3.1	(1.6)	1.6	(1.2)
Croatia	19.3	(3.4)	7.6	(1.5)	60.2	(4.1)	12.9	(2.6)
Czech Republic	70.0	(3.4)	16.1	(2.8)	10.6	(2.2)	3.4	(1.3)
Denmark	10.7	(2.9)	4.9	(2.0)	51.0	(4.7)	33.4	(4.2)
Estonia	11.3	(2.2)	1.0	(0.7)	76.4	(2.9)	11.3	(2.3)
Finland	2.3	(1.4)	9.2	(2.5)	14.7	(2.9)	73.8	(3.7)
France	9.4	(2.1)	3.6	(1.8)	50.5	(4.1)	36.5	(3.8)
Georgia	86.4	(2.5)	7.8	(1.9)	5.7	(1.9)	m	m
Iceland	17.3	(4.0)	8.7	(2.7)	51.0	(4.9)	23.1	(4.0)
Israel	9.7	(2.1)	82.6	(3.9)	3.3	(2.2)	4.4	(2.0)
Italy	11.2	(2.5)	75.9	(3.9)	m	m	12.9	(3.2)
Japan	15.1	(3.0)	76.9	(3.7)	m	m	8.1	(2.3)
Korea	91.1	(3.2)	8.1	(3.1)	0.8	(0.6)	m	m
Latvia	88.4	(3.6)	2.1	(0.6)	9.5	(3.5)	m	m
Malaysia	55.9	(4.5)	44.1	(4.5)	m	m	m	m
Mexico	68.5	(4.2)	22.3	(3.8)	7.7	(2.3)	1.7	(1.2)
Netherlands	16.0	(4.4)	8.7	(2.6)	51.0	(6.6)	24.2	(5.3)
New Zealand	25.1	(5.1)	69.5	(4.7)	0.7	(0.7)	4.7	(2.7)
Poland	89.9	(3.7)	6.6	(3.2)	3.5	(1.9)	m	m
Portugal	25.4	(3.9)	5.7	(2.4)	52.6	(4.2)	16.3	(3.0)
Romania	73.9	(3.2)	20.3	(2.7)	3.6	(1.5)	2.2	(1.4)
Russian Federation	82.1	(4.1)	13.6	(3.5)	4.1	(2.0)	0.3	(0.3)
Serbia	84.7	(3.2)	11.3	(2.8)	2.9	(1.4)	1.0	(0.7)
Singapore	62.6	(3.6)	36.1	(3.6)	0.7	(0.7)	0.7	(0.7)
Slovak Republic	30.0	(3.5)	66.8	(3.6)	0.1	(0.1)	3.0	(1.3)
Spain	16.8	(3.3)	10.1	(3.1)	59.7	(4.9)	13.5	(3.5)
Sweden	8.1	(3.0)	14.5	(3.1)	22.0	(4.2)	55.4	(4.8)
Sub-national entities								
Abu Dhabi (United Arab Emirates)	68.3	(4.2)	29.0	(4.3)	0.6	(0.6)	2.2	(1.3)
Alberta (Canada)	73.6	(3.4)	22.2	(3.5)	3.8	(1.8)	0.4	(0.4)
England (United Kingdom)	32.5	(5.7)	63.4	(6.1)	m	m	4.1	(2.6)
Flanders (Belgium)	11.0	(2.8)	2.0	(1.1)	72.9	(4.3)	14.2	(3.3)
Shanghai (China)	92.4	(1.9)	5.4	(1.8)	2.2	(1.1)	m	m
Average	45.9	(0.6)	23.8	(0.5)	19.4	(0.5)	10.9	(0.4)
Variance between systems (L2)	2.8		2.1		4.9		3.9	
Variance between principals (L1)	3.3		3.3		3.3		3.3	
Residual Intraclass correlation	0.5		0.4		0.6		0.5	

Notes:

m = missing (as none of the school leaders fall into this category).

Data from Norway are not included in the table as the latent class analyses was based, among other factors, on the percentage of time principals spend on curriculum and teaching related tasks and meetings. This percentage is missing for Norwegian schools.

As data the United States did not meet the international standards for participation rates, data from the United States were not included in the latent class analyses directed towards the identification of types of school leadership.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

StatLink http://dx.doi.org/10.1787/888933369932

Table 1.5 **Countries' and economies' classification according to the overall leadership types of their principals[4]**

	Degree of distributed leadership	Degree of instructional leadership	Percentage of time spent on educational leadership activities	
	%	%	%	Cluster
Abu Dhabi (United Arab Emirates)	12.46	10.93	21.6	1
Alberta (Canada)	13.70	11.22	17.3	1
Australia	13.42	11.18	24.8	1
Brazil	12.95	11.32	23.0	1
Bulgaria	11.87	11.18	17.0	1
Chile	13.39	11.55	21.3	1
Czech Republic	13.02	11.47	15.8	1
Georgia	13.97	11.61	26.9	1
Korea	12.70	11.59	22.9	1
Latvia	13.68	11.70	22.3	1
Malaysia	12.08	13.10	29.7	1
Mexico	12.72	11.80	24.0	1
Poland	12.21	11.92	23.3	1
Romania	12.74	11.81	22.1	1
Russian Federation	13.52	12.05	33.0	1
Serbia	12.00	12.05	21.9	1
Shanghai (China)	12.17	12.48	26.1	1
Singapore	11.97	12.75	23.4	1
Croatia	12.75	9.59	18.0	2
Denmark	11.95	9.82	17.8	2
Estonia	13.04	9.83	16.9	2
Finland	11.01	9.45	18.4	2
Flanders (Belgium)	12.09	10.18	20.9	2
France	13.02	10.37	24.6	2
Iceland	12.30	10.70	17.8	2
Netherlands	12.27	10.56	22.2	2
Portugal	12.65	10.75	18.4	2
Spain	11.48	10.85	16.6	2
Sweden	11.67	10.04	18.6	2
England (United Kingdom)	12.21	11.56	21.1	3
Israel	10.40	11.52	23.9	3
Italy	10.98	10.50	24.6	3
Japan	9.93	9.20	25.2	3
New Zealand	11.91	11.07	19.4	3
Slovak Republic	11.84	11.48	21.2	3
Average	12.34	11.12	21.8	

Notes:

Cluster classification

1: Countries and economies with mainly integrated leaders.

2: Countries and economies mainly inclusive leaders.

3. Countries and economies with mainly educational leaders.

Data from Norway are not included in the Table as the latent class analyses was based, among other factors, on the percentage of time principals spend on curriculum and teaching related tasks and meetings. This percentage is missing for Norwegian schools.

As data the United States did not meet the international standards for participation rates, data from the United States were not included in the latent class analyses directed towards the identification of types of school leadership.

Countries are ranked in alphabetical order within the three clusters.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Figure 3.15.

StatLink http://dx.doi.org/10.1787/888933369940

Table 1.6 Association between types of leadership and professional learning communities' dimensions, across educational levels

		Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Primary education	Instructional leadership	**+**	**+**	+	+	
	Distributed leadership			**+**		
Lower secondary education	Instructional leadership	**+**			**+**	
	Distributed leadership			**+**		
Upper secondary education	Instructional leadership	**+**				
	Distributed leadership			**+**		

Notes:

+ = positive effect; - = negative effect

Signs in bold font indicate significant effects at $p < 0.01$; grey signs indicate significant effects at $p < 0.05$.

Results of association are controlled for other school and teacher characteristics that might influence these relationships. For more information, see Chapters 4 and 6.

Since the analysis for each educational level consisted of different samples of countries and economies, caution should be taken when comparing results across levels. See Table 1.1 for the list of countries and economies included in the analysis of each educational level.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Tables 4.2, 4.3., 4.4., 4.5, 4.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.17, 6.18, 6.19, 6.20 and 6.21.

Table 1.7 Association between types of leadership and positive learning environment dimensions, across educational levels

		Classroom disciplinary climate	Positive teacher-student relationship
Primary education	Instructional leadership		
	Distributed leadership		+
Lower secondary education	Instructional leadership		
	Distributed leadership		**+**
Upper secondary education	Instructional leadership		
	Distributed leadership		+

Notes:

+ = positive effect; - = negative effect

Signs in bold font indicate significant effects at $p < 0.01$; grey signs indicate significant effects at $p < 0.05$.

Results of association are controlled for other school and teacher characteristics that might influence these relationships. For more information, see Chapters 5 and 6.

Since the analysis for each educational level consisted of different samples of countries and economies, caution should be taken when comparing results across levels. See Table 1.1 for the list of countries and economies included in the analysis of each educational level.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.2, 4.3., 4.4., 4.5, 4.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.17, 6.18, 6.19, 6.20 and 6.21.

Notes

1. For this report, the 1997 ISCED classification instead of the revised 2011 ISCED classification is used, as education levels in TALIS 2013 were coded and interpreted according to the 1997 classification.

2. In this report, the concept of "professional learning communities" was based on five indicators measured in TALIS 2013: teachers' engagement in reflective dialogue, deprivatised practice, shared sense of purpose, collaborative activity and a collective focus on learning. For more information, see Chapter 4.

3. In this report, the concept of "learning climates" was based on two indicators measured in TALIS 2013: classroom disciplinary climate and positive teacher-student relationships. For more information, see Chapter 5.

4. A latent class analyses, investigates whether the principals of lower secondary education can be classified systematically into a restricted number of groups (also called clusters or classes) based on their scores on four indicators: instructional leadership, distributed leadership, time spent on educational leadership and educational leadership practice policy.

The aim of the modelling is to group principals who share similar school leadership characteristics. On the other hand, principals who belong to the various groups should have a scoring on the four school leadership indicators as dissimilar as possible to the other groups. Based on the results of the latent class analyses, the report explores whether certain types of integrated leadership can be identified for principals in lower secondary education within and between countries. For more information, see the section in Annex B on *Multilevel latent class analyses*.

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2

Educational leadership for learning

Instructional and distributed leadership are regarded as important for creating and sustaining professional learning communities and for creating a climate conducive to student learning. This chapter addresses these issues by first examining how school leadership is defined in this report. The second part of the chapter desribes the core characteristics of professional learning communities and a learning climate in schools. In the third part, the role of school leadership in creating a learning environment in schools is examined. The fourth section explores leadership roles conducive to the development of professional learning communities in schools.

Highlights

- Both instructional leadership and distributed leadership are types of school leadership that recent research has identified as part of "leadership for learning". This type of leadership is highly desirable for improving school quality. While instructional leadership refers to the efforts of the principal in supporting instruction and learning in schools, distributed leadership acknowledges the collective effort of improving school quality by taking into account the involvement of other relevant stakeholders, such as staff, parents and students.
- According to the literature, a teacher's professional learning community can sustain and support quality instruction and learning. These communities refer to structural and recurrent actions aimed at encouraging dialogue and collaboration between school teachers in order to improve their practices. Thus, it is recommended that principals, through their leadership action, build and maintain these communities. Leadership orientated to instruction and learning can help sustain the collaboration between teachers aiming at improving student outcomes.
- A positive learning climate means the opportunity given to students to work in an orderly and encouraging environment that does not present a distraction to their learning. Evidence has shown that a positive learning environment can be a mediating mechanism between the actions of principals and student outcomes. Principals' actions aim at improving teacher relations with students and the involvement of students in some aspects of school decisions can definitely create a more positive and engaging environment.

EDUCATIONAL LEADERSHIP FOR SCHOOL IMPROVEMENT

At the core of school reform directed at improving the quality and equity of education is the teacher's ability to enhance student learning (Little, 2002; Vandenberghe, 2002). This requires the development of teaching skills to ensure that teachers are able to address the diverse needs of students in their classroom, that they are knowledgeable about student learning and academic content and skilful at the craft of teaching (Darling-Hammond et al., 2009). To accomplish this, school boards and principals need to create the conditions within schools for structured professional learning that engages all teachers and benefits all students. Hallinger and Heck (2010) termed this "leadership for learning". In their view, leadership for learning encompasses creating and conveying a vision of school improvement by making decisions to facilitate action that focuses the energy of the school on improving student outcomes and fostering commitment. Second, it embodies shared governance by empowering staff and encouraging their participation in the decisions taken at the school; and third, leadership for learning comprises obtaining and allocating resources to support teaching and learning (Hallinger and Heck, 2010).

Leadership for learning incorporates various conceptualisations of school leadership, but draws heavily on previous research into instructional leadership. Instructional leadership refers to "…those sets of leadership practice that involve the planning, evaluation, co-ordination, and improvement of teaching and learning." (Robinson, 2010: 2). Based on early research on effective schools, instructional leadership was conceived as providing coherence to the instructional programme at the school;

formulating central instructional objectives; setting high academic standards; making frequent classroom visits; keeping up with educational policies and teachers' concerns; creating incentives for student learning; and maintaining student discipline at the school (Bossert et al., 1982). Over the past decades, this view of mainly hands-on instructional leadership, in which the principal is actively involved in curriculum and instruction issues, has gradually changed to a view of the instructional leader as facilitating and supporting a strong focus on instruction and learning in school, and promoting the professional development of teachers to ensure that all teachers possess and retain teaching skills for optimising student learning. Horng and Loeb (2010: 67) argued that this facilitating role of principals is the key to effective leadership. School leaders affect what students learn mainly through "…staffing a school with high quality teachers and providing them the appropriate supports and resources to be successful in the classroom." In their view, a more directive principal who is actively engaged in curriculum and instruction may be less effective, as such a role will impede the principal's capacity for creating the necessary structures and resources for school staff to enhance student learning.

This view on instructional leadership reflects the current understanding of the role school leaders may play in enhancing student achievement at their school. Although in some countries school leaders may directly have an impact, albeit a relatively small impact, on student achievement, their main effect on student learning is indirectly, by establishing a structure and providing resources conducive to student learning (Bell, Bolam and Cubillo, 2003; Witziers, Bosker and Krüger, 2003). Whereas initial reviews found relatively small or unstable effects of educational leadership across studies, later reviews by Marzano, Waters and McNulty (2005) and Robinson, Lloyd and Rowe (2008) report a greater effect of leadership on student learning. In particular, Robinson, Lloyd and Rowe's (2008) review includes a larger number of studies on the indirect effects of leadership. The study concludes that instructional leadership actions are among the strongest predictors of leadership on student achievement and that promoting and participating in teacher learning and development was found to be especially crucial. This implies that school leaders not only promote, but directly participate with teachers in formal or informal professional learning. Moreover, school leaders should engage in establishing goals and in planning, co-ordinating and evaluating teaching and the curriculum. Thus, leaders set goals, ensure that staff are competent for their duties, evaluate whether the goals have been met and provide teachers with feedback for improvement.

Several factors identified by Robinson, Lloyd and Rowe (2008) imply that leadership is a collective effort in which not only the principal, but all staff members are involved. Distributed leadership in schools reflects the view that not only is leadership exerted by the principal, but that several organisation members act as leaders in school (Spillane, 2006; Spillane, Halverson and Diamond, 2004). As various scholars have noted, distributed leadership is more the acknowledgement of how leadership functions in practice than a normative view on how leadership should be enacted in schools. It recognises the existence of formal and informal leadership roles, and incorporates the activities of multiple groups of school members guiding and mobilising staff towards instructional change (Spillane, Halverson and Diamond, 2004). Leadership roles are taken up by other organisation members, like teachers or other professional staff in the school. Copland (2003: 376) broadens this view and argues that distributed leadership is to be conceived as "…a set of functions or qualities shared across a much broader segment of the school community that encompasses administrators, teachers and other professionals and community members both internal and external to the school." This view is less rooted in a professional perspective on distributed leadership, and strongly focuses on the local community of the school as enactors of leadership.

PROFESSIONAL DEVELOPMENT THROUGH LEARNING COMMUNITIES

Over the past three decades, the emphasis with regard to teachers' professional development has gradually shifted from formal in-service training and teacher education programmes to teacher networks, coaching, mentoring and other activities in which teachers in schools learn from each other. In the early 1980s, Little (1982) advocated "collegial" forms of professional development over more formal training, as she found that successful schools, particularly those receptive to staff development, differed from less successful schools by patterned norms of interaction among staff. In these schools, teachers valued and participated in norms of collegiality and continuous improvement and pursued a greater range of professional interactions with fellow teachers or administrators, including talk about instruction, structured observation and shared planning or preparation.

Rosenholtz (1989) refers, in this respect, to the supportive collegial group. She reports that a vast majority of teachers in so-called learning-enriched schools indicated that they improved their teaching skills through consultation with other teachers rather than through pre-service training or in-service workshops and outside courses, which were more common among teachers in "moderately learning impoverished schools" (Rosenholtz, 1989; Rosenholtz, Bassler and Hoover-Dempsey, 1986). Based on collegial norms, professional learning communities are concerned with the structure and organisation of schools by integrating their professional development efforts in communities of practice where teachers learn and examine their day-to-day practice with the goal of meeting the educational needs of their students and enhancing their learning (Bolam and Britain, 2005; Vescio, Ross and Adams, 2008). Hord (1997) indicates that professional learning communities can increase staff capacity to serve students, but success depends on what the staff do in their collective efforts. Peterson, McCartney and Elmore (1996: 119) caution that "…while school structures can provide opportunities for learning new practices, the structures, by themselves, do not cause the learning to occur."

A meta-analysis of Lomos, Hofman and Bosker (2011a) shows a positive relationship between professional learning communities and student achievement in secondary schools. Vescio, Ross and Adams (2008) argue that the impact of professional learning communities is largely dependent on a focus on student learning among the school staff. Teachers working in professional learning teams directed towards developing instructional strategies based on student data were found to have an effect on student achievement. A less clear focus on improving test scores, on the other hand, leads to less meaningful student outcomes (see also Berry, Johnson and Montgomery, 2005; Hollins et al., 2004; Strahan, 2003).

An effective professional learning community, therefore, has the ability to promote and sustain the learning of all professionals in the school community, with the collective purpose of enhancing student achievement (Bolam and Britain, 2005). Professional learning communities are based on the premise that knowledge is situated in the day-to-day experiences of teachers and is best understood through critical reflection with others who share the same experience. Teachers who actively engage in professional communities will increase their professional knowledge, which will lead to the enhancement of student learning. Professional learning communities should support teachers in making decisions based upon their goals, their contexts, the needs of students and their professional knowledge to become effective (Vescio, Ross and Adams, 2008).

Five interconnected characteristics of professional learning communities are generally identified: reflective dialogue; deprivatisation of practice; a collective focus on student learning; collaborative

activity; and a shared sense of purpose (Bryk, Camburn and Louis, 1999; Lomos, Hofman and Bosker, 2011a; Louis and Marks, 1998; Louis, Marks and Kruse, 1996; Wahlstrom and Louis, 2008):

1. "Reflective dialogue" refers to the extent to which teachers engage in professional conversations about specific educational issues. Based on these reflections, teachers are inclined to further improve their teaching (Lomos, Hofman and Bosker, 2011b). Vieluf et al. (2012) argue that this requires a climate for open discussion and critical reflection of teachers' own behaviours, roles and practices, as well as collective values and practices at the school. A premise is mutual trust among school staff and a willingness to accept and share new knowledge and information among teachers.
2. "Deprivatised practice" refers to teachers observing other teachers' classes, with the goal of providing feedback on their teaching (Lomos, Hofman and Bosker, 2011b). Teachers' work is, to a large extent, confined to the classroom, where they interact with groups of students. Still, often the only feedback teachers get is from their students. Deprivatised practice implies discussion about teaching practices and sharing ideas and problems among staff based on observation by peers. Teachers observe each other, give feedback, and act as mentor, advisor or specialist (Lieberman, Saxl and Miles, 1988; Little, 1990).
3. "A collective focus on student learning" indicates a high level of teachers' commitment to students' success. An undeviating concentration on student learning is a core characteristic of a professional community (Newmann and Wehlage, 1995). Teachers' professional actions focus on choices that affect students' opportunities to learn and provide substantial student benefit (Abbott, 1991; Darling-Hammond and Goodwin, 1993; Darling-Hammond and Snyder, 1992; Little, 1990). Teachers discuss the ways in which instruction promotes students' intellectual growth and development, as distinguished from simply focusing on activities or strategies that may engage student attention.
4. "Collaborative activity" represents a measure of the extent to which teachers engage in co-operative practices. Professional communities foster the sharing of expertise, and faculty members call on each other to discuss the development of skills related to the implementation of practice (Little, 1990, 1982). By collaborating, they create shared understandings from complex and confusing data. Collaborative work also increases teachers' sense of affiliation with each other and with the school and their sense of mutual support and responsibility for effective instruction (Louis, 1992).
5. "Shared sense of purpose" represents the teachers' degree of agreement for the school's mission and its operational principles. It refers to common goals, and a common mindset to work towards them and to take them into account for decision making. Through co-operative discussion and reflection, professional learning communities develop a shared view on fundamental issues, such as the core objectives to be achieved with students, effective roles and teaching strategies teachers should acquire, and determining whether goals set are actually achieved (see Vieluf et al., 2012).

SCHOOL LEADERSHIP AND PROFESSIONAL LEARNING COMMUNITIES

Due to their impact, it seems to be worthwhile to put considerable effort into the creation and support of professional learning communities (Lomos, Hofman and Bosker, 2011a; Stoll et al., 2006). Although professional learning communities are extremely difficult to develop (Harris and Jones, 2010; Huffman and Jacobson, 2003; Robins and Alvy, 2004), principals are considered influential in their development (Stoll and Louis, 2007). Bryk, Camburn and Louis (1999: 757) even argue that "…it seems very unlikely

that a professional learning community can be sustained without strong principal support." According to Louis, Marks and Kruse (1996), the effectiveness of professional learning communities tends to be higher when teachers experience the support of their principal. Principals play a central role in planning, implementing and sustaining the professional learning community (Copland and Knapp, 2006; Robbins and Alvy, 2004; Stoll et al., 2006; Wahlstrom and Louis, 2008).

Bryk, Camburn and Louis (1999) indicate that two tasks of the principal are crucial in establishing a professional learning community in schools. First, the principal has to be in charge of the collective effort to build a professional learning community (DuFour and Dufour, 2012). Building and sustaining professional learning communities is a human enterprise (Stoll et al., 2006), in which the principal has to nurture the relationships to create a culture or climate in the school in which a professional learning community can flourish (Bryk, Camburn and Louis, 1999). The principal, for instance, indirectly helps to create an environment conducive to teachers' professional development by fostering staff commitment and creating a supportive collegial environment in the school (Leithwood and Jantzi, 1990; Robbins and Alvy, 2004). The leading role of the principal seems to be especially relevant in building a collective focus on student learning and the shared sense of purpose of a professional learning community, because these characteristics both reflect a shared vision (Lomos, Hofman and Bosker, 2011b). The principal has to lead the collective effort in order to shift from a focus on teaching to a focus on learning. Teachers have to become highly committed to students' learning success, which implies not simply an effort to ensure that students are taught, but, even more, that they have to ensure that students learn (DuFour, 2004). Likewise, the principal leads the collective effort to increase the shared sense of purpose. This refers to the degree of teacher agreement with the mission of the school and its operational principles (Lomos, Hofman and Bosker, 2011b). Effective leaders identify the mission of the school and reward actions that further the mission. They act as "keepers of the vision" (Louis, Marks and Kruse, 1996).

Next to this, the principal is expected to facilitate the professional learning community at their school. The principal has to create conditions that lead to improved learning of the students and the learning of the school staff (DuFour and DuFour, 2012). Time and resources must be provided to allow professional learning communities to occur (Bryk, Camburn and Louis, 1999; Stoll et al., 2006; Wahlstrom and Louis, 2008). The facilitating role of the principal seems to be mainly relevant with regard to the reflective dialogue, deprivatisation of practice and collaborative activity in the school. These three characteristics involve interaction between teachers (Lomos, Hofman and Bosker, 2011b), whereas the role of the principal is mainly facilitating. The principal has to make time and space available for this interaction. Youngs and King (2002) report that principals can promote reflective inquiry and collaboration by allocating time for teachers to interact on a consistent basis. Teachers working with at least one other related professional on a sustained basis positively impacts teaching and learning. This collaborative, continuing professional development leads, for instance, to enhanced beliefs among teachers in their power to make a difference to their students' learning, principally to enhanced expert knowledge (Cordingley et al., 2003). In this sense, the principal helps to create useful teacher development directly by providing the needed resources (Leithwood and Jantzi, 1990; Stoll et al., 2006; Wahlstrom and Louis, 2008).

SCHOOL LEADERSHIP ROLES CONDUCIVE TO DEVELOPING PROFESSIONAL LEARNING COMMUNITIES

Principals seem to need different aspects of leadership behaviour to fulfil their role in the development and sustainment of professional learning communities. For example, as Robinson, Lloyd and Rowe (2008: 31) state: "…educational leadership involves not only building collegial teams, a loyal and

cohesive staff, and sharing an inspirational vision. It also involves focusing such relationships on some very specific pedagogical work." With this clear focus on pedagogical work, Robinson, Lloyd and Rowe (2008) cite the concept of instructional leadership, also referred to as learning-centred leadership (Robinson, 2010). Instructional leadership concerns "…those sets of leadership practice that involve the planning, evaluation, co-ordination, and improvement of teaching and learning" (Robinson, 2010: 2). Instructional leadership corresponds well, in general, with the premise that professional learning communities increase teacher practice with the ultimate goal of enhancing student learning. As indicated before, the impact of a professional learning community on student outcomes is largely dependent on the focus on student learning among the staff (Vescio, Ross and Adams, 2008). It is often emphasised that effective schools require principals to become instructional leaders (Robinson, 2010; Robinson, Lloyd and Rowe, 2008; Wahlstrom and Louis, 2008). According to Robinson, Lloyd and Rowe (2008), it is more likely for principals in high performing schools to be seen as a source of instructional advice. Meanwhile, Wahlstrom and Louis (2008) suggest that perhaps teachers only turn to the principal for direct instructional support when the professional learning community is weak. When teachers share, discuss and demonstrate ideas about practice on a regular basis, teachers may have decreased dependence on the principal as a direct source of expert knowledge.

Furthermore, it is an unmanageable task for the principal to be in several classrooms most days, as well as being an expert in all aspects of instructional practice. Therefore, principals must share their responsibilities (Wahlstrom and Louis, 2008). Moreover, without principals' willingness to delegate or give away some of their power, a collaborative culture that fosters both teacher development and student development seems unlikely (Leithwood and Jantzi, 1990). Shared leadership, meaning the increasing influence of teachers and their participation in decision making (Wahlstrom and Louis, 2008), seems to be indispensable in professional learning communities (see also Hord, 1997; Lee, Zhang and Yin, 2011). Although professional learning communities focus more on sharing teacher knowledge about practice than on decision making, it is suggested that shared leadership may have a positive impact on binding teachers to the strategic decisions that teachers face when they design their instructional practices (Wahlstrom and Louis, 2008). This is confirmed by the multiple case studies by King (2011), who argues that principals encourage teachers to develop professional learning communities by giving them autonomy.

To develop their school as a professional learning community, principals must exercise a kind of leadership that corresponds well with a learning organisation (Wahlstrom and Louis, 2008). Central to a learning organisation is organisational learning, indicating the intentional use of learning processes to continuously transform the organisation. Transformational leadership is often associated with learning organisations (see, for example, Coad and Berry, 1998). In the concept of transformational leadership, the leader is regarded as an agent of change, which is often opposed to transactional leadership: a steady state of leadership in which the school leader is the manager of transactions (Huber, 2004). Leaders who are effective change agents guide the school collaboratively to develop a shared vision, to learn collectively and to share professionally and personally (Huffman and Jacobson, 2003). More specifically, to build a professional learning community, principals are challenged to become agents of change (Williams, 2006). Wiley (2001) indicates a relationship between transformational leadership and professional learning communities by concluding that only when teachers experience above average transformational leadership will professional learning communities have a positive effect on student performance in mathematics. This is in accordance with the research of Huffman

and Jacobson (2003), who conclude that leaders have greater opportunities for success in building a professional learning community when they exhibit the characteristics of a transformational leadership style. This is confirmed by King (2011), who argues that where the principal has a transformational leadership style, it supports the development of professional learning communities.

Williams (2006) argues, additionally, that developing an effective professional learning community relies on a principal's capacity to adopt a collaborative leadership style. In addition, Huffman and Jacobson (2003) conclude that school leaders have greater opportunities for success in building a professional learning community if they exhibit the characteristics of a collaborative leadership style. In this collaborative leadership style, the leader and the teacher negotiate a course of action and jointly take responsibility for decisions. Subsequently, a collaborative leadership style, as described by Williams (2006) and Huffman and Jacobson (2003), shows characteristics of both transformational and distributed leadership (Huffman and Jacobson, 2003; Leithwood and Jantzi, 1999; Williams, 2006).

According to Marks and Printy (2003), strong transformational leadership is essential in supporting the commitment of teachers and placing importance on vision building. Without instructional leadership, however, there is a lack of focus on teaching and learning. Moreover, instructional leadership must be shared for a dynamic collaboration between teachers and their principal. When transformational leadership and distributed instructional leadership coexist in an integrated form, termed "integrated leadership", the impact on pedagogical quality and student achievement is substantial (Marks and Printy, 2003). This is confirmed by the meta analysis of Robinson, Lloyd and Rowe (2008). It is possible that integrated leadership might also affect the development of professional learning communities. However, by the increasing convergence between several concepts of leadership (Robinson, Lloyd and Rowe, 2008), the question revolves around which specified leadership practices may influence the development of professional learning communities.

In conclusion, it is widely assumed that principal leadership is a key factor in building and sustaining professional learning communities. In a professional learning community, the principal has a leading role, as well as a facilitating role. A collaborative leadership style and aspects of the concepts of instructional leadership, distributed leadership and transformational leadership are frequently associated with the development and sustainability of professional learning communities. However, there is no clear, unambiguous depiction of the effect of leadership on building professional learning communities. It is of interest to examine which of the principal's specified leadership practices may influence the development of a professional learning community.

EDUCATIONAL LEADERSHIP AND CREATING A LEARNING CLIMATE AT SCHOOL

A positive learning climate refers to a learning environment in which students have the opportunity to work on their tasks and in which they are not distracted from their work. The absence of order and safety at the school may seriously weaken the motivation of both teachers and students in school (Sebastian and Allensworth, 2012). Following Edmonds' (1979) early review on factors conducive to learning, creating an orderly environment in the classroom has been stressed as one of the key factors for student achievement in school effectiveness reviews (Levine and Lezotte, 1990; Sammons, Hillman and Mortimore, 1995; Scheerens and Bosker, 1997). Well-prepared lessons may not have the desired results if students are not responsive or misbehave in class.

Developing a positive climate in school is, as Hallinger and Murphy (1986) argue, one of the major assignments of instructional management – next to defining the school's mission and managing the instructional programme. Sebastian and Allensworth (2012) argue that creating such a climate indirectly enhances student learning. In their study on Chicago high schools, they found that the learning climate was the mediating mechanism between principal leadership and differences in instruction and student achievement. They suggest that establishing a safe, achievement-oriented climate may be the most important leadership function for promoting achievement. Similar findings regarding middle schools in the United States are reported by O'Donnell and White (2005).

Moreover, as Mainhard, Brekelmans and Wubbels (2011) point out, student achievement is strongly related to how students perceive the social climate of their classroom and the way students perceive their interaction with teachers. Warm and supportive teachers create a climate in which students feel a stronger sense of belonging and are more engaged in the class. On the other hand, student learning is impeded when teachers act offensively and coercively. Principals should take account of the way teachers treat their students and take action when teachers interact with a student in a way that does not contribute to their learning.

In the report, two crucial components of learning environments are examined in relation to educational leadership:

a) "Classroom disciplinary climate" refers to what extent student learning is not hindered by noise and disruption in the classroom.

b) "Positive teacher-student relationships" refers to what extent teachers and students engage in a mutually helpful, friendly and respectful way.

Both of these components have considered being areas of direct teacher involvement. However, as has been argued throughout this section, principals can have a role, whether direct or indirect, in the situations taking place in the classroom. Thus, it is relevant examining to what extent the principal's leadership extend into the classroom.

SUMMARY

The report frames school leadership under a conception of "leadership for learning". Under this perspective, principals' leadership is categorised as all actions aiming at improving the quality of their school, whether through increasing the commitment of their staff or initiatives to expand student outcomes.

A "leadership for learning" perspective is best expressed in two types of leadership identified by the literature: instructional leadership and distributed leadership. Instructional leadership refers to practices that involve the improvement of teaching and learning, while distributed leadership refers to the incorporation of multiple stakeholders in mobilising efforts for the improvement of school quality.

Both types of leadership can have a significant association with crucial school quality indicators, such as professional learning communities and a positive learning environment. "Professional learning communities" refers to structural and recurrent actions aimed at encouraging dialogue and collaboration between school teachers in order to improve their practices. The literature has identified that the professional learning community has the capacity to sustain and promote the learning of a community of teachers and there seems to be a positive association between

the implementation of these communities and student achievement in secondary schools. Five interconnected characteristics of professional learning communities are generally identified: reflective dialogue; deprivatisation of practice; a collective focus on student learning; collaborative activity; and a shared sense of purpose.

Although the development of professional learning communities can be a complex task, it is undeniable that this would not be possible without strong support from the leadership. In particular, leadership that is orientated to learning can help sustain the collaboration between teachers aiming at improving student outcomes. At the same time, the deliberate inclusion of staff in school decisions can build a shared sense of purpose that helps to establish strong relationships which, in turn, help foster a learning community. Thus, instructional and distributed leadership play an important role in the proliferation of professional learning communities.

A positive learning climate means the opportunity given to students to work in an orderly and encouraging environment that does not present a distraction to their learning. Two crucial components of learning environments are going to be examined in this report in relation to educational leadership: classroom disciplinary climate and a positive teacher-student relationship.

Evidence has shown that a positive learning environment can be a mediating mechanism between the actions of principals and student outcomes. Principals' actions aim at improving teacher relations with students and the involvement of students in some aspects of school decisions can definitely create a more positive and engaging environment.

The existence and the strength of the association of instructional and distributed leadership with professional learning communities and a positive learning environment will be explored in this report and tested across countries and across educational levels.

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3

What determines school principals' leadership styles?

School leadership shapes the process at schools and indirectly affects student achievement. For that reason, knowing what characteristics influence educational leadership within schools can be used by principals and school boards to reflect on leadership in their schools and also by local, regional and national governments to create conditions for further enhancing school leadership. This chapter addresses these issues by examining to what extent characteristics of principals and the school context influence educational leadership across countries and economies. First, the chapter focuses on differences between systems with regard to instructional leadership of principals and characteristics that are related to instructional leadership. Then, countries and economies are compared regarding distributed leadership. The last section explores different types of leadership based on principals' instructional leadership, distributed leadership and their action directed towards the instructional processes at schools.

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Highlights

- In most countries and economies, a vast majority of principals act as instructional leaders, but about one-third still rarely engages in instructional leadership actions. For example, while in Malaysia nearly every principal is engaged in instructional leadership, in Japan only about one-third supports co-operation between teachers to develop new teaching practices and ensures that teachers take responsibility for improving their teaching skills or their students' achievements.
- Nearly all schools involve their staff in the decision-making process at school. Schools and systems differ, however, with regard to opportunities offered to students and their parents or guardians to be involved in school decisions.
- Principals who attended instructional leadership programmes are more frequently engaged in instructional leadership activities in their schools, but these training programmes explain only a small part of the differences in instructional leadership of principals across countries and economies.
- Principals who were involved in professional training or courses are more likely to create opportunities for staff, students and parents or guardians to take part in school decisions.
- About half of all principals across countries and economies exert integrated leadership. These principals have a strong focus on instructional and distributed leadership. They spend much time on curriculum- and teaching-related tasks in school and use student outcomes for developing instructional programmes and policies at their school.
- Specific types of school leadership are more prominent in certain countries and economies than others, which might indicate that leadership practices are idiosyncratic to each national context.

INSTRUCTIONAL LEADERSHIP IN LOWER SECONDARY SCHOOLS ACROSS COUNTRIES AND ECONOMIES

Instructional leadership refers to "…those sets of leadership practice that involve the planning, evaluation, co-ordination, and improvement of teaching and learning…" (Robinson, 2010: 2). Based on early research on effective schools, instructional leadership was conceived as providing coherence to the instructional programme at schools, formulating central instructional objectives, setting high academic standards, making frequent classroom visits, keeping up with educational policies and teachers' concerns, creating incentives for student learning, and maintaining student discipline at the school (Bossert et al., 1982). Over the past decades, this view of mere "hands on" instructional leadership, in which the principal is actively involved in curriculum and instruction issues, has gradually changed to a view of the instructional leader as facilitating and supporting a strong focus on instruction and learning in the school and also promoting professional development of teachers to ensure that all teachers possess and retain the teaching skills for optimising student learning.

Horng and Loeb (2010: 67) have argued that this facilitating role of principals is the key to effective leadership. School leaders affect what students learn mainly through "…staffing a school with high-quality teachers and providing them the appropriate supports and resources to be successful in the classroom." In their view, a more directive principal who is actively engaged in curriculum and instruction may be less effective, as such a role will impede the principal's capacity for creating necessary structures and resources for school staff to enhance student learning.

Whether principals take up such a facilitating and structuring role is measured in TALIS 2013 by means of the principal's engagement in supporting co-operation among teachers and ensuring that teachers take responsibility for the learning outcomes of their students and for improving their own teaching skills (Box 3.1). Figure 3.1 depicts to what degree, on average, principals in each of the countries and economies indicated that they are often or very often engaged in these instructional leadership practices.

Box 3.1 **Instructional leadership in TALIS 2013**

Instructional leadership is measured in TALIS 2013 by asking principals how frequently they have been engaged in the following activities in their school over the 12 months prior to the study:

- actions to support co-operation among teachers to develop new teaching practices
- actions to ensure that teachers take responsibility for improving their teaching skills
- actions to ensure that teachers feel responsible for their learning outcomes

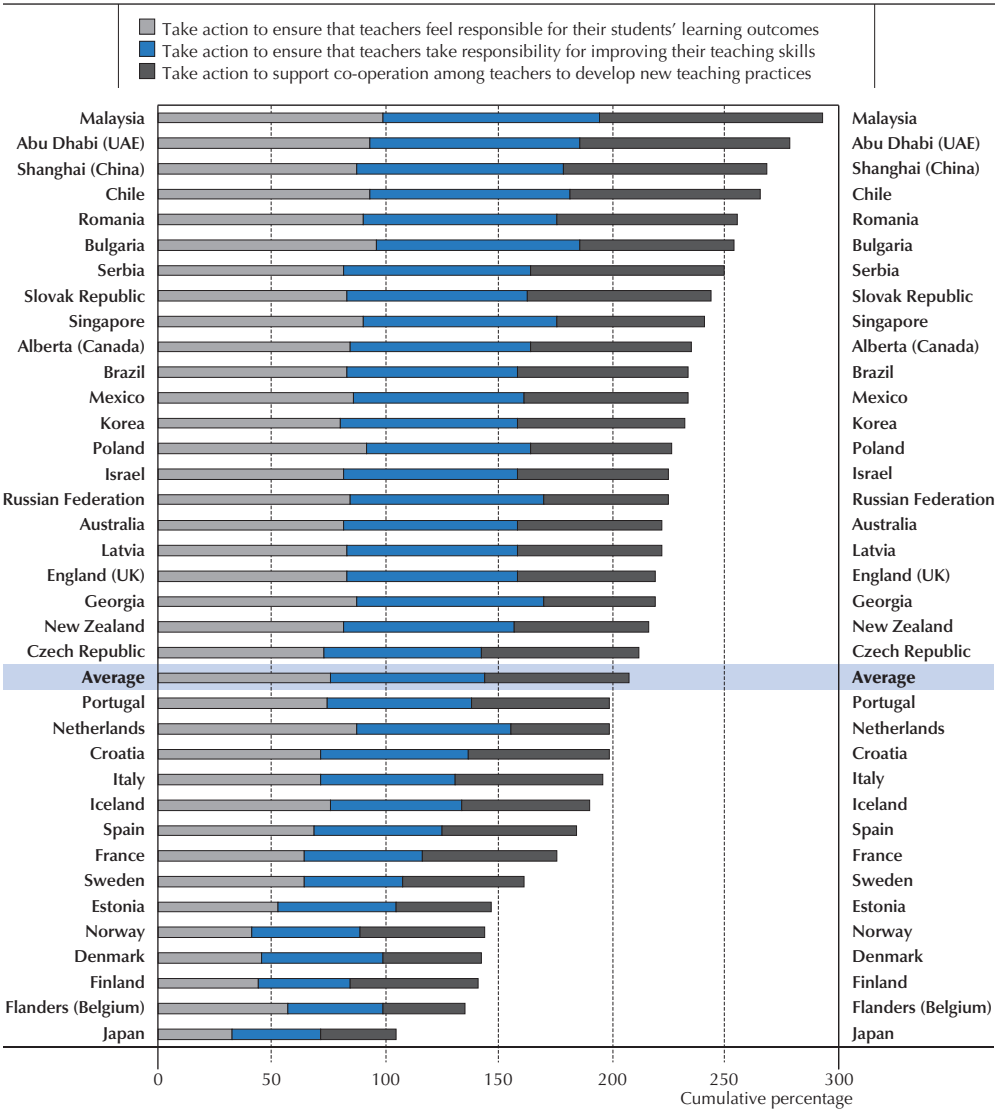
These items were measured on a four-point scale, with the response categories 1 for "never or rarely", 2 for "sometimes", 3 for "often" and 4 for "very often". The index of instructional leadership (PINSLEADS) was calculated to have a standard deviation of 2.0 and a midpoint of 10 to coincide with the midpoint of the scale. This means that a score of 10 for PINSLEADS corresponds with the average response of 2.5 on the three items in the index, and a score above 10 indicates consistent repetition of activities described by the items in this scale. For further information, the reader is referred to Chapter 10 of the *TALIS 2013 Technical Report* (OECD, 2014b).

In most countries and economies, a vast majority of principals (70% or more) indicate that they ensure that teachers feel responsible for their students' learning outcomes. In nearly all of these systems, a similar percentage of principals indicate that they take action to ensure that teachers feel responsible for improving their teaching skills and to support co-operation among teachers to develop new teaching strategies. However, there is a strong cross-country variation in the level of engagement in instructional leadership practices. In Malaysia, nearly all principals agree that they took instructional leadership action in their school. Principals are less engaged in instructional leadership practices in Denmark; Estonia; Finland; Flanders, Belgium; Japan; and Norway. While in most of these countries and economies about half of the principals indicate that they engaged in instructional leadership practices actions, in Japan, only slightly over one-third of all principals on average agrees that they were engaged in these practices.

■ Figure 3.1 ■

Engagement in instructional leadership in lower secondary education

Percentage of lower secondary education principals who report having engaged "often" or "very often" in the following instructional leadership activities during the 12 months prior to the study



Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "often" or "very often" engage in instructional leadership actions.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.1.

StatLink http://dx.doi.org/10.1787/888933369579

CHARACTERISTICS OF PRINCIPALS AND THEIR INSTRUCTIONAL LEADERSHIP

The leadership skills of leaders and their personal experience with teaching might affect the possibilities of exerting instructional leadership in their school. For that purpose, the following sections explore the relationship of a principal's instructional leadership and his or her experience in teaching, the completion of training or a course in instructional leadership, and whether the principal has his or her own teaching obligation, in the context of gender differences in instructional leadership across systems.

Gender and instructional leadership

Figure 3.2 depicts the differences in the instructional leadership scale between female and male principals across countries and economies. Systems with predominantly female principals are depicted in grey. Countries and economies with a majority of male principals are represented in blue. Systems differ considerably with regard to the gender of school principals in lower secondary education. Around three quarters of school principals are female in Bulgaria, Brazil, Latvia and the Russian Federation. In contrast, in Japan, less than 10% of principals are female, and in Korea just over 10%. In Denmark, the Netherlands and New Zealand, two-thirds of all principals are male (see Table 3.3).

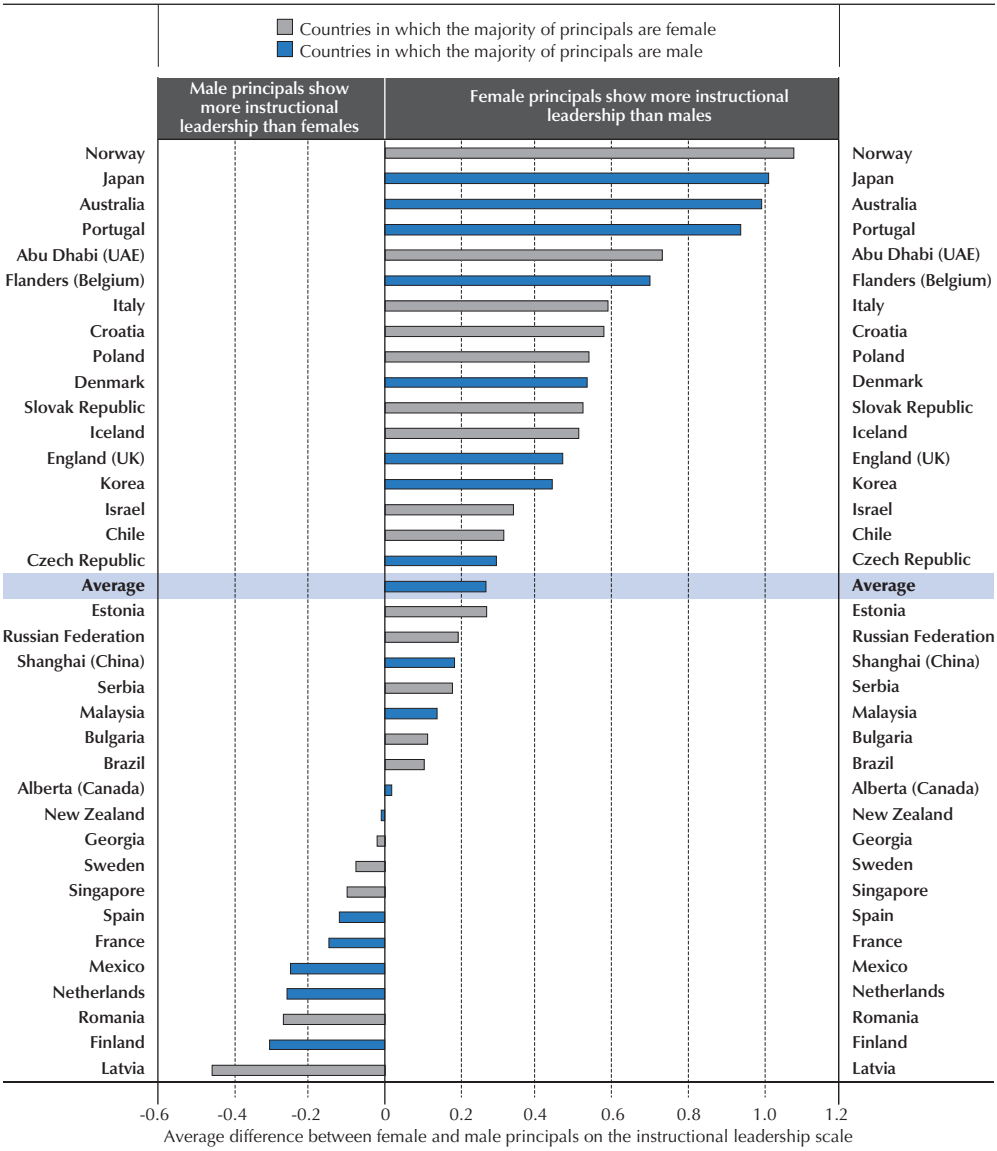
As the absence of a clear pattern in Figure 3.2 reveals, the relative percentage of females in educational administration has no significant relationship to females or males showing greater instructional leadership at the system level (Pearson's r = 0.23, p = 0.16). On average, women in educational administration score 0.27 higher in the instructional leadership scale than male principals. This is particularly evident in around a quarter of all countries and economies participating in TALIS, and in Australia, Japan, Norway and Portugal, the engagement of female principals over male principals is considerably strong. In contrast, male principals in Finland, Latvia, Mexico, the Netherlands and Romania give more attention than female principals to instructional leadership, but these gender differences are much smaller in these systems than those in favour of female principals in many other systems.

Principals' teaching experience and instructional leadership

Figure 3.3 indicates to what degree the teaching experience of principals affects their engagement in instructional leadership actions. Principals' teaching experience is categorised as minor or absent (equal to or fewer than 2 years of teaching experience), moderate (3 to 10 years of teaching experience), major (11 to 20 years of teaching experience) and extensive (more than 20 years of teaching experience). On average, principals with moderate to extensive teaching experience differ little in their engagement in instructional leadership. Principals with only minor or without any teaching experience appear to take relatively fewer instructional leadership actions, but in nearly all countries and economies only a marginal percentage of principals has less than two years of teaching experience before they become a principal (see Table 3.4). In Alberta, Canada; Israel; Italy; Malaysia; and Shanghai, China, none of the principals indicated having less than two years of teaching experience. In other systems, the percentage is below 8%, and in 30 out of all 37 systems, even below 4%. Only in Abu Dhabi, United Arab Emirates (11%) and France (20%) did a substantial number of principals indicate having no, or only minor prior teaching experience. For these educational systems, no significant differences in instructional leadership with regard to the teaching experience of principals are present (Table 3.4).

■ Figure 3.2 ■

Instructional leadership, by principals' gender, in lower secondary education



Notes:

In countries and economies depicted in grey, a majority of principals are female; in countries and economies depicted in blue, a majority of principals are male.

Countries and economies are ranked in descending order, based on the average differences in scores between women and men on the instructional leadership scale.

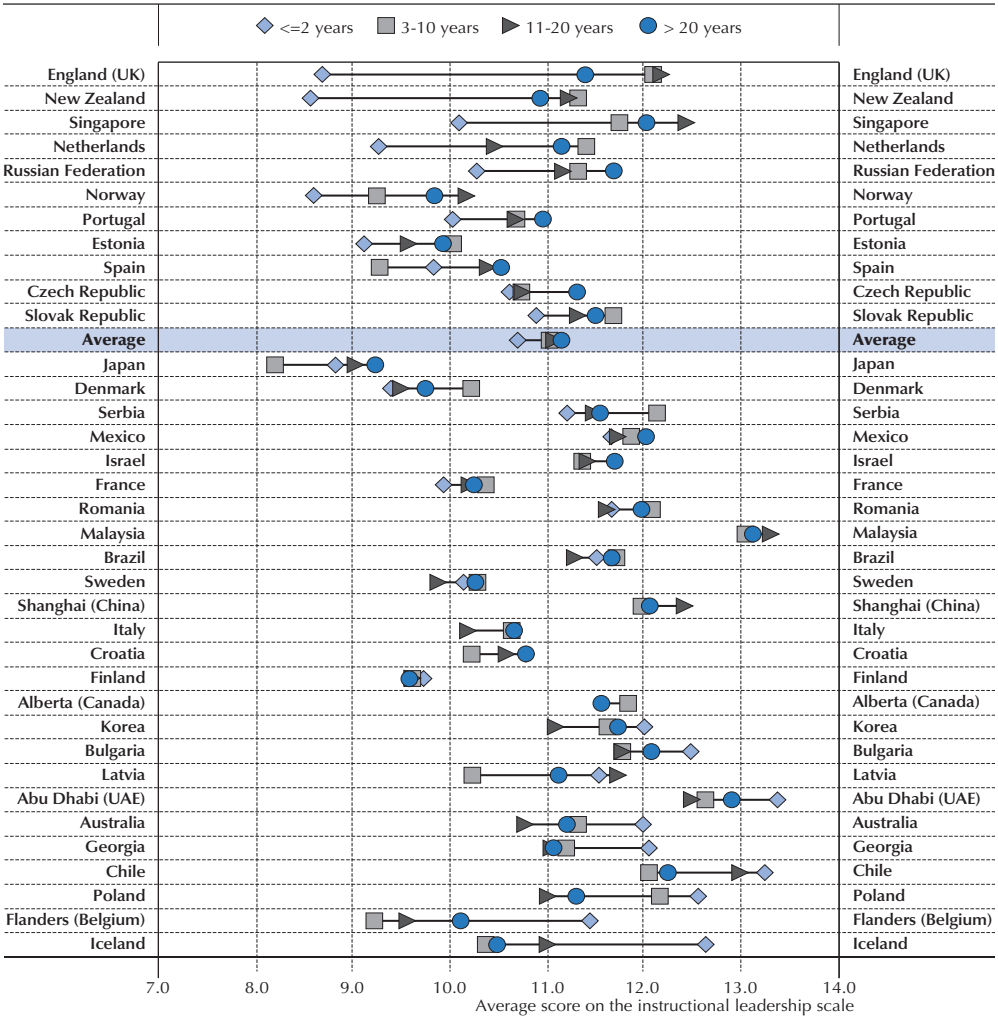
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.3.

StatLink http://dx.doi.org/10.1787/888933369581

■ Figure 3.3 ■

Instructional leadership, by principals' experience as a teacher, in lower secondary education

Average scores on the instructional leadership scale for principals with minor or no teaching experience, moderate teaching experience, major teaching experience or extensive teaching experience



Note: Countries and economies are ranked in descending order of the difference in averages scores on the instructional leadership scale between principals with over 20 years of experience and those with two years or fewer (3-10 years if data was not available).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.4.

StatLink http://dx.doi.org/10.1787/888933369599

Principals' training and instructional leadership

Leadership preparation programmes affect to what degree principals are engaged in instructional leadership in their school (Pounder, 2011). Studies from the United States about the effects of leadership

preparation programmes reveal that principals who were trained more thoroughly in instructional and organisational leadership more often engaged in these leadership practices in their schools (Orr and Orphanos, 2011), which was related to increases in teacher quality (Fuller, Young and Baker, 2011).

In Figure 3.4, principals' engagement in instructional leadership is shown for principals who report not to have been trained in instructional leadership compared to those who have. The figure includes only those countries and economies in which at least 10% of the principals indicated that they participated in training or a course in instructional leadership and at least 10% of the principals indicated that they did not participate in such a training or course. Countries are ranked based on the difference in instructional leadership between principals who attended training or a course in instructional leadership and those who did not.

Across countries and economies, principals who attended training or a course in instructional leadership were, on average, more frequently involved in educational leadership actions in their school. This is most apparent in Denmark, Romania and Spain. However, the degree of instructional leadership among principals from Denmark who were trained in instructional leadership is considerably lower than the instructional leadership of (trained and non-trained) principals in various other systems. In England, United Kingdom and the Netherlands, principals who did not participate in any training or course in instructional leadership not only report to be engaged more often in instructional leadership actions than principals who received training in this domain, but they also appear to take such action more often than principals in several other countries and economies (see Table 3.5). For both countries, however, no significant differences were found in instructional leadership between principals who were trained in instructional leadership and those who were not. This indicates that, in many countries and economies, training in instructional leadership may be beneficial to encourage principals to act as instructional leaders. The large differences between countries and economies, on the other hand, suggest that other system specific factors might be of even greater importance.

Principals' teaching obligation and instructional leadership

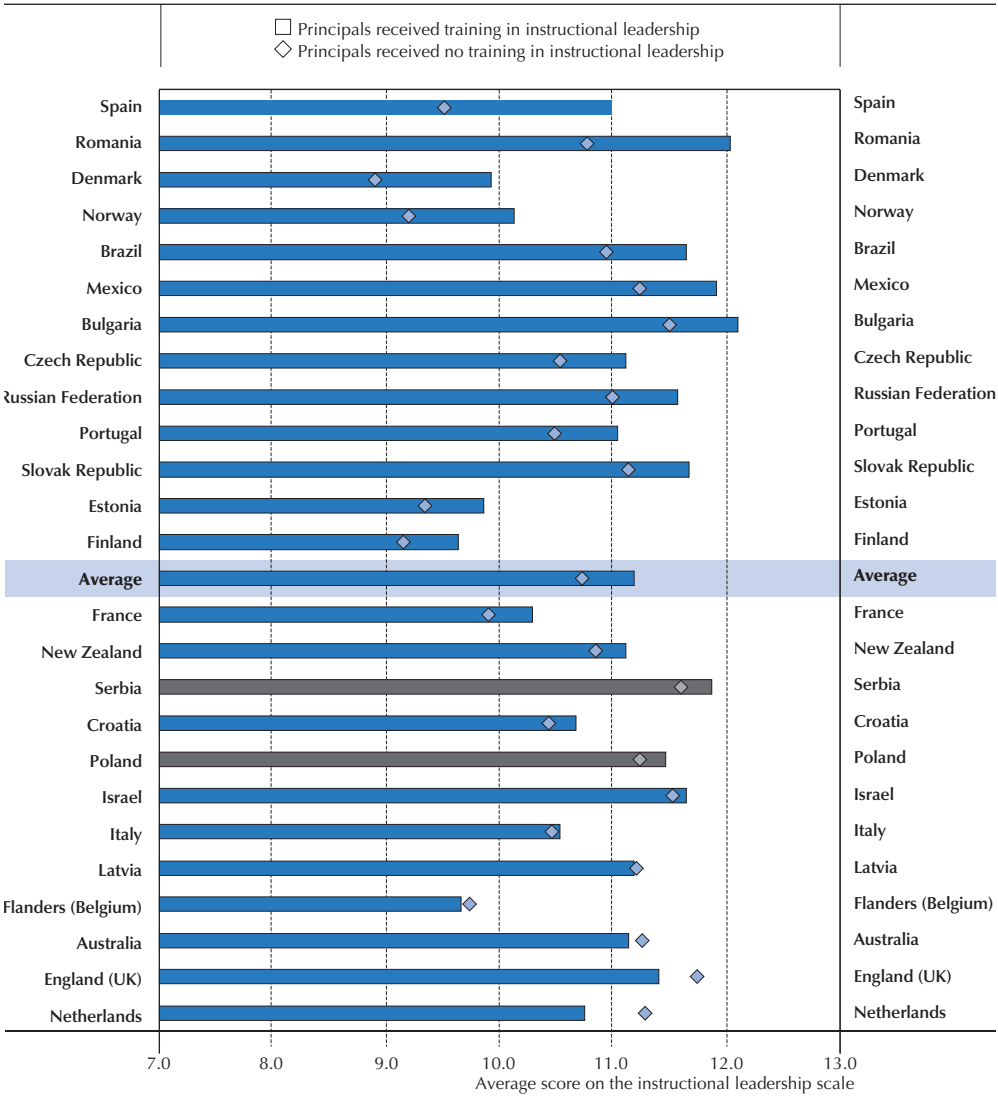
Whether principals themselves have a teaching obligation might affect their engagement in instructional leadership actions. By teaching students in school, principals might be aware of the problems teachers face in their lessons – especially when they had only minor teaching experience before becoming a principal, or have been working as a principal for a considerable number of years. Moreover, the principal's involvement in teaching could lead to a greater acceptance among the teachers at the school of instructional policies issued by the management of the school, or to greater use of instructional facilities offered to teachers at the school. The opposite could emerge as well. For example, when principals are not exemplary teachers, this may hamper teachers' acceptance of instructional policies and facilities. In addition, in having their own teaching obligation, principals might experience that it is more difficult to gain enough distance from the instructional process to ensure that teachers at their school take responsibility for improving their teaching skills and students' learning outcomes.

Figure 3.5 presents principals' engagement in instructional leadership actions for principals with a teaching obligation and for those without such an obligation. Figure 3.5 includes only countries and economies in which at least 10% and at most 90% of the principals have a teaching obligation. Countries and economies are displayed in grey if a majority of principals have a teaching obligation and in blue if a majority does not have such an obligation. The figure reveals that, across countries and economies, no differences in instructional leadership were found based on principals' teaching obligations (Table 3.6). The same conclusion is to be drawn for most individual countries and economies. A major exception is Shanghai, China, where principals with a teaching obligation are relatively more engaged in instructional leadership actions than those without a teaching obligation, and in Denmark, Latvia and Norway, where the opposite is the case.

■ Figure 3.4 ■

Instructional leadership, by principals' training in instructional leadership, in lower secondary education

Average scores on the instructional leadership scale for principals who did or did not attend training or a course in instructional leadership



Notes:

Blue bars and rhombuses represent countries and economies in which the majority of principals have received training in instructional leadership. Grey bars and rhombuses represent countries and economies in which a minority of principals has received such training.

Countries and economies are ranked in descending order, based on the difference in instructional leadership between principals who received training or a course in instructional leadership and those principals who did not.

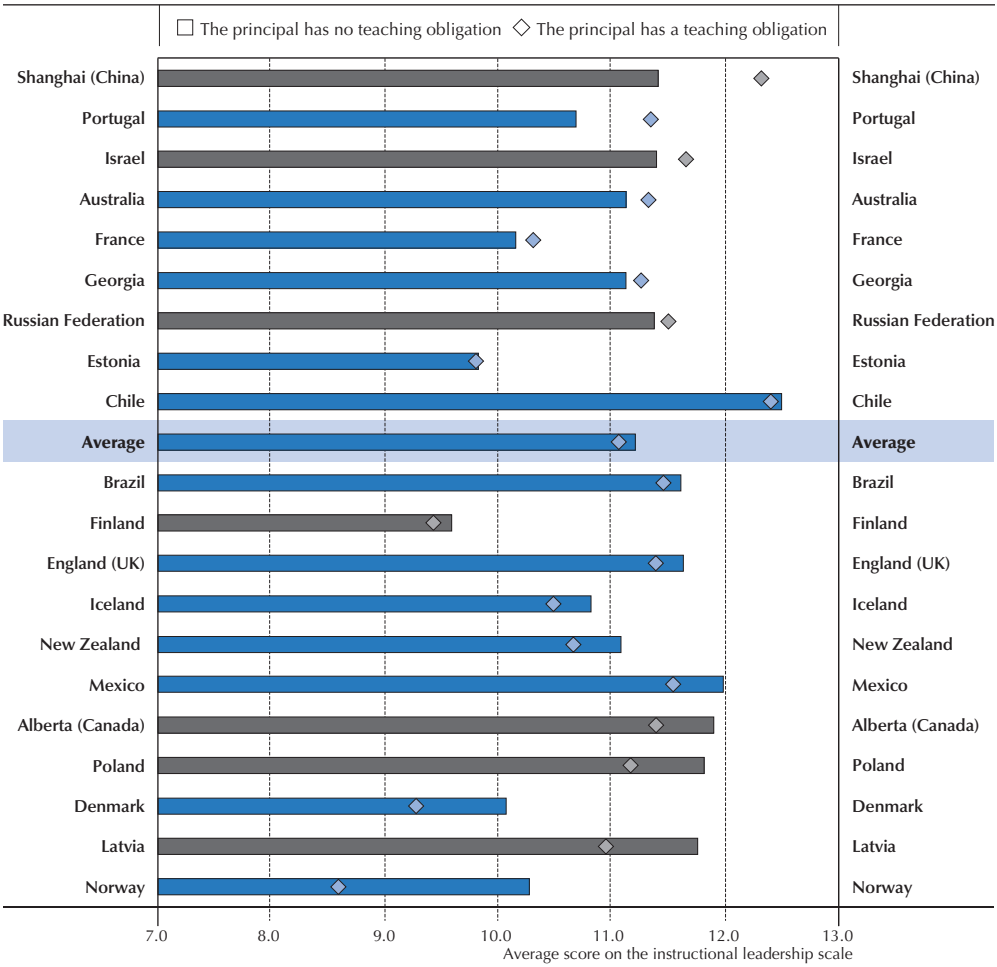
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.5.

StatLink http://dx.doi.org/10.1787/888933369605

■ Figure 3.5 ■

Instructional leadership, by principals' teaching obligation, in lower secondary education

Average scores on the instructional leadership scale for a principal's obligation to teach in their school



Notes:

Blue bars and rhombuses represent countries and economies in which the minority of principals has a teaching obligation. Grey bars and rhombuses represent countries and economies in which the majority of principals has a teaching obligation.

Countries and economies are ranked in descending order, based on the difference in instructional leadership between principals without a teaching obligation and those who have one.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.6.

StatLink http://dx.doi.org/10.1787/888933369612

As Figure 3.5 shows, whether principals with a teaching obligation or without a teaching obligation are relatively more engaged in instructional leadership seems to be independent of whether a majority of principals in each of the participating countries has a teaching obligation or not (Table 3.6).

DISTRIBUTED LEADERSHIP IN LOWER SECONDARY SCHOOLS ACROSS SYSTEMS

Distributed leadership in schools reflects the view that not only is leadership exerted by the principal, but that several organisation members act as leaders in school (Spillane, 2006; Spillane, Halverson and Diamond, 2004). As various scholars have noted, distributed leadership is more the acknowledgement of how leadership functions in practice than a normative view on how leadership should be enacted in schools. It recognises the existence of formal and informal leadership roles and incorporates the activities of multiple groups of school members guiding and mobilising staff towards instructional change (Spillane, Halverson and Diamond, 2004).

Leadership roles are taken up by other organisation members, like teachers or other professional staff in school. Next to school staff, stakeholders such as community members may be involved in the decision-making process at the school, as Copland (2003) argues. These community members might be either internal or external to the school. This view is less rooted in a professional perspective on distributed leadership and focuses strongly on the local community of the school as enactors of leadership. A similar perspective is used in TALIS 2013 by taking account of decisions made by teachers and other staff, but also incorporating students and their parents or guardians in decisions at the school (see Box 3.2).

Box 3.2 **Distributed leadership in TALIS 2013**

Distributed leadership is measured in TALIS 2013 by asking principals how strongly they agree or disagree with the following statements as applied to their school:

- This school provides staff with opportunities to actively participate in school decisions.
- This school provides parents or guardians with opportunities to actively participate in school decisions.
- This school provides students with opportunities to actively participate in school decisions.

These items were measured on a four point scale, with response categories of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". The index of distributed leadership (PDISLEADS) was calculated to have a standard deviation of 2.0 and a midpoint of 10 to coincide with the midpoint of the scale. This means that a score of 10 for PDISLEADS corresponds with the average answer of 2.5 on the three items. A score below 10 indicates disagreement with the items in the PDISLEADS scale. For further information, the reader is referred to Chapter 10 of the *TALIS 2013 Technical Report* (OECD, 2014b).

This implies creating a collaborative school culture, in which all stakeholders feel responsible for the school and take up their role to improve school practices. It is important to clarify that including staff, parents or guardians and students in the decision-making process of the school may not depend

solely on the willingness and actions of a school principals, but also on the regulations and framework imposed by local, regional or national legislation. For more information about the principal's role in each entity, see Annex C.

To what degree principals, on average, agree with statements reflecting a collaborative school culture at their school has been reported in the *TALIS 2013 Results* report (OECD, 2014a). The report indicates that most principals agree that there is a collaborative culture at school, which is characterised by mutual support among the staff. Moreover, nearly all principals across the participating countries agree or strongly agree that the school provides staff with opportunities to actively participate in school decisions.

Figure 3.6 shows the percentage of principals who agree or strongly agree with the three statements that make up the distributed leadership index (see Box 3.2). Countries do differ more with regard to opportunities offered to parents or guardians and students to actively participate in school decisions. As is apparent in Figure 3.6, according to principals, in most countries and economies the degree of opportunities for parents and guardians to participate in school decisions is similar to the opportunities for active participation offered to students. Nearly all principals in Estonia; Georgia; Korea; Latvia; Poland; the Russian Federation; Serbia; and Shanghai, China, agree or strongly agree that both students and their parents or guardians may be actively engaged in decision-making processes at the school. In Finland, Israel, Italy, Japan, the Slovak Republic and Sweden, schools provide relatively fewer opportunities for parents and students to play a role in school decisions. In Italy and the Slovak Republic, the opportunity of students to participate in school decisions is relatively more constrained than the opportunities provided for parents to participate, whereas principals report relatively greater opportunities for students in Finland and Sweden.

CHARACTERISTICS OF PRINCIPALS AND DISTRIBUTED LEADERSHIP

The distributed leadership of principals is expected to be more prominent both in larger schools, because, in those schools, school leaders will experience more difficulties in steering the school themselves, and in schools where teachers are able to take over some leadership responsibilities, because distributed leadership shown by principals requires the professional skills of those involved in the decision-making process. Furthermore, distributed leadership is more likely to take place in schools that are characterised by high principal teacher trust, and in schools in which the principal feels confident in sharing responsibility with the school staff. For that purpose, determinants that are taken into account to explain the degree of distributed leadership are school size, the degree to which a lack of shared leadership with other school staff members is experienced, and the lack of parent or guardian involvement and support. In addition to these, the principal's gender and formal education, as well as his or her participation in professional development activities, are explored in this section.

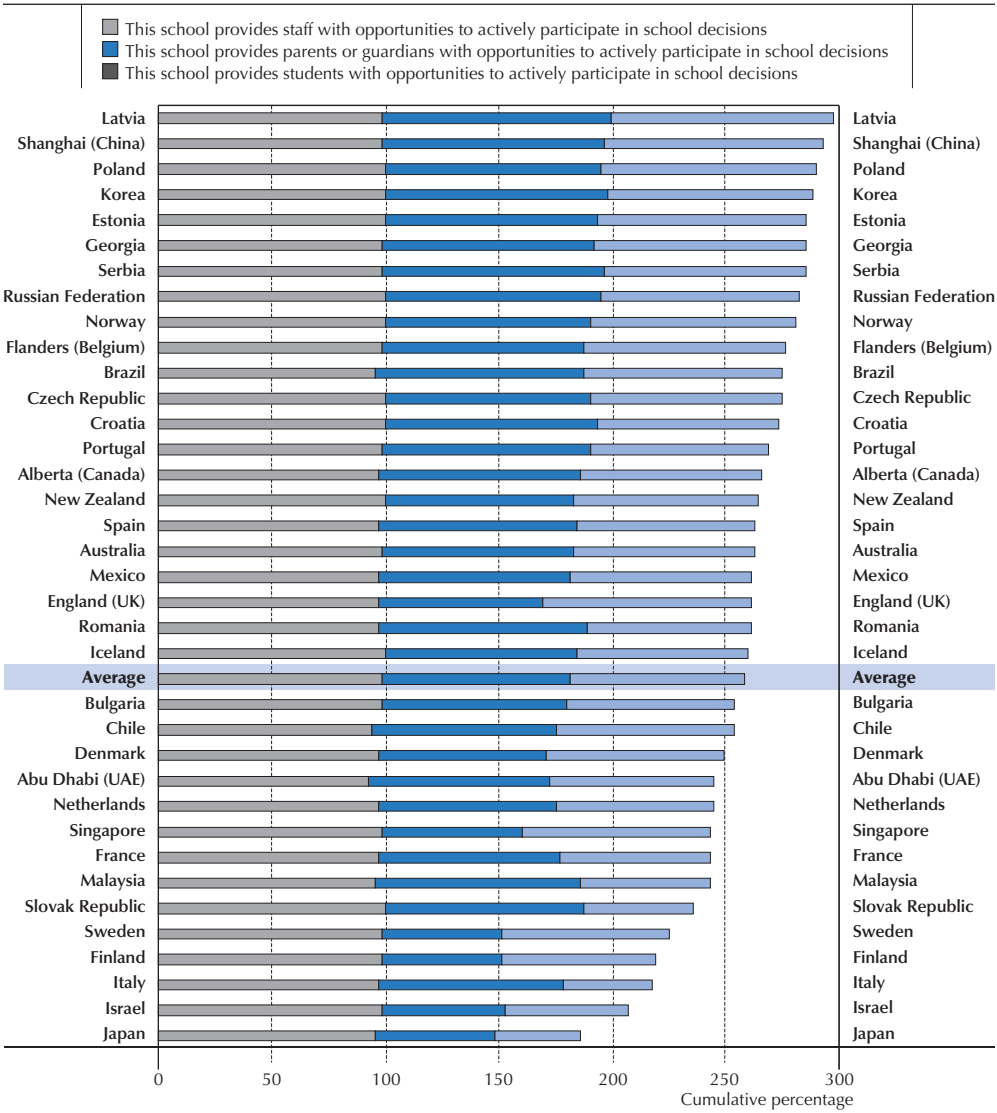
Gender and distributed leadership

Figure 3.7 shows differences in the distributed leadership scale between female and male principals across countries and economies. Countries and economies with predominantly female principals are depicted in grey. Countries and economies with a majority of male principals are represented in blue. As the absence of a clear pattern in figure 3.7 reveals, the relative percentage of females in educational administration has no relationship to either females or males showing greater distributed leadership (Pearson's $r = 0.21$, $p = 0.22$).

■ Figure 3.6 ■

Distributed leadership in lower secondary education

Percentage of lower secondary education principals who report that they "agree" or "strongly agree" with the following distributed leadership statements about their school



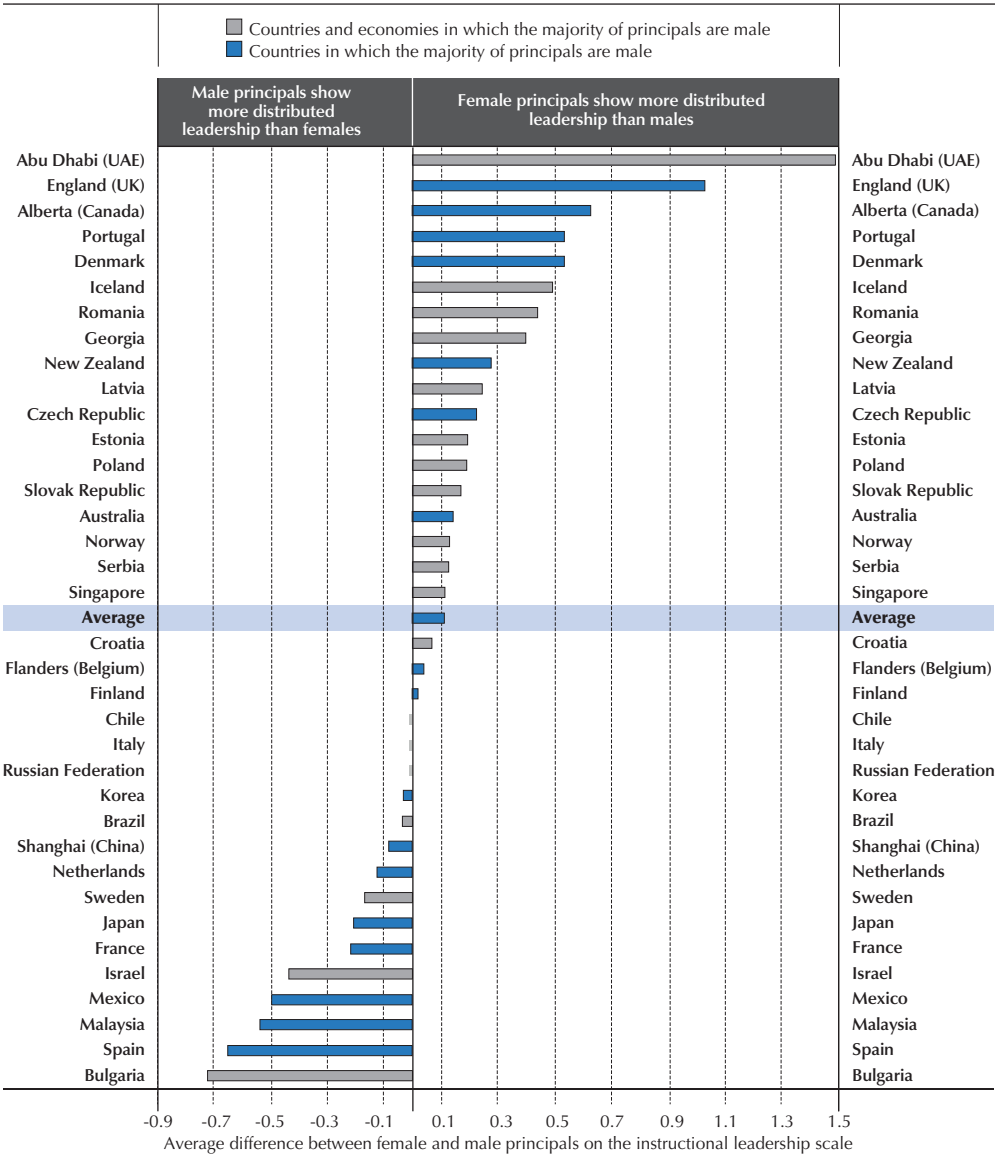
Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "agree" or "strongly agree" with distributed leadership statements about their school.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.2.

StatLink http://dx.doi.org/10.1787/888933369623

■ Figure 3.7 ■

Distributed leadership, by principals' gender, in lower secondary education



Notes:

In countries and economies depicted in grey, a majority of principals is female; in countries and economies depicted in blue, a majority of principals is male.

Countries and economies are ranked in descending order, based on the average differences in scores between women and men on the distributed leadership scale.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.3.

StatLink http://dx.doi.org/10.1787/888933369632

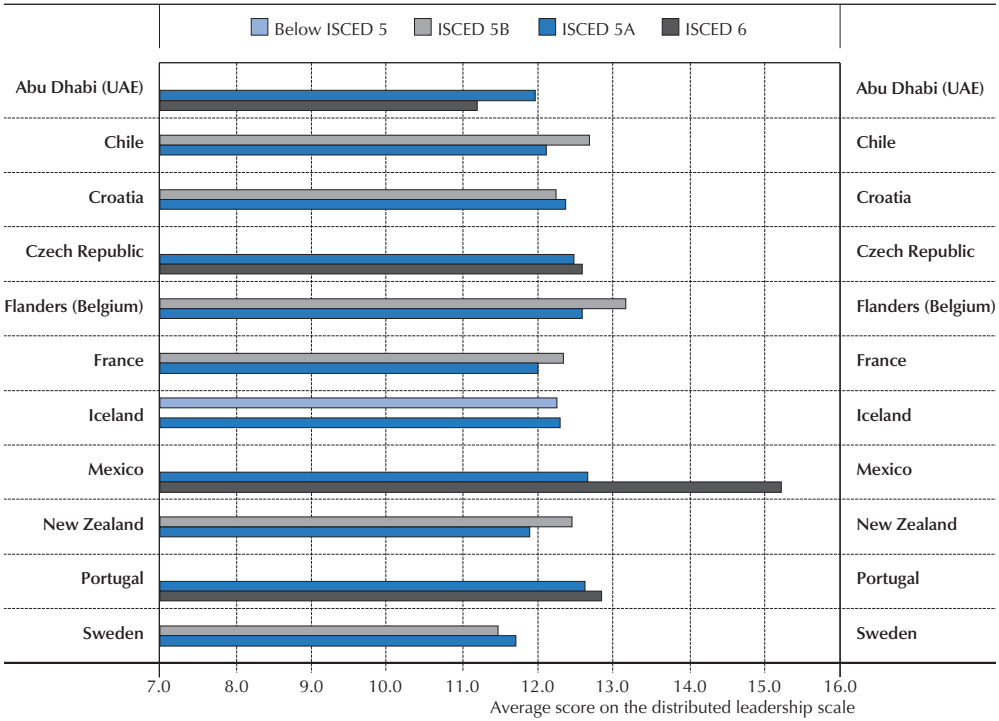
On average, women in educational administration score 0.11 higher on the distributed leadership scale than men. In Abu Dhabi, United Arab Emirates; Alberta, Canada; Denmark; and England, United Kingdom, female principals show a greater degree of agreement regarding the inclusion of staff, students and parents in school decisions than males, whereas in Bulgaria and Malaysia, men reported higher levels of distributed leadership more often than women do. In most countries, however, no significant difference between female and male principals is found (Table 3.3).

Principals' formal education and distributed leadership

Figure 3.8 reports differences in distributed leadership based on principals' formal education. As Table 3.7 indicates, a vast majority of principals hold a degree from a largely theory-based programme in higher education (ISCED5A).

▪ Figure 3.8 ▪

Distributed leadership, by principals' formal education, in lower secondary education



Note: Countries and economies are presented in alphabetical order.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.7.

StatLink http://dx.doi.org/10.1787/888933369645

Only in a few countries and economies (Chile; Croatia; Flanders, Belgium; France; New Zealand; and Sweden) do more than 5% of all principals hold a degree from tertiary education that is more focused on practical, technical or occupational skills (ISCED5B), and only in Iceland do more than 5% of all principals hold a degree below ISCED5. In a number of countries and economies (Abu Dhabi, United Arab Emirates; the Czech Republic; Mexico; and Portugal), a substantial group of principals graduated from the second stage of higher education, leading to an advanced research qualification (ISCED6). In each of these countries and economies, this concerns between 5% and 10% of the principals, except for Portugal (27%), where even a considerably larger percentage of principals holds an ISCED6 degree. In Figure 3.8, only countries with either more than 5% of principals with a degree below ICSED5, an ISCED5B degree, or an ISCED6 degree are included.

As is apparent from Figure 3.8, schools with principals with either a higher formal education (ISCED6) or a lower formal education (below ISCED5 or ISCED5B) do not differ in their distributed leadership score from schools with principals educated at ISCED5A. Only in Mexico do principals with an advanced-level research qualification report being substantially more engaged in creating opportunities for students and their parents or guardians to participate in the school's decision-making process (Table 3.7).

Principals' participation in professional development activities and distributed leadership

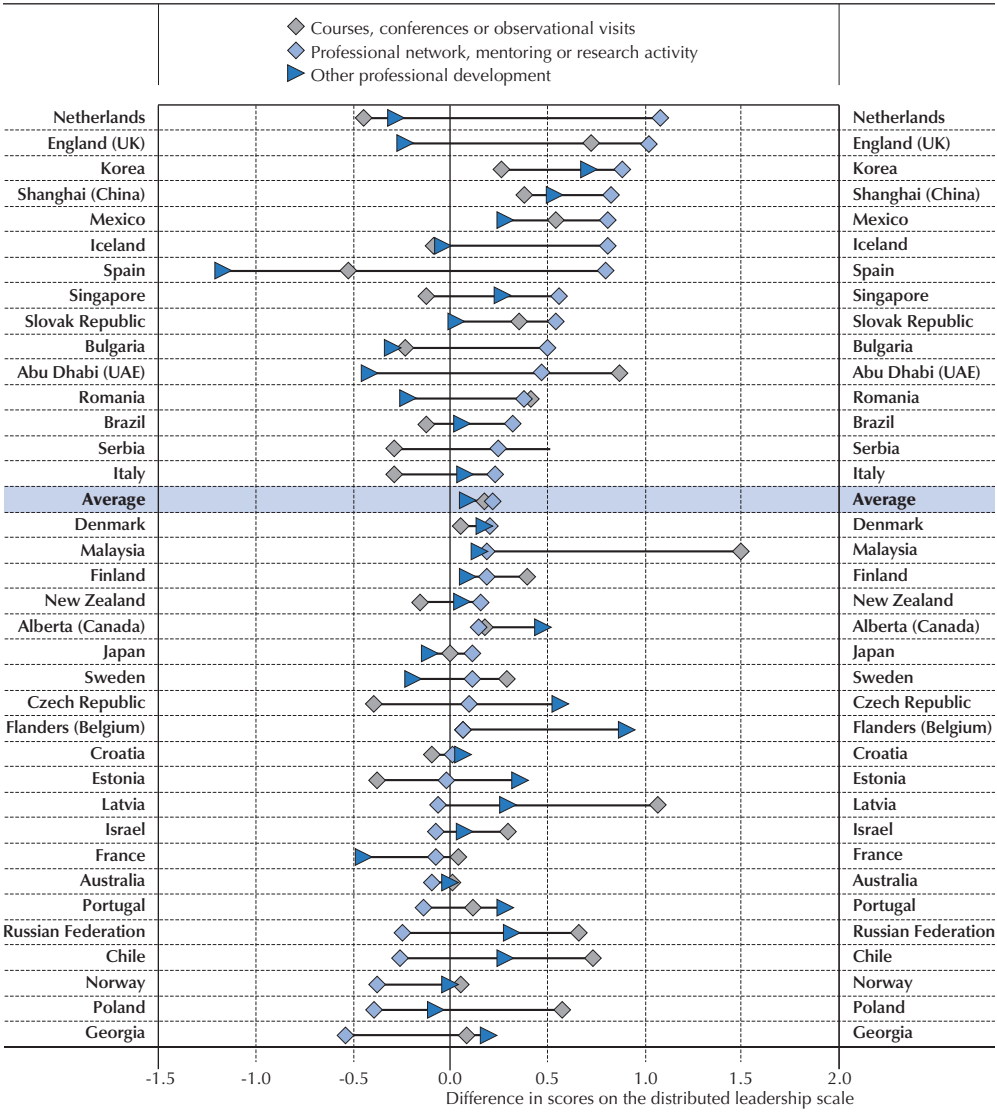
In Figure 3.9, differences in the distributed leadership score are presented for principals who participated over the past 12 months in 1) a professional network, mentoring or research activity; 2) courses, conferences or observational visits; and 3) other professional development activities. Figure 3.9 reveals a small but significant relationship between a principal's engagement in professional development activities and his or her distributed leadership. This concerns principals' participation in a professional network, mentoring or research activity, as well as their participation in courses, conferences or observational visits.

To what degree each of these activities contribute to a principal's engagement in distributing powers to staff, students and parents or guardians varies considerably across countries. In most countries and economies, none of the professional development activities is significantly related to the distributed leadership of principals. In some countries and economies, one of the types of professional development is often related to engaging staff, students and parents in the decision-making process. In some countries and economies, this concerns principals' engagement in a professional network, mentoring or a research activity, such as in England, United Kingdom; Iceland; Korea; Shanghai, China; and the Slovak Republic. Overall, on average, principals that have engaged in a professional network tend to score 0.22 higher in the distributed leadership scale than principals that have not (Table 3.8).

About one-third of all principals indicated that they took part in professional development activities other than professional networks, mentoring, research activities, courses, conferences or observational visits. In a few countries, including the Czech Republic; Flanders, Belgium; and Korea, these principals reported to be considerably more engaged in distributed leadership, or, as in Spain, considerably less engaged than their fellow principals, who did not report having participated in other professional development activities.

■ Figure 3.9 ■

Distributed leadership, by principals' professional development activities, in lower secondary education



Notes:

How to read this chart: In the Netherlands, principals who engaged in a professional network, mentoring or research activity over the 12 months prior to the survey score more than one score point higher on the distributed leadership scale than principals who did not engage.

Countries and economies are ranked in descending order of the difference in scores on the distributed leadership scale between principals who engaged in a professional network, mentoring or research activity over the 12 months prior to the survey and those who did not.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.8.

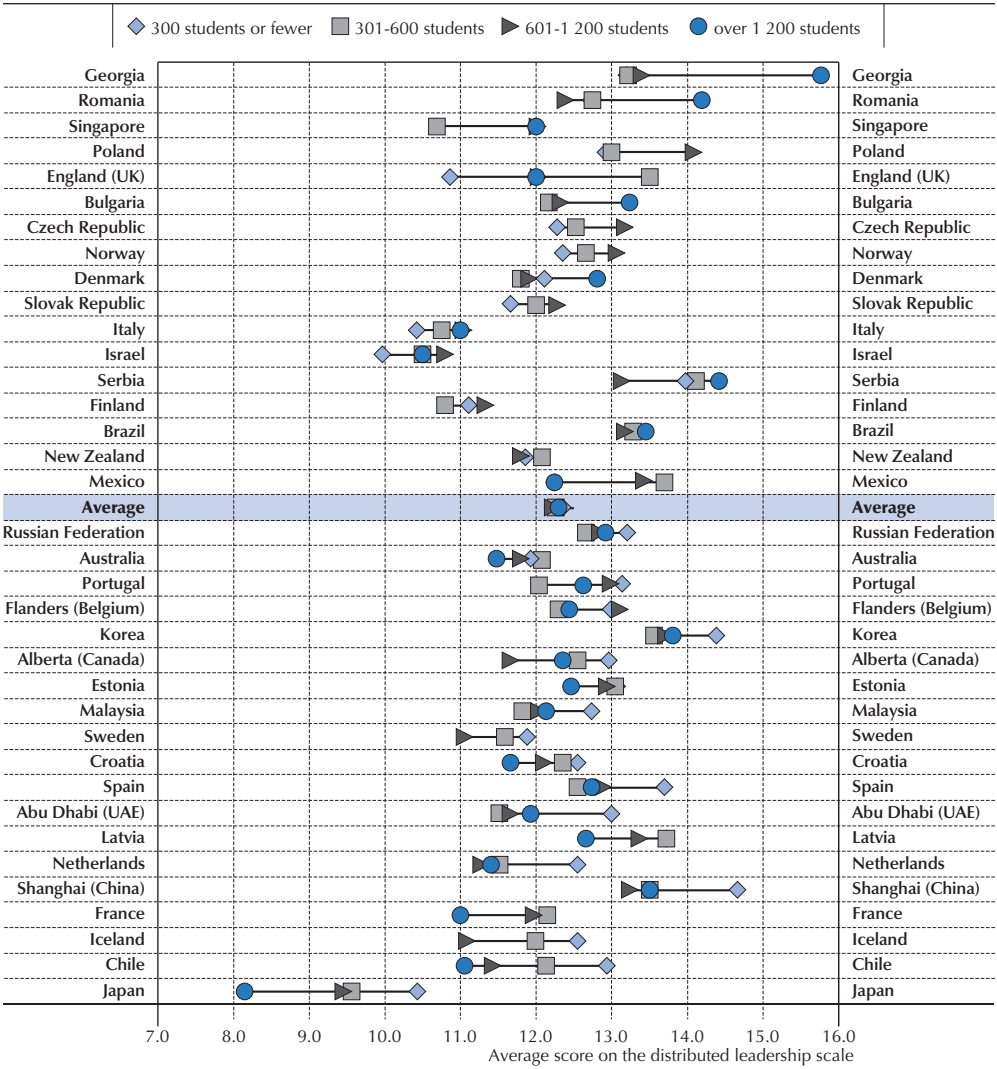
StatLink http://dx.doi.org/10.1787/888933369657

School size and distributed leadership

Figure 3.10 shows the average distributed leadership for schools of different size. As nearly all school principals indicate that they involve their staff in the decisions taken at their school (see also Figure 3.6), these averages mainly specify to what degree schools engage students and their parents or guardians in the decision-making process.

▪ Figure 3.10 ▪

Distributed leadership, by school size, in lower secondary education



Note: Countries and economies are ranked in descending order of the difference in average scores on the distributed leadership scale between principals of schools with over 1 200 students and those of schools with 300 students or fewer. If data is not available for these categories, the next lower/higher category was chosen to calculate the difference.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.9.

StatLink http://dx.doi.org/10.1787/888933369667

On average, distributed leadership does not differ across countries and economies with respect to the size of the school. Only in relatively small schools, with 300 students or fewer – which concerns about 36% of all lower secondary schools – do principals engage, on average, on a greater degree in distributed leadership than in larger schools[1].

In most of the participating countries and economies in TALIS 2013, however, no meaningful differences in distributed leadership across schools of different sizes are found. In countries and economies in which either relatively small or large schools differ in the distributed leadership reported by the principals, this often concerns a small number of schools in either the lowest (300 students or fewer) or the highest (more than 1 200 students) category. In Georgia and Romania, where principals of the largest schools report the highest degree of distributed leadership, only about 1% and 5% of all schools, respectively, have more than 1 200 students. The same applies to countries and economies that score relatively low on distributed leadership in large to very large schools, like Latvia (Table 3.9).

Distributed leadership and the lack of parent or guardian involvement

Distribution of leadership to parents and guardians implies that parents are willing to take up responsibilities for the school. Principals can be expected to involve parents and guardians in school decisions when they feel this contributes to the functioning of the school, while not limiting their own effectiveness as a school leader. Principals in TALIS 2013 could indicate to what degree they perceive their effectiveness is limited by a lack of parent or guardian involvement. About half of the principals across countries and economies indicate that they perceive no, or only very little, limitations in their own effectiveness due to a lack of parent or guardian involvement (see Table 3.10). The other half of the principals perceive to some, or even a large extent, a hindrance to their effectiveness due to the lack of parent and guardian involvement. This is particularly the case in Brazil; Bulgaria; Mexico; Portugal; Romania; and Shanghai, China, where about 70% of principals reports a limitation in effectiveness due to parents' and guardians' involvement in school, and in Chile, where 86% of principals indicate this for their school.

Figure 3.11 illustrates distributed leadership in schools on the basis of the principal's perceived ineffectiveness due to a lack of involvement among parents and guardians. On average, only small differences across countries and economies are found in principals' perceived ineffectiveness as a result of parent and guardian involvement, but in the Czech Republic, Japan and Serbia, these differences in distributed leadership are more prominent, in favour of principals who perceive no hindrance to the way they function based on parent or guardian involvement.

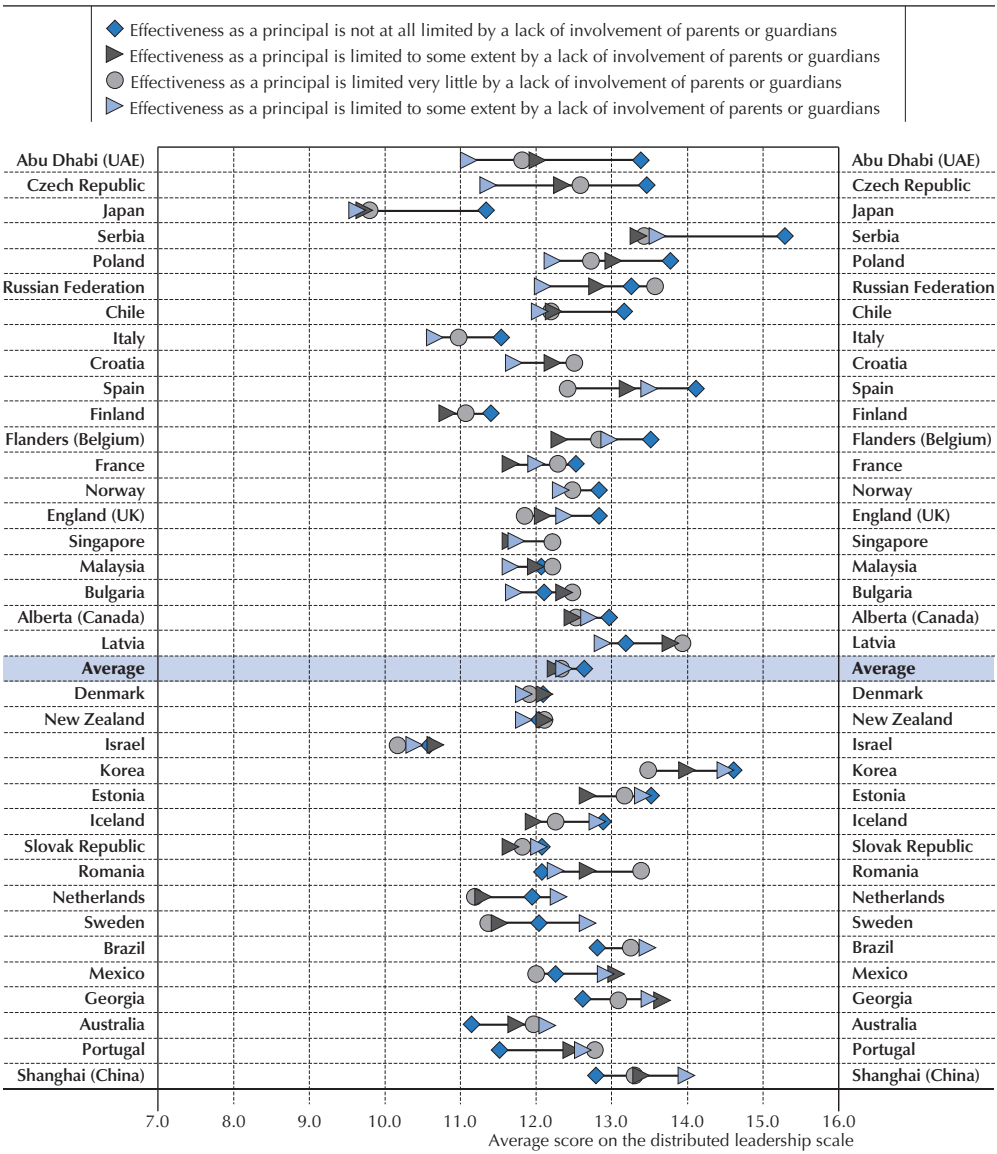
Distributed leadership and lack of shared leadership with other school staff

Distribution of leadership to teachers and other school staff might be hampered by a lack of staff willingness or competence to share responsibilities. Principals in TALIS 2013 could indicate to what degree they perceive that their effectiveness is hindered by a lack of shared leadership with other school staff. Over two-thirds of principals across countries and economies in the survey indicate that they perceive no, or only very little restrictions on their own effectiveness due to a lack of shared leadership among the staff (see Table 3.11). Only 5% report that their effectiveness is seriously limited as a result of a lack of shared leadership with other school staff. In Croatia and France, however, nearly one-fifth of all principals seem to encounter serious threats to their own effectiveness due to a lack of shared leadership. Moreover, in Romania, Serbia and Sweden, also slightly over 10% of principals indicate a perceived lack of shared leadership with staff as a major threat to their effectiveness.

▪ Figure 3.11 ▪

Distributed leadership, by lack of parent or guardian involvement, in lower secondary education

Average scores on the distributed leadership scale for principals who indicate that their effectiveness is limited "not at all", "very little", "to some extent" or "a lot" by a lack of parent or guardian involvement



Note: Countries and economies are ranked in descending order of the difference in average scores on the distributed leadership scale between principals whose effectiveness is "not at all" limited by the lack of involvement of parents or guardians and those whose effectiveness is limited "a lot" by the lack of involvement of parents and guardians. If data is not available for these categories, the next lowest/highest category was chosen to calculate the difference.

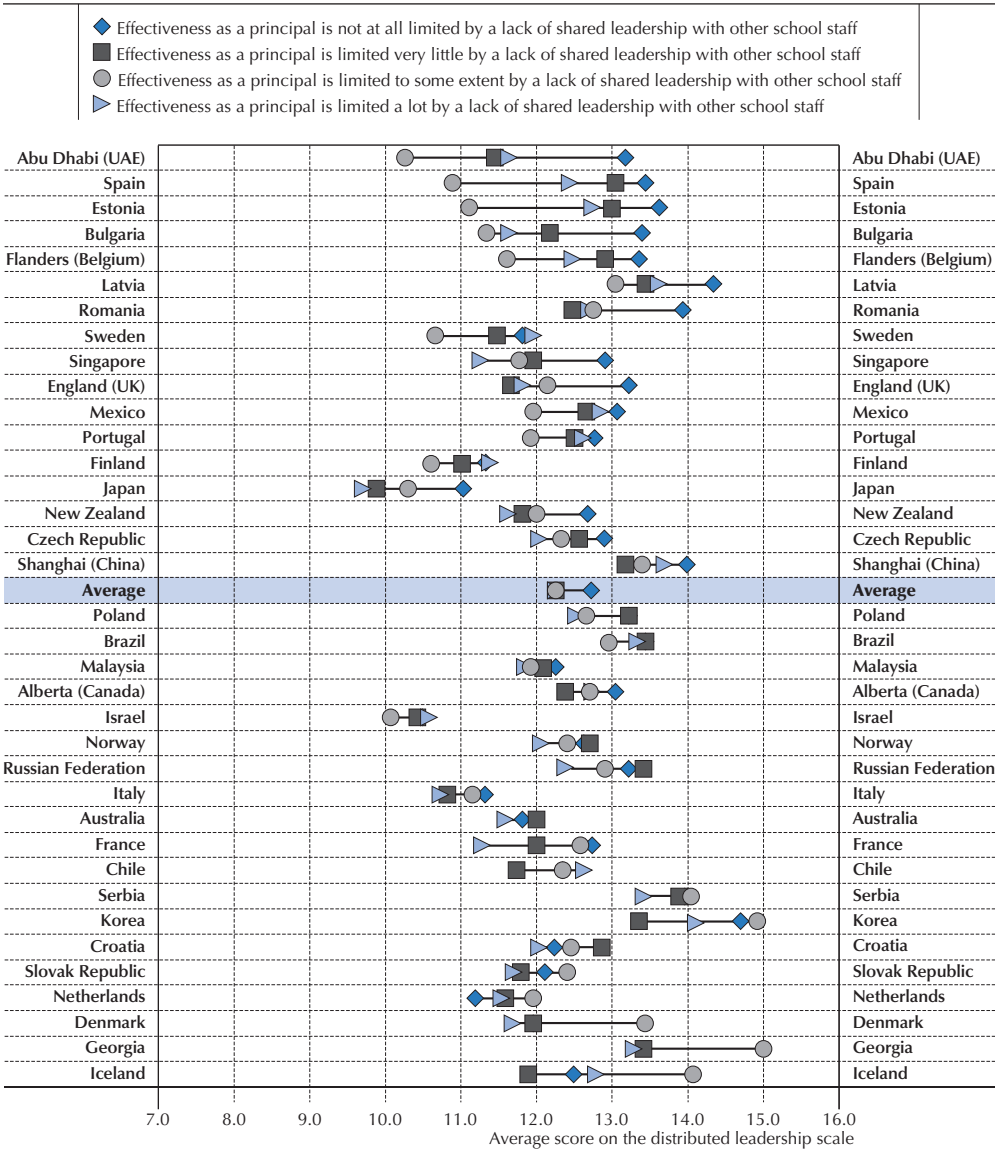
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.10.

StatLink http://dx.doi.org/10.1787/888933369671

▪ Figure 3.12 ▪

Distributed leadership, by lack of shared leadership with other staff, in lower secondary education

Average scores on the distributed leadership scale for principals who indicate that their effectiveness is limited "not at all", "very little", "to some extent" or "a lot" by a lack of shared leadership with other school staff



Note: Countries are ranked in descending order of the difference in scores on the distributed leadership scale between principals who indicate that their effectiveness is "not at all" limited by a lack of shared leadership with other school staff and those who indicate that their effectiveness is limited "a lot" by a lack of shared leadership with other school staff ("to some extent" for Australia).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.11.

StatLink http://dx.doi.org/10.1787/888933369689

Figure 3.12 reports the distributed leadership in schools based on the principal's perceived ineffectiveness due to a lack of shared leadership with other staff. On average, principals who report that they feel no deficits in their effectiveness as a result of a lack of shared leadership indicate that they are significantly more engaged in distributed leadership than principals who perceive that their effectiveness is hindered very little, to some extent or even a lot (Table 3.11). Although this finding across countries and economies does not apply to all of them, most notably in Abu Dhabi, United Arab Emirates; Bulgaria; Estonia; and New Zealand, such significant differences are apparent. In contrast, Figure 3.12 seems to suggest that principals in Denmark, Georgia and Iceland who perceive grave deficits in their effectiveness due to a lack of shared leadership with other school staff, are more engaged in distributed leadership than those principals who encounter fewer threats to the way they function. However, only for Iceland is a significant difference found. These averages, however, are based on a very low percentage of schools (between 1% and about 3%). This also applies to Abu Dhabi, United Arab Emirates and to Estonia, where the opposite relationship exists for principals who indicate that their effectiveness is hindered by a lot of shared leadership among the school staff (Table 3.11).

INTEGRATING INSTRUCTIONAL AND DISTRIBUTED LEADERSHIP

Instructional leadership reflects the main characteristics of effective school leaders, as reported in several meta-analyses on the relationship between school leadership and student achievement (Bell, Bolam and Cubillo, 2003; Marzano, Waters and McNulty, 2005; Robinson, Hohepa and Lloyd, 2009; Witziers, Bosker and Krüger, 2003). Moreover, distributed leadership is frequently considered a crucial prerequisite for building a professional learning community within a school (Hallinger and Heck, 2010; Harris, 2003).

Box 3.3 **Latent class analyses**

School leadership in this report is differentiated into four, relatively independent measures: distributed leadership (PDISLEADS scale), instructional leadership (PINSLEADS scale), time spent on educational leadership, and educational leadership practice policy. Time spent on educational leadership is measured as the percentage of time a principal spends throughout the school year on curriculum and teaching-related tasks and meetings (TC2G19B). Educational leadership practice policy is measured by the principal's engagement in developing educational goals/programmes (TC2G20A) and a professional development plan for his or her school (TC2G20B) over the past 12 months (see Annex A for further information).

By means of a latent class analyses, this report has investigated whether the principals of lower secondary education can be classified systematically into a restricted number of groups (also called clusters or classes) based on their scores on four indicators: instructional leadership, distributed leadership, time spent on educational leadership and educational leadership practice policy.
The aim of the modelling is to group principals who share similar school leadership characteristics. On the other hand, principals who belong to the various groups should have a scoring on the four school leadership indicators as dissimilar as possible to the other groups. Based on the results of the latent class analyses, the report explores whether certain types of integrated leadership can be identified for principals in lower secondary education. Subsequently, the report studies whether the obtained clusters of integrated leadership provide more explanatory power for professional community and learning climates in multilevel analyses over the four single indicators of school leadership (see Chapters 4 and 5).

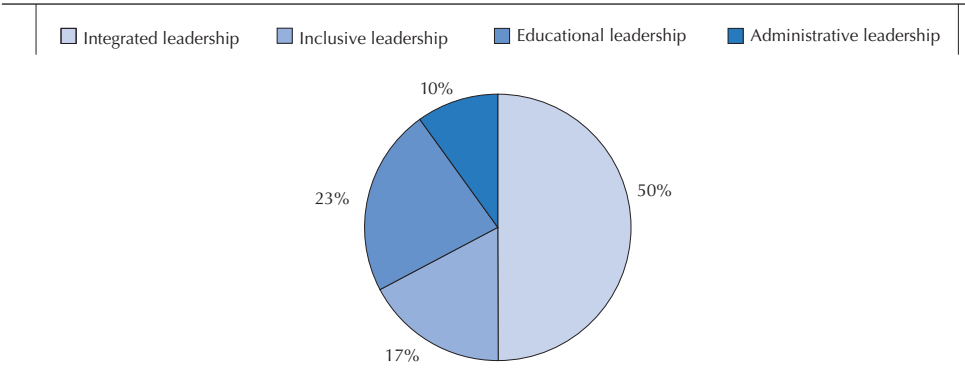
Thus, distributed leadership stimulates the capacity of schools for further improvement. Using latent class analysis (see Box 3.3), it is explored to what extent certain types of leadership are present among school principals, and whether some principals exert more integrated leadership (combining instructional leadership and distributed leadership) than others. Next to instructional and distributed leadership, the latent class analysis took into account to what degree principals actually put effort into educational leadership activities, in addition to other duties they have to perform, and to what degree they are involved in more strategic actions regarding educational policy in their school.

Four types of school leadership by principals

The analysis reveals four types of leadership in schools (see Box 3.4). The first type, termed "integrated leadership", refers to principals who pay a lot of attention to both instructional and distributed leadership in their schools and spend relatively more time on curriculum and teaching-related tasks in school. About half of all principals (50%) can be characterised as integrated leaders (Figure 3.13). Nearly nine out of ten of these integrated leaders indicate that they use student results to develop the school's educational goals or programmes and a professional development plan for their school (Figure 3.14).

▪ Figure 3.13 ▪

Percentage of principals in TALIS exercising integrated, inclusive, educational or administrative leadership



Note: Leadership styles classification based on the latent class analyses built on the scores on four indicators: instructional leadership, distributed leadership, time spent on educational leadership and educational leadership practice policy.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

StatLink http://dx.doi.org/10.1787/888933369698

A second type of principal, representing about 17% of all principals, can be characterised as inclusive leaders. Similar to integrated leaders, inclusive leaders engage staff, students and their parents or guardians in the decisions at school, but relatively less often take up a role as instructional leaders and spend less time on curriculum and teaching-related tasks in their school. Moreover, a major percentage of inclusive leaders indicate that they use student results only to develop the school's educational goals or programmes, or for the development of a professional development plan for their school (Figure 3.14). Nearly 15% report not using student results for any of these purposes. Thus, inclusive leaders appear to be sensitive to involving all relevant stakeholders in school operations, but they provide hardly any guidance to instructional policies at their school.

A third group of about 23% of the principals is less concerned with enabling students and their parents or guardians in the decision making process at school, but take considerable action to support co-operation among teachers and ensure that teachers take responsibility for the learning outcomes of their students and their own professional development. These principals also spend relatively more time on curriculum and teaching related tasks in school and can be designated as merely educational leaders.

A final group of principals, called administrative leaders, are less engaged in distributed and instructional leadership than are integrated and educational leaders. These leaders, representing about 10% of all principals, also spend relatively little time on curriculum and teaching related tasks. Similarly, compared to integrated and educational leaders, a smaller percentage of administrative leaders uses student results for developing both the school's educational goals or programmes and a professional development plan for their school.

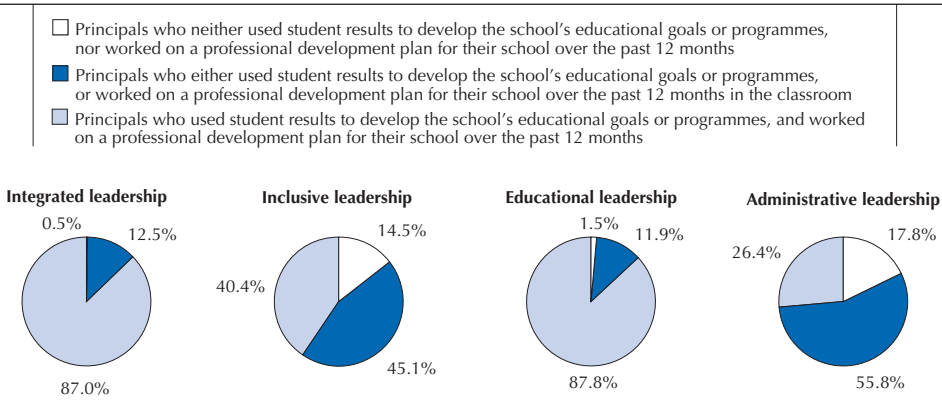
Box 3.4 **Four types of school leadership**

Integrated leader	Strong focus on instructional as well as distributed leadership. Spends considerable time on curriculum and teaching related tasks in school. Most use student outcomes to develop the school's educational goals or programmes and a professional development plan for their school.
Inclusive leader	Strong focus on distributed leadership, but a weak focus on instructional leadership. Spends little time on curriculum and teaching related tasks in school. Some use student outcomes to develop the school's educational goals or programmes and a professional development plan for their school.
Educational leader	Strong focus on instructional leadership, but a weak focus on distributed leadership. Spends much time on curriculum and teaching related tasks in school. Most use student outcomes to develop the school's educational goals or programmes and a professional development plan for their school.
Administrative leader	Weak focus on instructional as well as distributed leadership. Spends some time on curriculum and teaching-related tasks in school. Many use student outcomes to develop the school's educational goals or programmes and a professional development plan for their school.

An additionally relevant analysis consists of the exploration of how these different types of leadership vary between countries. If the variation of the school leadership practices is big, it might be hinting that school leadership practices are idiosyncratic to each country and economy and there might be system level variables, such as national educational policy laws, that might be affecting their implementation.

■ Figure 3.14 ■

Degree to which various types of principals use student results for developing educational goals or programmes and a professional development plan at their school

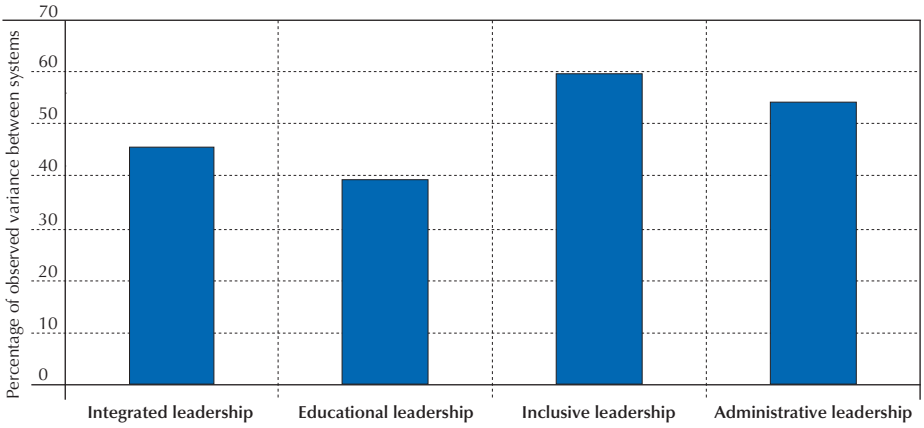


Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 3.11.

StatLink http://dx.doi.org/10.1787/888933369703

■ Figure 3.15 ■

Between-system variance of school leadership types



Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

StatLink http://dx.doi.org/10.1787/888933369719

Figure 3.15 shows the proportion of variance at the system level of each type of school leadership. Overall between 40 and 60% of the difference between leaderships might be explained by country and economy characteristics. In particular, the graph shows that school leadership emphasising the integration of stakeholders (inclusive leadership), or a leadership that focuses mainly on administrative tasks instead of instructive aspects (administrative leadership) seems to be mostly conditioned by country and economy characteristics. In order to explore which possible system characteristics are associated with different types of leaders, Annex C presents a comprehensive table with the key policy features of most of the countries and economies participating in TALIS 2013.

Overall, one can conclude that the differences in principals' leadership practice between countries and economies are large, meaning that, for certain of them, specific types of leaders are more prominent.

Three country and economy types of educational leadership

In addition to identifying types of principals, latent class analysis is used to classify countries on instructional leadership, distributed leadership, the degree that principals actually put effort into educational leadership activities, as well as the other duties they have to perform, and the degree to which they are involved in more strategic actions regarding educational policy in their school. This analysis revealed three categories of countries (Figure 3.16)[2]. The functioning of leadership in these categories at the system level more or less resembled the types of leadership found at the level of the principal.

A first category consists of 18 education systems: Abu Dhabi, United Arab Emirates; Alberta, Canada; Australia; Brazil; Bulgaria; Chile; Czech Republic; Georgia; Korea; Latvia; Malaysia; Mexico; Poland; Romania; the Russian Federation; Serbia; Singapore; and Shanghai, China. This category of education systems consists mainly of schools with integrated leadership (76%). About 5% of the principals in these systems, on average, act as inclusive leaders, and nearly 19% can be characterised as educational leaders. Less than 2% of all principals in this first category of systems act as administrative leaders.

■ Figure 3.16 ■

Countries' and economies' classification according to the overall leadership types of their principals

Countries with mainly integrated leaders (Category 1)	Countries with mainly inclusive leaders (Category 2)	Countries with mainly educational leaders (Category 3)
Abu Dhabi (United Arab Emirates)	Croatia	England (United Kingdom)
Alberta (Canada)	Denmark	Israel
Australia	Estonia	Italy
Brazil	Finland[1]	Japan
Bulgaria	Flanders (Belgium)	New Zealand
Chile	France	Slovak Republic
Czech Republic	Iceland	
Georgia	The Netherlands	
Korea	Portugal	
Latvia	Spain	
Malaysia	Sweden[1]	
Mexico		
Poland		
Romania		
Russian Federation		
Serbia		
Singapore		
Shanghai (China)		

Note:
1. Although Finland and Sweden clearly belong to Category 2, these two countries have an important percentage of principals demonstrating administrative leadership. Thus, Finland and Sweden might deviate from the main description of leadership in this category. For more information, see Table 3.12 and Figure 3.17.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

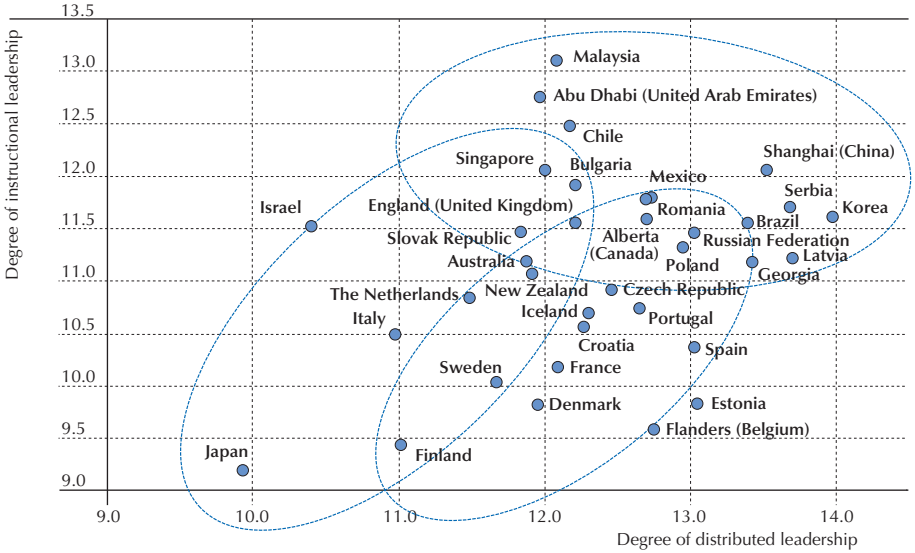
A second category of 11 systems (Croatia; Denmark; Estonia; Finland; Flanders, Belgium; France; Iceland; the Netherlands; Portugal; Spain; and Sweden), on average, is characterised by a variety of leadership types among their principals, with inclusive leadership being generally the main type found in their schools (51%). Next to inclusive leadership, integrated leadership (13%) and administrative leadership styles (29%) prevail in more than two fifths of all schools in this category.

A third category consists of six education systems: England, United Kingdom; Israel; Italy; Japan; New Zealand; and the Slovak Republic. Principals in these systems, on average, either act as educational leaders (73%) or integrated leaders (21%). In these systems, hardly any inclusive or administrative leadership is found.

These three types of systems are depicted graphically in Figure 3.17, based on the average system scores on the instructional and distributed leadership scale. The demarcations between the types overlap, as the types were not only based on instructional and distributed leadership, but also on time spent by principals on educational leadership and principals' engagement in educational policies at their school.

■ Figure 3.17 ■

Countries' and economies' distribution on the integrated leadership scale



Note: Classification by system of three clusters of leadership styles based on the latent class analyses built on the scores on four indicators: instructional leadership, distributed leadership, time spent on educational leadership and educational leadership practice policy.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

StatLink http://dx.doi.org/10.1787/888933369723

In the interpretation of these results it is important to consider that these types of leadership are in part the results of institutional and legal frameworks that limit and shape the action of principals in terms of what they are able to do in their schools. These frameworks can vary considerably across countries and economies, thus, understanding the implications of national educational context for the roles of

principals becomes a crucial task. With that purpose in mind, Annex C presents a brief description of the employment and career history of the principals, along with the legal framework affecting their educational leadership.

SUMMARY

In lower secondary education, countries and economies differ considerably regarding the instructional leadership of their principals. In a few systems, nearly every principal supports co-operation between teachers to develop new teaching practices and ensures that teachers take responsibility for improving their teaching skills or their students' achievements. In almost all countries and economies a majority of principals act as instructional leaders. Those who take action to support co-operation and ensure that teachers take responsibility for improving their teaching were more likely to have received training in instructional leadership during their education or in courses they attended. Moreover, in some systems, principals' participation in professional networks, mentoring or research, as well as principals' participation in courses, conferences or observational visits, appears to be beneficial, although the type of professional activities that contribute to the instructional leadership demonstrated by the principal differs considerably between countries and economies. In order to enhance instructional leadership in schools, it is worthwhile paying explicit attention to instructional leadership in the initial training principals receive, and to offer in-service courses or programmes on instructional leadership for those principals who have not received any or sufficient preparation during their initial training.

Despite the relevance of training in instructional leadership for the exertion of actions by principals, major differences between countries and economies are present that cannot be ascribed to differences in instructional leadership training. In the systems in which instructional leadership is less common, other factors are probably at stake, which might be related to different conceptions about the role of the principal or teachers or traditions that may be hard to change. These patterns need first to be discerned.

Based on what principals reported, nearly all schools across countries and economies provide their staff with opportunities to engage in decision making at their school. Teacher involvement in decision-making processes within the school is one of the key factors in adopting and sustaining educational improvements. At the same time, schools differ to what degree and in the nature of involving staff in school decisions. Given the complexity and the dynamics of educational change, these subtle differences in engaging staff in the decision-making process determine whether schools actually have the capacity to improve their education effectively. The results from TALIS therefore suggest that in each of the participating systems, the basis for educational improvement exists, but it needs to be further examined to what extent the type and extent of teacher participation in school decisions is beneficial for school improvement.

About half of all principals across countries and economies exert integrated leadership. These principals have a strong focus on instructional leadership and create opportunities for staff, students and parents or guardians to take part in the school decisions. They spend a lot of time on curriculum and teaching-related tasks in school and use student outcomes for developing instructional programmes and policies at their school. On the other hand, about one-third of all principals take hardly any action to support co-operation among teachers to develop new teaching practices or to ensure that teachers in their school take responsibility for students' learning outcomes or for improving their teaching skills.

Notes

1. The variable school size might not refer to the same population within and between countries. Schools may cater to varying grade levels. Thus, results in this section should be interpreted with caution.

2. Norway was not included in the latent analysis. Norway had missing data regarding the percentage of time a principal spends on curriculum and teaching-related tasks and meetings. Since these data were absent, it was not possible to determine the classification for Norway.

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4

School leadership and professional learning communities

Principals are considered as playing a key role in the development of professional learning communities. This chapter examines to what extent educational leadership affects the development of professional learning communities across countries and economies. The first part of the chapter focuses on the manifestation of professional learning communities in individual countries and economies. In the second section, the relationship of instructional and distributed leadership and professional learning communities is examined, while accounting for relevant school context and teacher characteristics. In the third part of the chapter, these analyses are redone using the four types of educational leaders and the three types of systems classification in place of instructional and distributed leadership. The chapter concludes with a short summary of the findings and some reflections on the impact of these findings for educational practice and policy.

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Highlights

- The characteristics of professional learning communities are unevenly represented across education systems. In some systems, specific characteristics of professional learning communities are manifest, whereas other characteristics are more prominent in other systems.
- In countries and economies in which principals employ more distributed leadership, teachers report a greater sense of purpose. In schools in which principals show greater instructional leadership, teacher collaboration and reflective dialogue is also more common.
- Schools with principals showing integrated leadership, i.e. balancing elements of both distributed and instructional leadership, are more often associated with characteristics of professional learning communities, such as teachers engaging in reflective dialogue and collaboration, than schools with inclusive leaders. Similarly, schools with integrated leaders are linked, more often than schools with educational leaders, to a shared sense of purpose among their staff and a collective focus on student learning.
- The establishment of a professional learning community is not enhanced by a larger number of foreign language students, or students from more deprived homes, but it is more likely to develop in schools with students with special educational needs. When the number of students with special educational needs is higher, teachers have a greater shared sense of purpose, work together more often and perceive that they reflect more on improving the way they function based on feedback they receive from others. However, when the number of students with special educational needs gets too high, this collaboration and reflective practice tends to disappear.
- Teachers who are self-efficacious in instruction and student engagement collaborate more at school, reflect more on the way they function based on the feedback they receive from colleagues, are more strongly focused on students' cognitive achievement and have a stronger sense of purpose. In order to stimulate teachers' self-efficacy, schools can offer coaching or training to their teachers.

PROFESSIONAL LEARNING COMMUNITIES AT SCHOOL

Over the past decades, interest in the development of professional learning communities has gained the attention of many scholars and practitioners because, in schools with a stronger learning community, student learning is enhanced (Lomos, Hofman and Bosker, 2011a). Professional learning communities are based on the premise that teachers' knowledge is situated in their day-to-day, lived experiences and best understood through critical reflection with others who share the same experience (Vescio, Ross and Adams, 2008). Moreover, teachers who actively engage in a professional learning community will likely increase their professional knowledge, which will enhance student achievement. Following Louis, Marks and Kruse (1996), a professional community consists of five factors: reflective dialogue; deprivatisation of practice or feedback on instruction; collaborative activity; a shared sense of purpose; and a collective focus on student learning. Box 4.1 presents descriptions of how these factors were operationalised in the Teaching and Learning International Survey (TALIS) 2013. Based on these conceptualisations, system averages for each of these five factors are presented in the next sections.

Box 4.1 Measurement of professional learning communities in TALIS 2013

A professional learning community consists of five factors 1) reflective dialogue; 2) deprivatisation of practice or feedback on instruction; 3) collaborative activity; 4) a shared sense of purpose; and 5) a collective focus on student learning (Louis, Marks and Kruse,1996).

Reflective dialogue. Reflective dialogue refers to the extent to which teachers are engaged in professional conversations about specific educational issues. In the teacher questionnaire, teachers were asked about the feedback they have received at their school and to what extent this feedback has directly led to a positive change in 1) their classroom management practices; 2) their knowledge and understanding of their main subject field(s); 3) their teaching practices; 4) their methods for teaching students with special educational needs; and 5) their use of student assessments to improve student learning. The five items are measured on a four-point scale, with 1 being "no positive change", 2 "a small change", 3 "a moderate change" and 4 "a large change". Using an exploratory factor analysis, the factor scores were used to construct the "reflective dialogue" scale. Cronbach's alpha of the scale across systems is 0.89.

Deprivatised practice by feedback from another teacher. Deprivatised practice refers to teachers observing other teachers' classes, with the goal of providing feedback on their teaching. This issue is measured in TALIS through identifying whether other teachers within a school provide "Feedback following direct observation of your classroom teaching". Teachers could select the box to indicate whether or not this was the case. The factor is dichotomous, with 0 representing "no feedback by other teachers" and 1 representing "feedback by other teachers".

Collaborative professional activity. The collaborative activity of the teachers is measured using the exchange and co-ordination for teaching scale (TCEXCHS) in TALIS 2013. Teachers were asked how often, on average, they do the following in their school: 1) Exchange teaching materials with colleagues; 2) engage in discussions about the learning development of specific students; 3) work with other teachers in their school to ensure common standards in evaluations for assessing student progress; and 4) attend team conferences. All items in the scales were measured on a six-point scale, with response categories of 1 for "never", 2 for "once a year or less", 3 for "2-4 times a year", 4 for "5-10 times a year", 5 for "1-3 times a month" and 6 for "once a week or more". The scale of collaborative professional activity was calculated to have a standard deviation of 2.0 and a midpoint of 10 to coincide with the midpoint of the scale. This means that a score of 10 corresponds with the average response of 3.5 on the four items in the scale, and a score above 10 indicates consistent repetition of activities described by the items in this scale. For further information, the reader is referred to Chapter 10 of the *TALIS 2013 Technical Report* (OECD, 2014).

Shared sense of purpose. A shared sense of purpose reflects teachers' agreement on the school's mission and its operational principles. Two items measure this issue: 1) the school has a culture of shared responsibility for school issues; and 2) a collaborative culture that is characterised by mutual support. These items were measured on a four point scale, with response categories of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". As the two items correlate well (Spearman's rho = 0.66, $p < 0.001$), a summative scale "shared sense of purpose" is constructed, ranging from 2 to 8.

Box 4.1 **Measurement of professional learning communities in TALIS 2013** *(continued)*

Collective focus on student learning. Collective focus on student learning reflects to what degree student performance is emphasised within a school. It is measured by asking teachers what emphasis, when they receive feedback, is placed on 1) student performance; 2) knowledge and understanding of the subject fields; 3) pedagogical competencies in teaching the subject fields, 4) student assessment practices; and 5) student behaviour and classroom management. The five items are measured on a four-point scale, with 1 "not considered at all", 2 "considered with low importance", 3 "considered with moderate importance" and 4 "considered with high importance". Using an exploratory factor analysis, the factor scores were used to construct the scale "collective focus on student learning". Cronbach's alpha of the scale across countries is 0.83.

Reflective dialogue

Reflective dialogue refers to the extent to which teachers engage in professional conversations about specific educational issues. Based on these reflections, teachers are inclined to further improve their teaching (Lomos, Hofman and Bosker, 2011a).

As Figure 4.1 shows, teachers in Malaysia perceive, on average, greater changes in their knowledge and skills on teaching and assessment based on the feedback they receive than teachers in other systems. Alongside them, teachers in Abu Dhabi, United Arab Emirates; Chile; Mexico; and Romania, also perceive more impact on their own competencies from the feedback they receive than teachers in most other countries and economies. As regards their subject knowledge and teaching skills, teachers from Australia; Finland; Flanders, Belgium; France; and the Netherlands indicate being the least influenced by the feedback they receive, relatively, in comparison with other countries/economies in the survey (see Table 4.1).

Deprivatised practice by classroom observation

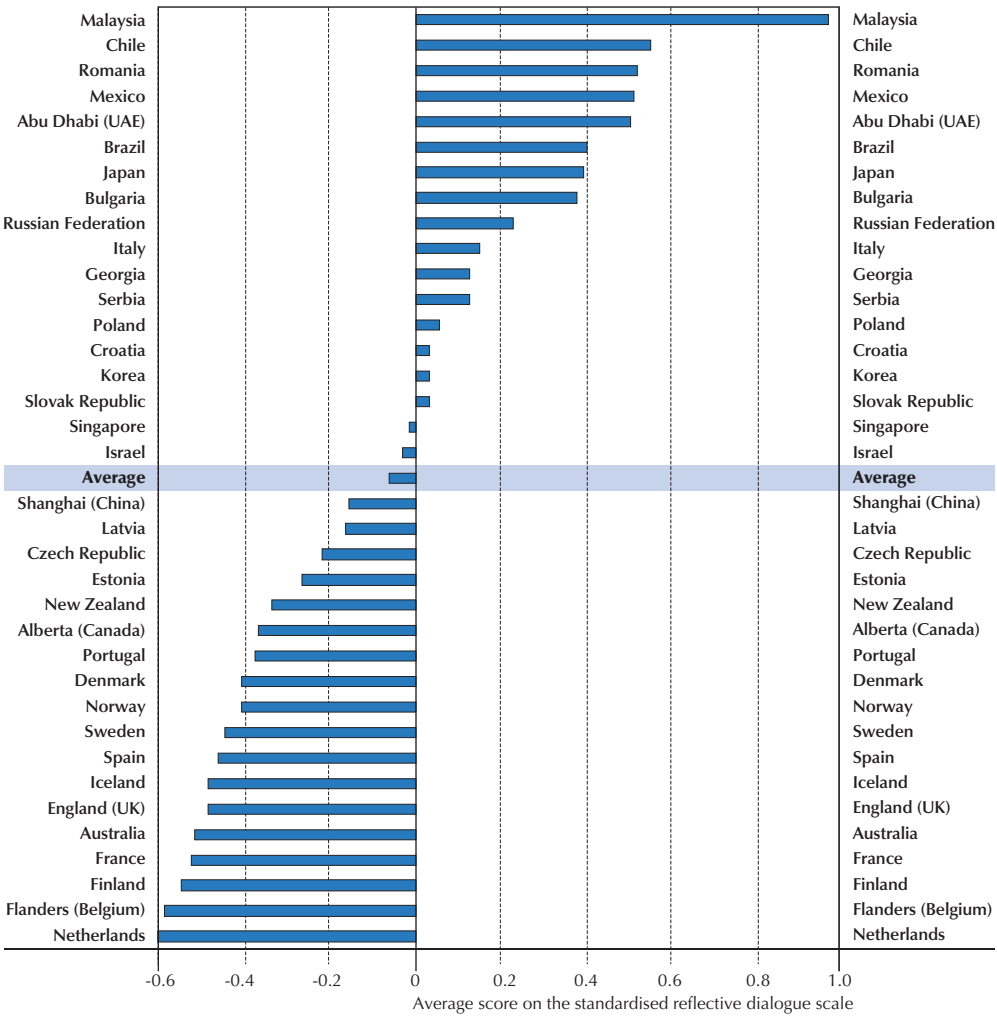
Deprivatised practice refers to teachers observing other teachers' classes, with the goal of providing feedback on their teaching. Teachers' work is, to a large extent, confined to the classroom, where they interact with groups of students. Often, the only feedback teachers get is from their students. Deprivatised practice implies discussion of teaching practices and sharing ideas and problems among staff, based on observation by peers. Teachers observe each other, give feedback, and act as mentors, advisors or specialists (Lieberman, Saxl and Miles, 1988; Little, 1990). This issue is measured in TALIS through identifying whether other teachers within a school provide feedback following direct observation of a teacher's classroom teaching. Figure 4.2 presents the mean percentage of teachers per country/economy reporting such feedback.

As Figure 4.2 reveals, teachers in Korea – considerably more so than teachers in other systems – report that they receive feedback from their colleagues after those colleagues have visited their classroom. Moreover, on average, more than 40% of teachers in New Zealand and Norway indicate that their lessons are observed by fellow teachers within their school, who subsequently report what they saw. In Flanders, Belgium; France; and Poland, on average, only 10% or less report that they get feedback from colleagues following observation of their classes (see Table 4.1).

■ Figure 4.1 ■

Reflective dialogue scale, by country and economy, in lower secondary education

Average scores on the professional learning community scale "reflective dialogue"



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "reflective dialogue".

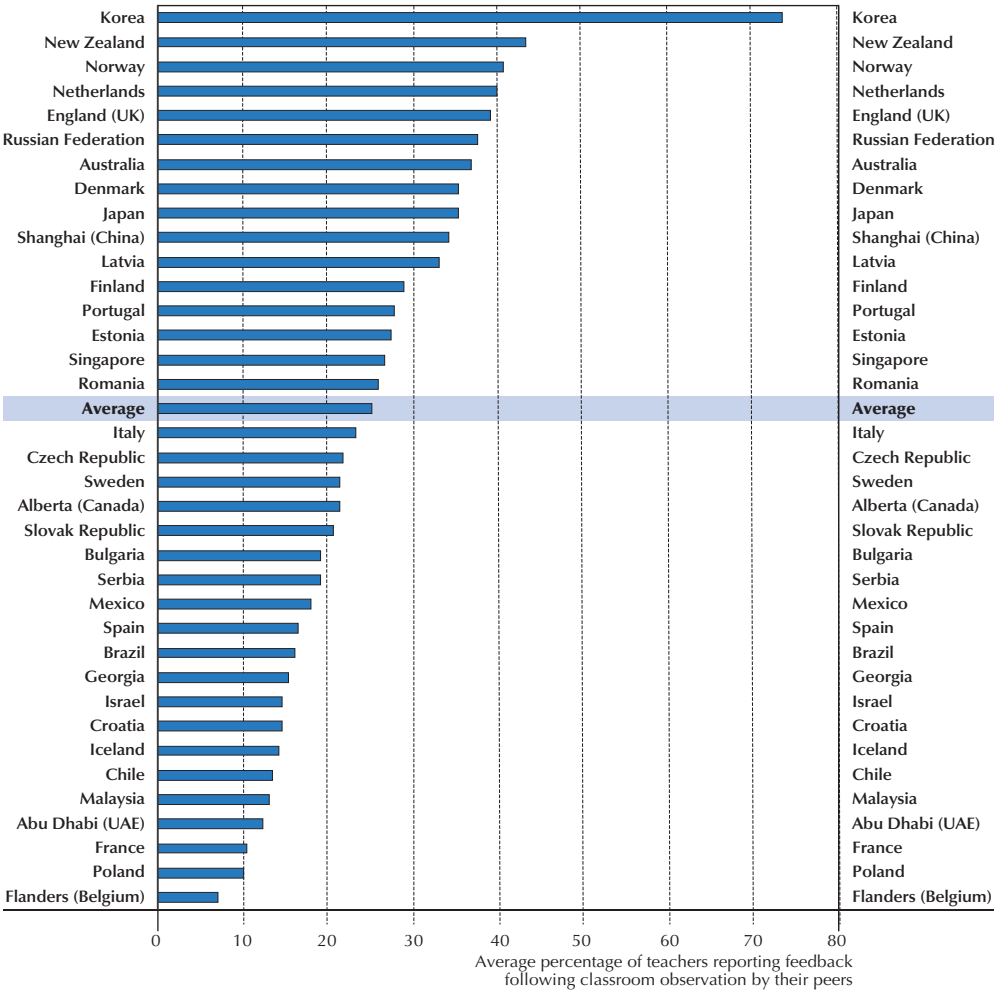
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1.

StatLink http://dx.doi.org/10.1787/888933369735

▪ Figure 4.2 ▪

Deprivatised practice factor, by country and economy, lower secondary education

Percentage of teachers that report receiving feedback following classroom observation by other teachers



Note: Countries and economies are ranked in descending order, based on the average percentage of teachers per system reporting classroom observations by fellow teachers.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1.

StatLink http://dx.doi.org/10.1787/888933369747

Collaborative activity of teachers

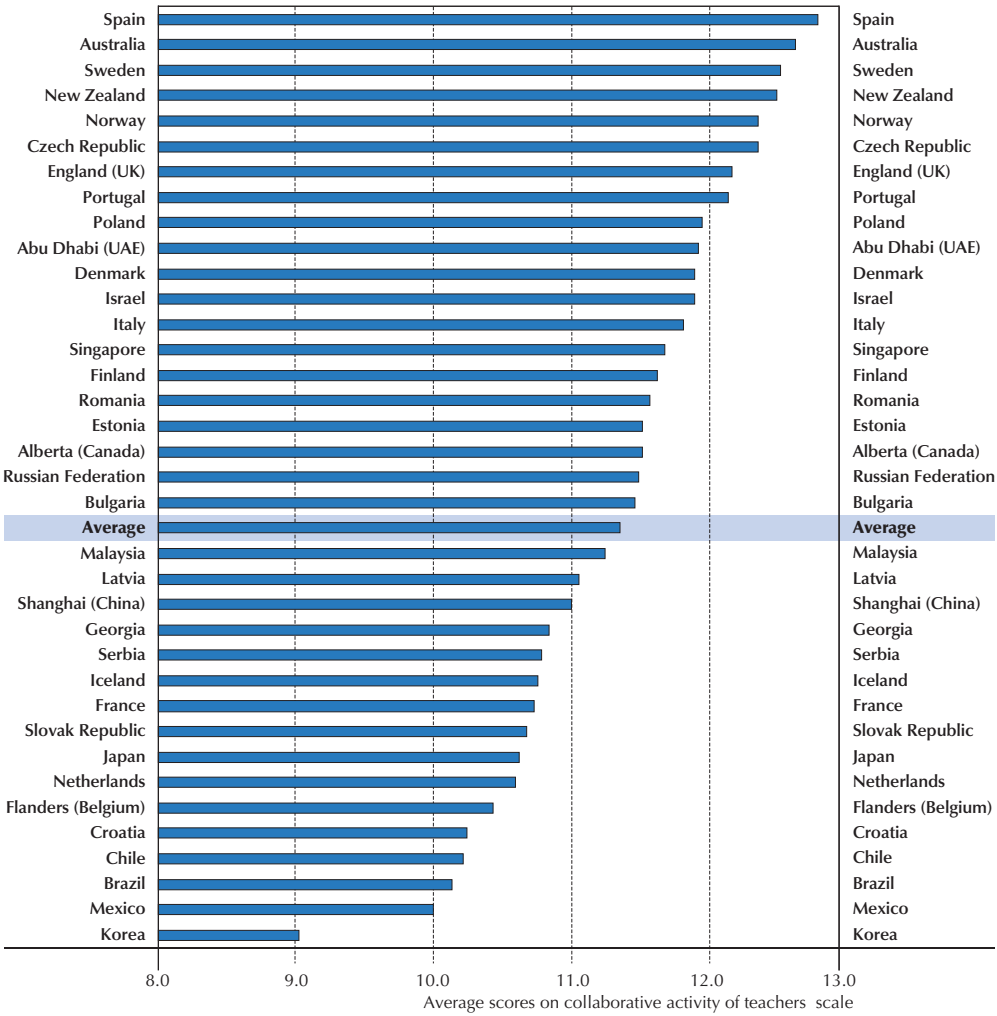
Collaborative activity represents a measure of the extent to which teachers engage in co-operative practices. Professional communities foster the sharing of expertise, and faculty members call on each other to discuss the development of skills related to the implementation of practice (Little, 1990, 1982).

By collaborating, they create shared understandings from complex and confusing data. Collaborative work also increases teachers' sense of affiliation with each other and with the school and their sense of mutual support and responsibility for effective instruction (Louis, 1992).

■ Figure 4.3 ■

Collaborative activity scale, by country and economy, in lower secondary education

Average scores on the professional learning community scale "collaborative activity"



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "collaborative activity".

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1.

StatLink http://dx.doi.org/10.1787/888933369758

Teachers' collaborative activity is measured by using the exchange and co-ordination for teaching scale. Teachers were asked to indicate how often, on average, they were: engaged in the exchange of teaching materials with colleagues; in discussions about the learning development of specific students; in work with other teachers in their school to ensure common standards in evaluations for assessing student progress; and in team conferences. In Figure 4.3, the country means for the exchange and co-ordination for teaching are presented.

Figure 4.3 reveals that teachers in Australia, New Zealand, Spain and Sweden report being most engaged in co-operative practices within their school, in comparison with other countries/economies in the survey. Teachers in Korea, on the other hand are, on average, the least inclined to engage in co-operative activities with other teachers in their school. Most Korean teachers indicate that they engage in exchanges and co-operative activities on average just once a year or less. Although more engaged in co-operative practices than Korean teachers, Brazilian, Chilean, Croatian and Mexican teachers are, on average, less engaged than their colleagues in most other systems (Table 4.1).

Shared sense of purpose

"Shared sense of purpose" represents the teachers' degree of agreement with the school's mission and its operational principles. Through co-operative discussion and reflection, professional learning communities develop a shared view of fundamental issues, such as the core objectives to be achieved with students, effective roles and teaching strategies teachers should acquire, and determining whether goals set are actually achieved (see Vieluf et al., 2012).

Figure 4.4 indicates that, on average, teachers in all systems agree that the staff at their school have a shared sense of purpose. Teachers in Australia; England, United Kingdom; France; Korea; New Zealand; Mexico; and Sweden report, on average, a lower sense of purpose than teachers across countries and economies. On the other hand, teachers in Abu Dhabi, United Arab Emirates; Georgia; Latvia; Malaysia; Norway; Romania; the Russian Federation; and Shanghai, China report, on average, a stronger collaborative culture in which responsibilities are shared among the school staff.

Collective focus on student learning

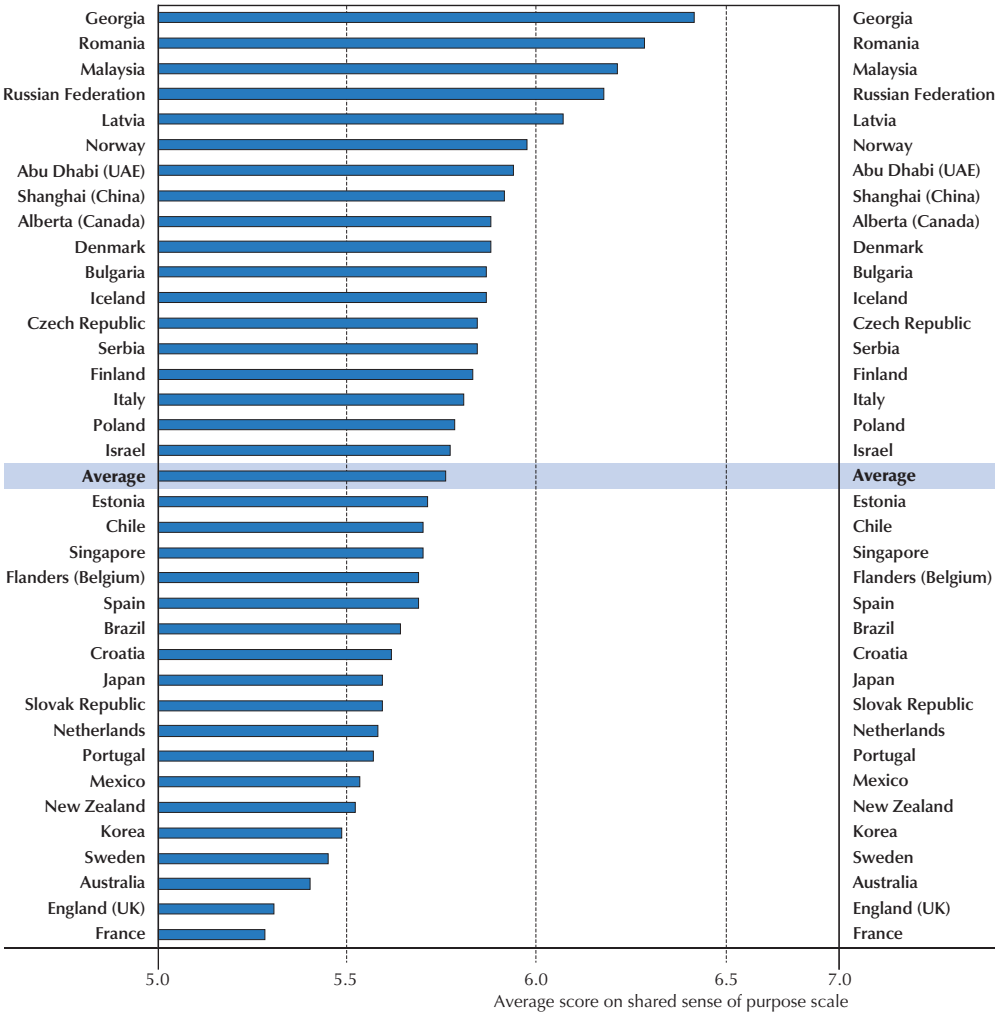
A collective focus on student learning indicates a high level of teachers' commitment to students' success. An undeviating concentration on student learning is a core characteristic of professional community (Newmann and Wehlage, 1995). Teachers' professional actions focus on choices that affect students' opportunity to learn and provide substantial student benefit (Abbott, 1991; Darling-Hammond and Goodwin, 1993; Darling-Hammond and Snyder, 1992; Little, 1990). Teachers discuss the ways in which instruction promotes students' intellectual growth and development, as distinguished from simply focusing on activities or strategies that may engage student attention.

Figure 4.5 indicates that, in Malaysia and Romania, student performance is, on average, more strongly emphasised in the feedback teachers receive within their school than in other systems. A relatively stronger emphasis on teachers' feedback on student performance is also reported by teachers in Brazil and the Russian Federation. The least emphasis on student performance in the feedback they receive is reported by teachers in four Norden countries, respectively, Finland, Iceland, Norway and Sweden.

■ Figure 4.4 ■

Shared sense of purpose scale, by country and economy, in lower secondary education

Average scores on the professional learning community scale "shared sense of purpose"



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "shared sense of purpose".

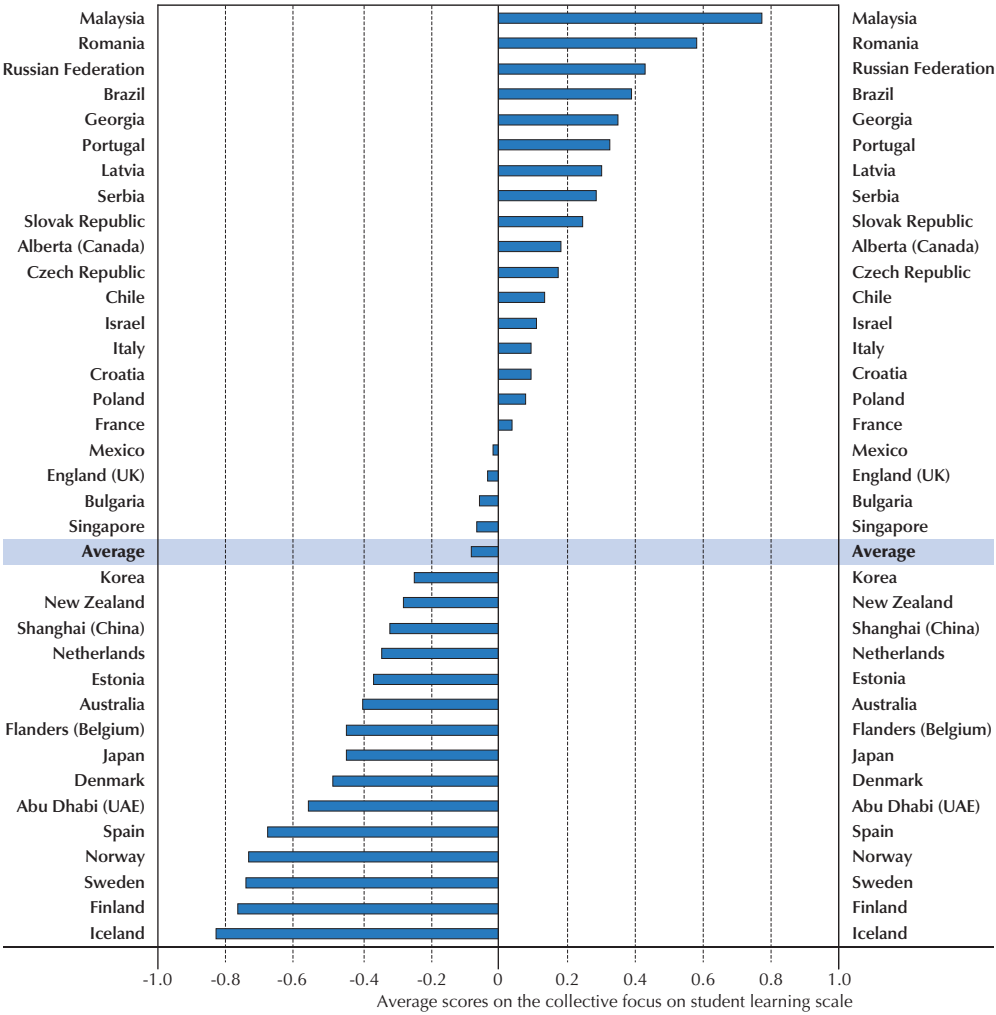
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1.

StatLink http://dx.doi.org/10.1787/888933369769

▪ Figure 4.5 ▪

Collective focus on student learning scale, by country and economy, in lower secondary education

Average scores on the professional learning community scale "collective focus on student learning"



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "collective focus on student learning".

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1.

StatLink http://dx.doi.org/10.1787/888933369775

RELATIONSHIP BETWEEN EDUCATIONAL LEADERSHIP AND ESTABLISHING A PROFESSIONAL LEARNING COMMUNITY IN SCHOOLS

To determine the relationship between educational leadership and the five characteristics of a professional learning community, a multilevel analysis was used (see Box 4.2). Figure 4.6 indicates whether positive or negative relations were found for the two educational leadership indices, school context variables and teacher characteristics in relation to the professional learning community scales.

Box 4.2 **Multilevel analyses**

Multilevel analysis takes the hierarchical structure of the TALIS 2013 dataset into account. Three levels are distinguished. Teachers (level 1) are nested within schools (level 2), and schools are nested within countries (level 3). Random intercept models were used to estimate the effect on the five aspects of the professional learning community: collaborative professional activity; reflective dialogue; collective focus on student learning; deprivatised practice by feedback of another teacher; and shared sense of purpose (Snijders and Bosker, 2012). The sampling design of TALIS 2013 is considered by performing a weighted analysis. Final teacher weight and final school weight are implemented in the analyses at, respectively, levels 1 and 2.

First, an empty model is estimated (Model 0). Such a model reveals the basic estimates for the random parts of the model: the variance at levels 1, 2 and 3. Secondly, distributed leadership and instructional leadership are added as predictors to the empty model (Model 1). Model 1 enables an estimate of the gross effects of these two forms of educational leadership on aspects of professional learning communities. The third step in the multilevel analysis concerns adding school context characteristics to Model 1, resulting in Model 2. This model presents the restricted net effect of school leadership aspects on the professional learning community, accounting only for school context characteristics. The fourth step is expanding Model 2 with 10 teacher characteristics. This results in Model 3, the most extensive model to estimate the net effect of school leadership aspects on the professional learning community. The signs in Figure 4.6 and 4.7 are based on these most extensive models. See Annex B for further details.

As Figure 4.6 shows, the collaborative activity of teachers is higher in schools in which principals are more engaged in instructional leadership. This means that principals who take action to support co-operation among teachers to develop new teaching practices, and who stimulate teachers' responsibility for their teaching skills and students' learning outcomes, more often work in schools where teachers are inclined to exchange their practices. In these schools, teachers more often exchange teaching materials with colleagues, engage in discussions about the development of specific students, work together to ensure common standards in evaluations for assessing student progress and attend team conferences. This may indicate that the action principals take to develop co-operation and to promote teachers' responsibility for their instruction affects teachers' collaboration in school. On the other hand, when teachers are engaged in exchanging practices and co-operation, it will probably be much easier for principals to further stimulate teachers' collaboration – or both might be mutually reinforcing (see Table 4.5).

Moreover, Figure 4.6 reveals that teachers are more engaged in professional conversations through reflective dialogue in schools in which principals are more often engaged in instructional leadership (Table 4.2). For other characteristics of a professional learning community, like deprivatised practice, a shared sense of purpose and a collective focus on student learning, no significant relationship with instructional leadership was found.

For distributed leadership, a significant relationship is found for a shared sense of purpose (Table 4.4). When the school provides the staff with opportunities to actively participate in school decisions, and also involves parents and students in decision making at school, teachers feel a greater shared responsibility for school issues because they are at a school in which people are willing to support each other. This finding suggests that some schools indeed succeed in building a collaborative culture when stakeholders feel that they might have a say in school issues and their opinion is valued. As a high percentage of schools across countries and economies engage teachers in some way in school decision making, the finding further suggests that for creating a shared sense of purpose, the inclusion of students and their parents or guardians is also important. This might lead to a broader shared mission or vision towards which all relevant parties within a school are dedicated and which they try to achieve collaboratively.

School context factors are also related to establishing a shared sense of purpose within a school. Across systems, for example, teachers in smaller schools experience a culture of shared purpose more often and indicate being relatively more engaged in reflective dialogue at their school. These findings are in accordance with previous studies on professional communities in schools. Louis, Marks and Kruse (1996) conclude that the development of professional learning communities is more frequently found in smaller schools. As small schools usually have fewer programmes, teachers are more likely to engage in common endeavours (Bryk, Camburn and Louis, 1999). Moreover, communication flows more easily through face-to-face interactions.

Previous research into school size and professional learning communities, however, mainly focused on primary education. Secondary schools in nearly all countries have a different structure than primary schools, which might have implications for the relationship between school size and various facets of a professional learning community. Bolam et al. (2005) conclude that professional learning communities in the United Kingdom were as likely to be found in small secondary schools as in larger secondary schools. They argue that, in secondary education, several "mini professional learning communities" might be established, structured around subject departments in school (see also Lomos, Hofman and Bosker, 2011b; Melville and Wallace, 2007). In this study, the analyses for reflective dialogue, collaborative activities, and deprivatised practice, as well as a collective focus on student learning, point to differences between the subjects that are taught. This could also point to differences between subject departments regarding teacher collaboration and exchange. Among others, Talbert and McLaughlin (2002) have shown that teachers have a strong subject-related identity and that they mainly collaborate with colleagues on department-related schoolwork. This likely limits the influence of instructional leadership by the principal, most probably in large secondary schools in which subject departments are relatively large.

■ Figure 4.6 ■

Effect of leadership and other school and teacher characteristics on the establishment of professional learning communities in lower secondary education

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Educational leadership					
Instructional leadership	+			+	
Distributed leadership			+		
School context					
School location (hamlet, village or small town)					
Town			+		
City or large city	–	–	+		
School type (public)					
Private government dependent					
Private government independent		+			
School size (300 or fewer students)					
301-600 students	–		–		
601-1 200 students	–		–		–
more than 1 200 students		–	–		–
School autonomy on staffing (no autonomy)					
Mixed autonomy					
High autonomy					
School autonomy on budgetting (no autonomy)					
Mixed autonomy		+		–	
High autonomy					
School autonomy on instruction (no autonomy)					
Mixed autonomy					
High autonomy					
Percentage foreign language students (0%)					
1-10% of students	–				–
11-30% of students		+			
31-60% of students					
more than 60% of students					
Percentage students with special needs (0%)					
1-10% of students	+		+	+	
11-30% of students	+		+	+	
31-60% of students					
more than 60% of students	+	–			
Percentage low SES students (0%)					
1-10% of students				+	
11-30% of students	+			+	
31-60% of students	+			+	
more than 60% of students	+			+	
Teacher characteristics					
Gender (females)	–	–		–	–
Employment status (less than 50% full-time hours [fth])					
50-70% fth		–	–	+	
71-90% fth		–	–	+	
more than 90% fth	+	–	–	+	+
Subject (other subjects)					
Humanities subjects	+	–		+	+
Science subjects	+	–		+	
Teaching experience	–				+
Teachers' formal education (below ISCED5)					
ISCED5B					
ISCED5A	–		–		
ISCED6	–		–		–
Self-efficacy classroom management	–	+		–	+
Self-efficacy instruction	+	–	+	+	+
Self-efficacy student engagement	+	–	+	+	+
Teacher autonomy		–	+		

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the professional community scales while accounting for all other characteristics. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a normal sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses are presented on line via StatLinks (Tables 4.2 to 4.6).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Tables 4.2, 4.3, 4.4, 4.5 and 4.6.

A further interesting finding is that teachers' self-efficacy in classroom instruction and student engagements is related to several aspects of a professional community. This could indicate that when teachers feel confident in teaching and engaging students in their classroom, they might experience fewer barriers to sharing their practices with their colleagues and exploring ways for further improvement (see also Runhaar, Sanders and Yang, 2010). Consequently, teachers who are less self-efficacious in instruction might feel threatened if others confront them with their shortcomings. Wahlstrom and Louis (2008), however, argue that a reverse mechanism may be at play, as observing teachers and providing them with feedback might stimulate a teacher's self-efficacy in teaching. In their view, enhancing, in particular, the visibility of classroom practice through observations by peers improves a teacher's self-efficacy and a teacher's attitudes toward professional development, among other characteristics (Figure 4.6).

For experience in teaching and teachers' formal education, only relatively small effects on some of the professional learning community dimensions are present. The findings indicate that, on average across systems, teachers with university training are not more or less engaged in collaboration with peers or class observations of peers than less educated teachers. They do seem, nevertheless, to be less inclined to engage in professional conversations and to have less of a shared sense of purpose. Similarly, full time teachers, along with teachers who work nearly full-time, on average have less of a shared sense of purpose than part time teachers. Full-time teachers, on the other hand, are more engaged in collaborative activities and reflective dialogue. They also express having a stronger focus on student learning than part time teachers.

The establishment of a professional learning community is not enhanced by a larger number of foreign language students and is only partly enhanced by housing a larger number of students from more deprived homes. Professional learning communities, however, seem more likely to develop in schools with students with special educational needs. When the number of students with special educational needs is higher, teachers have a greater shared sense of purpose, work together more often, and perceive that they reflect more on improving the way they function based on feedback they receive from others. However, when the number of students with special educational needs gets too high, this collaboration tends to disappear.

■ Figure 4.7 ■

Effect of school and country/economy leadership types and other school and teacher characteristics on the establishment of professional learning communities in lower secondary education

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Educational leadership					
School leader types (ref. integrated leadership)					
Educational leadership	–	–	–		–
Inclusive leadership	–			–	
Administrative leadership	–		–	–	–
Country leadership profile (ref. category 1)					
Countries with mainly inclusive leaders (Cat. 2)	–		–		–
Countries with mainly educational leaders (Cat. 3)					

■ Figure 4.7 ■

Effect of school and country/economy leadership types and other school and teacher characteristics on the establishment of professional learning communities in lower secondary education *(continued)*

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
School context					
School location (hamlet, village or small town)					
Town			+		
City or large city	–	–			
School type (public)					
Private government dependent		+			
Private government independent		+			
School size (300 or fewer students)					
301-600 students	–		–		
601-1 200 students			–		-
more than 1 200 students		–	–		–
School autonomy on staffing (no autonomy)					
Mixed autonomy					
High autonomy					
School autonomy on budgetting (no autonomy)					
Mixed autonomy					
High autonomy					
School autonomy on instruction (no autonomy)					
Mixed autonomy					
High autonomy					
Percentage foreign language students (0%)					
1-10% of students	–				–
11-30% of students					
31-60% of students					
more than 60% of students					
Percentage students with special needs (0%)					
1-10% of students	+		+		
11-30% of students	+		+	+	
31-60% of students					
more than 60% of students	+	–			
Percentage low SES students (0%)					
1-10% of students					
11-30% of students	+			+	
31-60% of students	+			+	
more than 60% of students	+			+	
Teacher characteristics					
Gender (females)	–	–		–	–
Employment status (less than 50% full-time hours [fth])					
50-70% fth		–	–	+	
71-90% fth		–	–	+	
more than 90% fth	+	–	–	+	+
Subject (other subjects)					
Humanities subjects	+	–		+	+
Science subjects	+	–		+	
Teaching experience	–				
Teachers' formal education (below ISCED5)					
ISCED5B					
ISCED5A	–		–		
ISCED6	–		–		–
Self-efficacy classroom management	–	+			
Self-efficacy instruction	+	–	+	+	+
Self-efficacy student engagement	+		+	+	+
Teacher autonomy		–	+		

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the professional community scales while accounting for all other characteristics. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a normal sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses are presented on line via StatLinks (Tables 4.2 to 4.6).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Tables 4.7, 4.8, 4.9, 4.10 and 4.11.

RELATIONSHIP BETWEEN SCHOOL LEADERSHIP TYPES AND A PROFESSIONAL LEARNING COMMUNITY WITHIN A SCHOOL

Figure 4.7 includes the four types of school leadership, as well as the system profiles in the multilevel analyses, instead of the instructional and distributed leadership of principals. The system profiles concern the types of integrated leaders, inclusive leaders, educational leaders and administrative leaders (see Chapter 3).

Figure 4.7 reveals that, for deprivatised practice, hardly any differences between the four school leadership types of principals are found. For the other professional learning community characteristics, differences between the types are present. Common to these effects is that integrated leadership is generally more conducive to the development of professional learning community characteristics than other types of leadership. More specifically, in schools with inclusive leaders, teachers engage less in reflective dialogue and teacher collaboration than teachers in schools with integrated leaders. Similarly, integrated leaders who combine strong instructional with strong distributed leadership seem better able than educational leaders to create a shared sense of purpose among their staff and a collective focus on student learning. As both characteristics draw on shared views and collective effort within a school, it seems plausible that educational leaders who pay less attention to the creation of opportunities for others in and around the school are less likely to achieve a shared sense of purpose in schools compared to integrated leaders.

Administrative leaders, who pay little attention to the instructional process and are less likely than integrated and inclusive leaders to involve other stakeholders in school decisions, work in schools that, on average, are less characterised by teacher collaboration than teachers working with an integrated leader. To a large extent, administrative leaders leave educational decisions to their staff, and this seems to enhance teacher autonomy. Teachers in schools with administrative leaders do report being less involved in reflective dialogue at their school, and do perceive a less shared sense of purpose or a lesser focus on student learning in their school.

Inclusion of the systems types of school leadership reveals a small negative relationship between countries in school leadership categories 1 and 2. In category 2 countries and economies (Croatia; Denmark; Estonia; Finland; Flanders, Belgium; France; the Netherlands; Portugal; Spain; and Sweden), teachers, on average, tend to be less engaged in reflective practice and have less of a shared sense of purpose than teachers in category 1 countries and economies. Similarly, they report, on average, to have a lesser collective focus on student learning. Moreover, the negative effects for the system types suggest that, next to the composition of integrated, inclusive, educational and administrative leaders found in each of the countries and economies, the category points to an additional effect that is specific for these countries and economies.

The relationship of school context and teacher characteristics with professional learning communities resembles, to a large extent, the findings discussed in the section *Relationship between educational leadership and establishing a professional learning community in schools*.

SUMMARY

The characteristics of professional learning communities are unevenly represented in the various education systems. In some countries and economies, specific characteristics of professional learning communities are manifest, whereas other characteristics are more prominent in other systems. As these

profiles for participation in professional learning communities vary considerably among countries and economies, as Vieluf et al. (2012) noted earlier, this suggests an influence of pedagogical traditions and national cultures. These pedagogical traditions or cultural differences, rather than efforts to build professional learning communities, seem to clarify why certain characteristics are more often found in some systems over others. The analyses of country and economy types of educational leadership indeed substantiate this finding to some extent. When accounting for school context and teacher characteristics and for the type of educational leadership of a principal, some small additional effects were found for the system types. This suggests that some features of the educational system, some cultural specifics, or some educational policy, might cause a certain aspect of professional learning communities to be more or less common in these countries and economies than in others.

In countries and economies in which principals employ more instructional leadership, teachers report being more often engaged in professional discussions on educational issues. In schools with principals who show greater instructional leadership, teacher collaboration is also more common. Although, for deprivatised practice, no differences were found between integrated leadership and the other three leadership types, integrated leadership appears to be more beneficial for reflective practice, a shared sense of purpose, collaborative activity and a collective focus on learning, than either inclusive leadership, educational leadership or administrative leadership. This finding indicates that, rather than an emphasis on solely instructional leadership or shared leadership, a combination of both seems the most promising when stimulating professional learning within a school.

A student population with relatively more students from disadvantaged homes, with students who speak a different language from the language of instruction, or with special educational needs, may stimulate teacher collaboration, more reflective practice and a stronger sense of purpose. The establishment of a professional learning community, however, was not found to be enhanced by a larger number of students who speak a foreign language or students from more deprived homes. Only for students with special educational needs was a compelling relationship with characteristics of a professional learning community found. When the number of students with special educational needs is higher, teachers have a greater shared sense of purpose, work together more often, and perceive that they reflect more on improving the way they function based on feedback they receive from others. However, when the number of students with special educational needs gets too high, this collaboration tends to disappear. This might suggest that dealing with students with special educational needs is demanding and challenging for teachers, forcing them to consult other teachers in their school and sharing good practices. As a system of inclusive education is common in many countries, this means that these practices are to be sufficiently facilitated in order to achieve maximum effect.

Teachers who are self-efficacious in instruction and student engagement collaborate more at their school, reflect more on the way they function based on the feedback they receive from colleagues, are more strongly focused on students' cognitive achievement and have a stronger sense of purpose. In order to stimulate teachers' self-efficacy, schools can offer coaching or training to their teachers.

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5

School leadership and the development of a positive learning climate

This chapter addresses the role of educational leadership in shaping a climate conducive to student learning. The first part of the chapter focuses on differences between countries and economies with regard to creating a disciplinary classroom climate and establishing a positive relationship between teachers and students within a school. The second part of the chapter examines the impact of instructional and distributed leadership on the creation of a positive learning climate at a school. In the third section, the effect of school leadership on learning climate is explored by comparing the four different types of school leadership: integrated leadership, inclusive leadership, educational leadership and administrative leadership. In this section also, country and economy leadership types are related to the establishment of a learning climate within a school. The chapter concludes with reflections on the direct influence of the principal in lower secondary schools on classroom climate.

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Highlights

- School leadership only marginally influences the learning climate at a school. The learning climate at a school is relatively more affected by the composition of the student population and the experience of teachers.
- A stronger engagement of principals in distributed leadership is related to more positive teacher-student relationships. Creating opportunities for students and their parents or guardians to participate in school decisions means teachers are interested in what students have to say and are likely to be concerned with students' well-being. Thus, distributed leadership may result in a greater sense of belonging among students and parents, as well as common responsibility for the functioning of the school among all key stakeholders.
- Experienced teachers in lower secondary schools are better suited to creating an orderly atmosphere in the classroom. Teachers capable of creating a positive learning climate are also more confident in their skills concerning classroom management and student engagement.
- The presence of students who speak a foreign language and students with special educational needs creates a situation in the classroom that makes it more difficult for teachers to maintain a disciplinary climate in class.
- In classrooms with students with special educational needs, teachers are more willing to listen to the needs of students and give them extra help and assistance.
- Across systems, private schools are able to create a more positive climate for student learning than are public schools. Teachers in small schools experience fewer difficulties in maintaining an orderly environment in their classroom, and they are engaged in more positive relationships with their students.

CREATING A LEARNING CLIMATE AT SCHOOL

This chapter examines the role principals may play in enhancing a positive learning climate within a school.

Classroom disciplinary climate

Classroom disciplinary climate refers to what extent student learning is not hindered by noise and disruption in the classroom (see Box 5.1).

Box 5.1 **Classroom disciplinary climate in TALIS 2013**

Classroom disciplinary climate is measured in the Teaching and Learning International Survey (TALIS) by means of the "Classroom disciplinary climate: Need for discipline" scale (TCDISCS). Teachers answered four items: "When the lesson begins, I have to wait quite a long time for students to quiet down" (TT2G41A), "Students in this class take care to create a pleasant learning atmosphere" (TT2G41B), "I lose quite a lot of time because of students interrupting the lesson" (TT2G41C) and "There is much disruptive noise in this classroom" (TT2G41D).

These items were measured on a four point scale, with response categories of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". The negatively formulated items TT2G41A, TT2G41C and TT2G41D were reverse coded in order to create a scale with higher figures indicating a more favourable disciplinary climate. The factor scores for TCDISCS were transformed to a convenience metric with a standard deviation of 2.0 and a midpoint of 10 that coincided with the midpoint of the scale. Thus, a score of 10 for TCDISCS corresponds with the average response of 2.5 on items TT2G41A, TT2G41B, TT2G41C and TT2G41D.

Source: OECD (2014), *TALIS 2013 Technical Report*, OECD, Paris, www.oecd.org/edu/school/TALIS-technical-report-2013.pdf, Chapter 10.

Figure 5.1 presents the system means for the classroom disciplinary climate at schools. With scores of 10 points or higher on the scale, teachers are, on average, positive with regard to the disciplinary climate at their school. Only in Brazil do more teachers, on average, disagree than agree with the statements that their school has an orderly, non-disruptive atmosphere. Moreover, in Chile and Spain, teachers are also less positive on the disciplinary climate in their classes than in many other countries and economies. Teachers in Georgia; Japan; and Shanghai, China report, on average, a stronger disciplinary climate in their classrooms than teachers in most other countries (Table 5.1).

Positive teacher student relationship

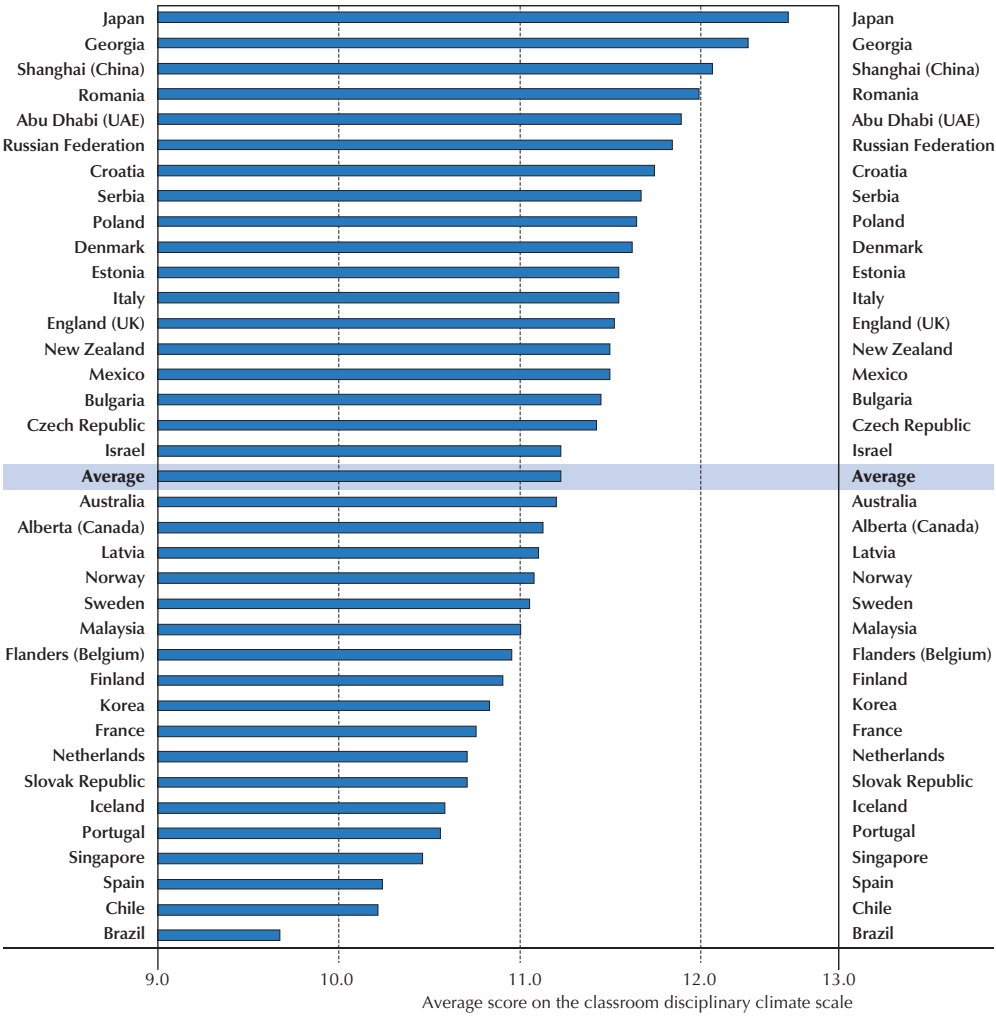
"Positive teacher student relationship" refers to what extent teachers and students engage in a mutually helpful, friendly and respectful way (Box 5.2). Figure 5.2 reveals that teachers in all countries and economies agree, on average, that their school is characterised by positive teacher-student relationships. In general, teachers in all participating countries find themselves working in a school in which teachers and students get on well with each other and in which teachers are concerned with their students' needs. Most notably, teachers in Norden countries, like Denmark, Iceland and, to a slightly lesser extent, Norway and Sweden, show great interest in their students' well-being and are inclined to provide assistance to students when needed. Teachers in Alberta, Canada; England, United Kingdom; and New Zealand express a similar attentiveness and consideration towards their students.

Although teachers in Korea indicate that positive relationships with students are common at their school, nevertheless, they rate the nature of these relationships as less attentive and caring than teachers in most other countries and economies. Next to Korean teachers, those from the Czech Republic, Poland and the Slovak Republic also express, on average, less positive teacher-student relationships at their school than teachers in various other countries and economies (Table 5.1).

■ Figure 5.1 ■

Classroom disciplinary climate scale, by country and economy, in lower secondary education

Average scores on the learning climate scale "classroom disciplinary climate"



Note: Countries and economies are ranked in descending order, based on the average system score on the learning climate scale "classroom disciplinary climate".

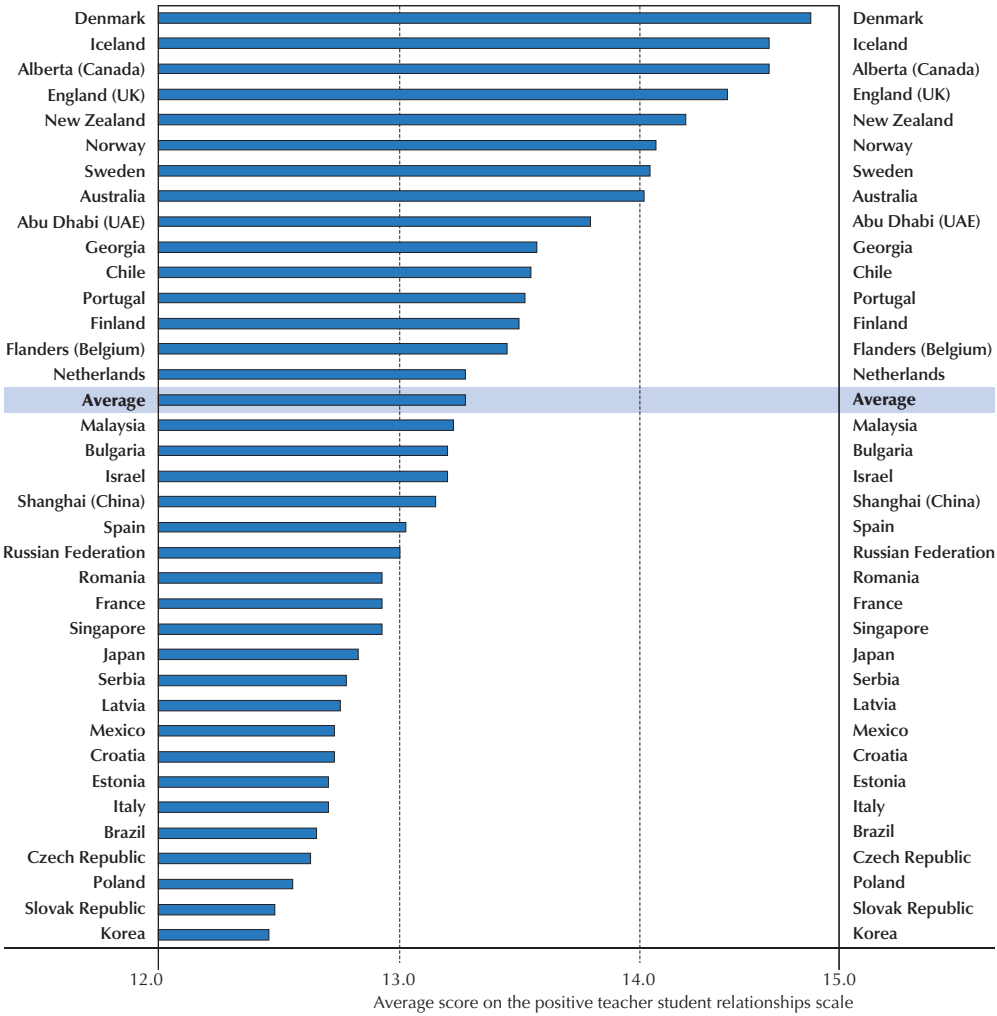
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.1.

StatLink http://dx.doi.org/10.1787/888933369783

■ Figure 5.2 ■

Positive teacher-student relationships scale, by country and economy, in lower secondary education

Average system score on the learning climate scale "positive teacher-student relationships"



Note: Countries and economies are ranked in descending order, based on the average system score on the learning climate scale "positive teacher-student relationship".

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.1.

StatLink http://dx.doi.org/10.1787/888933369794

Box 5.2 **Positive teacher-student relationship in TALIS 2013**

Positive teacher-student relationships are measured in TALIS by means of the teacher-student relations scale (TSCTSTUDS). Teachers answered four items: "In this school, teachers and students usually get on well with each other" (TT2G45A), "Most teachers in this school believe that the students' well-being is important" (TT2G45B), "Most teachers in this school are interested in what students have to say" (TT2G45C) and "If a student from this school needs extra assistance, the school provides it" (TT2G45D).

These items were measured on a four point scale, with response categories of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". The factor scores for TSCTSTUDS were transformed in TALIS to a convenience metric with a standard deviation of 2.0 and a midpoint of 10, which coincided with the midpoint of the scale. This transformation means that a score of 10 for TSCTSTUDS corresponds with the average response of 2.5 on items TT2G45A, TT2G45B, TT2G45C and TT2G45D. A score below 10 indicates disagreement with the items in the TSCTSTUDS scale.

Source: OECD (2014), *TALIS 2013 Technical Report*, OECD, Paris, www.oecd.org/edu/school/TALIS-technical-report-2013.pdf, Chapter 10.

RELATIONSHIP BETWEEN EDUCATIONAL LEADERSHIP AND ESTABLISHING A LEARNING CLIMATE IN SCHOOLS

Figure 5.3 indicates whether positive or negative relationships were found for the two educational leadership indices, school context variables and teacher characteristics in relation to the learning climate within a school using multilevel analysis (Box 5.3).

Box 5.3 **Multilevel analyses**

Multilevel analysis takes the hierarchical structure of the TALIS 2013 dataset into account. Three levels are distinguished. Teachers (level 1) are nested within schools (level 2), and schools are nested within countries (level 3). Random intercept models were used to estimate the effect on the two aspects of learning climates: disciplinary classroom climate and positive teacher-student relationships (Snijders and Bosker, 2012). The sampling design of TALIS 2013 is considered by performing a weighted analysis. Final teacher weight and final school weight are implemented in the analyses at, respectively, levels 1 and 2.

First, an empty model is estimated (Model 0). Such a model reveals the basic estimates for the random parts of the model: the variance at levels 1, 2 and 3. Secondly, distributed leadership and instructional leadership are added as predictors to the empty model (Model 1). Model 1 enables an estimate of the gross effects of these two forms of educational leadership on aspects of learning climates. The third step in the multilevel analyses concerns adding school context characteristics to Model 1, resulting in Model 2. This model presents the restricted net effect of school leadership aspects on learning climates, accounting only for school context characteristics. The fourth step is expanding Model 2 with 10 teacher characteristics. This results in Model 3, the most extensive model to estimate the net effect of school leadership aspects on learning climate. The signs in Figures 5.3 and 5.4 are based on these most extensive models. See Annex B for further details.

■ Figure 5.3 ■

Effect of leadership and other school and teacher characteristics on the establishment of a learning climate in lower secondary education

	Classroom disciplinary climate	Positive teacher-student relationships
Educational leadership		
Instructional leadership		
Distributed leadership		+
School context		
School location (hamlet, village or small town)		
Town		
City or large city	–	
School type (public)		
Private government dependent	+	+
Private government independent	+	+
School size (300 or fewer students)		
301-600 students	–	–
601-1 200 students	–	–
more than 1 200 students	–	–
School autonomy on staffing (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on budgetting (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on instruction (no autonomy)		
Mixed autonomy		
High autonomy		
Percentage foreign language students (0%)		
1-10% of students	–	
11-30% of students	–	
31-60% of students	–	
more than 60% of students	–	
Percentage students with special needs (0%)		
1-10% of students	–	+
11-30% of students	–	
31-60% of students	–	
More than 60% of students	–	+
Percentage low SES students (0%)		
1-10% of students		
11-30% of students	–	
31-60% of students	–	–
more than 60% of students	–	–
Teacher characteristics		
Gender (females)		–
Employment status (less than 50% full-time hours [fth])		
50-70% fth		–
71-90% fth		
more than 90% fth		
Subject (other subjects)		
Humanities subjects		
Science subjects		+
Teaching experience	+	
Teachers' formal education (below ISCED5)		
ISCED5B		–
ISCED5A	+	–
ISCED6		–
Self-efficacy classroom management	+	+
Self-efficacy instruction	–	+
Self-efficacy student engagement	+	+
Teacher autonomy		

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the learning climate scales. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a normal sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 5.2 to 5.5).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.2 and 5.3.

Figure 5.3 reveals that the influence of principals on creating a learning climate at their school seems to be limited. Only for distributed leadership is a positive relationship with positive teacher student interactions found. Including distributed leadership in the model, however, does not explain any variance, which further corroborates the idea that the influence of principals on learning climate is, at best, marginal (Table 5.3).

For instructional leadership of principals, neither a relationship with classroom disciplinary climate nor with positive teacher-student relationships in school is found (Table 5.2). Since instructional leadership is directed towards creating the conditions in a school necessary to produce an environment conducive to learning, a stronger engagement in instructional leadership is expected to foster an orderly school atmosphere, as well as an awareness among teachers regarding their interaction with students. As previous research into school leadership has shown that school leaders usually only indirectly affect student achievement through teachers (see also Robinson, Hohepa and Lloyd, 2009), one explanation for these findings could be that there are many intermediate factors in schools that might hinder the steps the principal takes to stimulate a positive learning climate. Figure 5.3 indicates that several school context and teacher characteristics play a role with regard to an orderly classroom climate, as well as positive teacher-student interactions. This corroborates the explanations that other factors, which more directly affect what happens within the classroom, have a greater impact on the school's learning climate than the actions of the principal.

The findings indicate that a student population with students who need extra attention or care has a negative effect on the classroom disciplinary climate. Teachers in schools with relatively more foreign language students, students with special educational needs, and high percentages of low socio-economic status (SES) students encounter more difficulties in creating an orderly learning environment in their classroom. This could point at relatively more difficulties in maintaining a disciplinary classroom climate in countries and economies with inclusive education or heterogeneous classes. Differences between public and private schools might possibly also account for this phenomenon since, in many countries and economies, private schools have a less disadvantaged student population and can often select the students who enrol at their school. If this explanation is sound, this would imply that this effect adds up to the negative effect on the classroom disciplinary climate found for foreign language, special educational needs and low SES students. Moreover, teachers in small schools report being better suited to creating a disciplinary climate in their class than teachers in larger schools.

More years of teaching experience appear to result in competencies that enable teachers to deal with any disturbances in the classroom and to maintain an orderly climate in their class. Similarly, teachers who feel efficacious in classroom management and student engagement are better able to create an orderly atmosphere in their classroom.

Positive teacher-student interactions seem to be less influenced by the student population. For foreign language students, no relationship with teacher-student interactions is found. The percentage of students with special educational needs is, however, unlike its relationship with the disciplinary classroom climate, positively related to teacher-student interactions. This might suggest that teachers who work with students with special educational needs feel dedicated to their needs. For foreign language students, this seems to be less the case. Possibly, teachers are less aware of the needs of these students, or they are less receptive to their needs than with students with special educational needs.

Teachers' self-efficacy is positively related to creating positive teacher-student interactions. For teachers' formal education, however, a negative instead of a positive relationship with teacher-student interactions is found.

RELATIONSHIP BETWEEN SCHOOL LEADERSHIP TYPES AND CREATING A LEARNING CLIMATE WITHIN A SCHOOL

Figure 5.4 reports on the effect of educational leadership types on the learning climate. Similar to the previous analysis on the effect of instructional and distributed leadership, no clear relationships between school leadership and either a disciplinary classroom climate or positive teacher-student interactions are found. The same mechanism of indirect influence through a long chain of possibly disruptive factors may at be play here, as previously discussed for instructional leadership.

■ Figure 5.4 ■

Effect of school and country/economy leadership types and other school and teacher characteristics on the establishment of a learning climate in lower secondary education

	Classroom disciplinary climate	Positive teacher-student relationships
Educational leadership		
School leader types (ref. integrated leadership)		
Educational leadership		
Inclusive leadership		
Administrative leadership		
Country leadership profile (ref. category 1)		
Countries with mainly inclusive leaders (Cat. 2)		
Countries with mainly educational leaders (Cat. 3)		
School context		
School location (hamlet, village or small town)		
Town		
City or large city	–	
School type (public)		
Private government dependent	+	+
Private government independent	+	+
School size (300 or fewer students)		
301-600 students	–	–
601-1 200 students	–	–
more than 1 200 students	–	–
School autonomy on staffing (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on budgetting (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on instruction (no autonomy)		
Mixed autonomy		
High autonomy		
Percentage foreign language students (0%)		
1-10% of students	–	
11-30% of students	–	
31-60% of students	–	
more than 60% of students	–	
Percentage students with special needs (0%)		
1-10% of students	–	+
11-30% of students	–	
31-60% of students	–	
more than 60% of students	–	+
Percentage low SES students (0%)		
1-10% of students		
11-30% of students	–	–
31-60% of students	–	–
more than 60% of students	–	–

■ Figure 5.4 ■

Effect of school and country/economy leadership types and other school and teacher characteristics on the establishment of a learning climate in lower secondary education *(continued)*

	Classroom disciplinary climate	Positive teacher-student relationships
Teacher characteristics		
Gender (females)		–
Employment status (less than 50% full-time hours [fth])		
50-70% fth		–
71-90% fth		
more than 90% fth		–
Subject (other subjects)		
Humanities subjects		
Science subjects		+
Teaching experience	+	
Teachers' formal education (below ISCED5)		
ISCED5B		–
ISCED5A	+	–
ISCED6		–
Self-efficacy classroom management	+	+
Self-efficacy instruction	–	+
Self-efficacy student engagement	+	+
Teacher autonomy		

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the learning climate scales. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a normal sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 5.2 to 5.5).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.4 and 5.5.

The relationship of school context and teacher characteristics with learning climate also resembles, to a large extent, the findings discussed in the section *Relationship between educational leadership and establishing a learning climate in schools*.

For the three country leadership profiles based on the type of school leadership shown in figure 5.4, no relationship with either disciplinary classroom climate or positive teacher-student relationships is found.

SUMMARY

The results in this report showed that a stronger engagement of principals in distributed leadership is related to more positive teacher-student relationships. Creating opportunities for students and their parents or guardians to participate in school decisions means teachers are interested in what students have to say and are likely to be concerned with students' well-being. Thus, distributed leadership may result in a greater sense of belonging among students and parents, as well as common responsibility for the functioning of the school among all key stakeholders.

However, the introduction of distributed leadership to the model only marginally explained the variance on positive teacher-student relationships and instructional leadership does not have any significant association with any of the dimensions of learning climate. Thus, educational leadership does not influence the learning climate at school to a great extent. The learning climate is mainly affected by the composition of the student population and the experience of teachers. Experienced teachers in lower secondary schools are better suited to creating an orderly atmosphere in the classroom. Teachers capable of creating a positive learning

climate are also more confident in their skills concerning classroom management and student engagement. With regard to the role of the principal, he or she should be aware of the assignment of teachers to classes. This role is, at least in some countries and economies, limited by the fact that principals have little say in the selection of their teachers, or do not have any opportunities in practice to select teachers who they feel would be best suited to address the specific needs of the students in the school. Several countries and economies have a system of assigning teachers to schools by higher agencies, and these assignments are, at best, partly based on the needs of a specific school. Other countries and economies have a market approach to hiring and dismissing teachers, but accounts from the United States, for instance, indicate that better teachers often choose the schools with lower percentages of foreign language students and low SES students, although these are the most in need of good education.

The report's findings point out that the presence of students who speak a foreign language and students with special educational needs creates a situation in the classroom that makes it more difficult for teachers to maintain a disciplinary atmosphere. On the other hand, in classrooms with students with special educational needs, teachers seem to be more willing to listen to the needs of students and give them extra help and assistance. For foreign language students and low SES students, no relationship with teacher-student interaction is present. It is possible that teachers are less aware of the needs of these students, or they are less receptive to their needs than with students with special educational needs.

Across countries and economies, private schools are able to create a more positive climate for student learning than public schools. The difference between public and private schools corroborates the conclusion that school context factors and teacher characteristics have a greater impact on the establishment of a learning climate within a school than the type of leadership. In many systems, private schools have a less disadvantaged student population and can often select the students who enrol in their school. This would imply that this effect adds up to the negative effect on the classroom disciplinary climate found for foreign language, special educational needs and low SES students.

Teachers in small schools experience fewer difficulties in maintaining an orderly environment in their classroom, and they are engaged in more positive relationships with their students. Griffith (1999) suggests that smaller schools are more easily managed and that smaller schools create an environment in which students feel less alienated by demands to participate in classroom and school activities and experience a sense of belonging and greater self-efficacy.

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6

School leadership and the development of a learning climate and professional learning community in primary and upper secondary school

This chapter addresses the role of educational leaders in primary and upper secondary education. The purpose is to explore to what degree the principal's role in developing a learning climate and professional learning community within a school at these levels differs from that in lower secondary schools, and what factors may account for these differences. The first part of the chapter describes to what extent principals in primary and upper secondary education are involved in instructional and distributed leadership. In the second section, primary and upper secondary schools across countries and economies are characterised by means of the five aspects of professional learning communities. The third section characterises countries and economies using dimensions of a learning climate in both primary and upper secondary schools. The chapter concludes with an analysis of the effect of instructional and distributed leadership on the development of a learning climate and professional learning community in primary and upper secondary education.

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Highlights

- There are no strong indications that principals in primary or in upper secondary education engage considerably less or more in instructional or distributed leadership activities than principals in lower secondary schools.
- Teachers in primary schools tend to engage more in collaboration and share a higher sense of purpose than teachers in lower secondary schools, while these aspects seem simultaneously to be more common in lower secondary than in higher secondary education.
- Whereas upper secondary schools report a relatively higher classroom disciplinary climate, primary schools report relatively more positive teacher-student relationships.
- A stronger engagement in instructional leadership is related to a stronger focus on teacher collaboration in schools in primary and lower secondary, as well as upper secondary education. Moreover, at all educational levels, instructional leadership is positively related to the reflective dialogue of teachers.
- Principals who strongly engage with distributed leadership initiatives, work with teachers who feel a greater shared responsibility for their school's issues because they work at a school in which people are willing to support each other at all educational levels.
- The development of professional learning communities in lower secondary schools may be promoted by more instructional leadership. In primary schools in which principals are engaged in instructional leadership action, teachers more often collaborate and engage in reflective dialogue, as well as in deprivatised practices (i.e. having teachers observe other teachers' classes), and have a shared sense of purpose. This association is stronger in primary school than lower secondary schools. This indicates that principals in lower secondary education can make a difference in building a professional learning community at their school.
- A stronger engagement of school principals in distributed leadership is related to more positive teacher student relationships within a school, at all educational levels.

INSTRUCTIONAL AND DISTRIBUTED LEADERSHIP IN PRIMARY AND UPPER SECONDARY EDUCATION

Instructional and distributed leadership are equally relevant for primary and secondary education. Day et al. (2009) notice that, although educational leadership plays a major role in both primary and secondary schools, the nature and impact that leadership has might, nevertheless, differ. In their study in the United Kingdom, they conclude that collective planning was common in primary as well as secondary schools, but teams in primary schools more often discuss which staff member or group will carry out certain leadership tasks. On the other hand, in primary schools, most of these tasks were, subsequently, taken up by the principal or the school management team, whereas, in secondary education, tasks were more often delegated to staff. Their findings suggest that instructional leadership is stronger in primary schools, while distributed leadership is more common in secondary schools.

Day et al. (2009) argue that it is likely that the larger size and differences in organisational scale of primary and secondary schools influence the distribution of leadership. In secondary schools, department heads

play a significant role whereas, in primary schools, these posts do not exist. Louis, Dretzke and Wahlstrom (2010) conclude that shared leadership is more common in elementary than middle, junior and senior schools in the United States. A common explanation is that principals in elementary schools have more pedagogical content knowledge than principals in middle and high schools, and that, due to the smaller size of the schools, principals in primary education are more a part of the school team.

To what degree these findings apply to other countries and economies is likely to be dependent on the organisation of the education system. While large numbers of students change school in both the United Kingdom and the United States, in Norden countries like Denmark, Finland and Norway, basic education is offered to students in an inclusive system. Although students in these latter countries experience some changes in the transition from primary education to lower secondary education – for example, a subject-oriented programme replacing the teacher-oriented structure – many facets of their learning environment do not change before they transfer to an upper secondary school. Students in countries and economies such as Flanders, Belgium and Poland experience a major change, such as a different curriculum or a different social organisation, and often transfer to a much larger school in their transition from primary to secondary education. Polish students make a subsequent transfer around the age of 15 after taking a compulsory external exam.

Box 6.1 **Countries and economies participating in TALIS 2013 primary and upper secondary education option**

Primary education: Denmark, Finland, Flanders (Belgium), Mexico, Norway and Poland.

Upper secondary education: Abu Dhabi (United Arab Emirates), Australia, Denmark, Finland, Georgia, Iceland, Italy, Mexico, Norway, Poland and Singapore.

This chapter explores whether the opportunities for instructional and distributed leadership are enhanced or impeded by the various system levels.

Instructional leadership in primary and upper secondary education

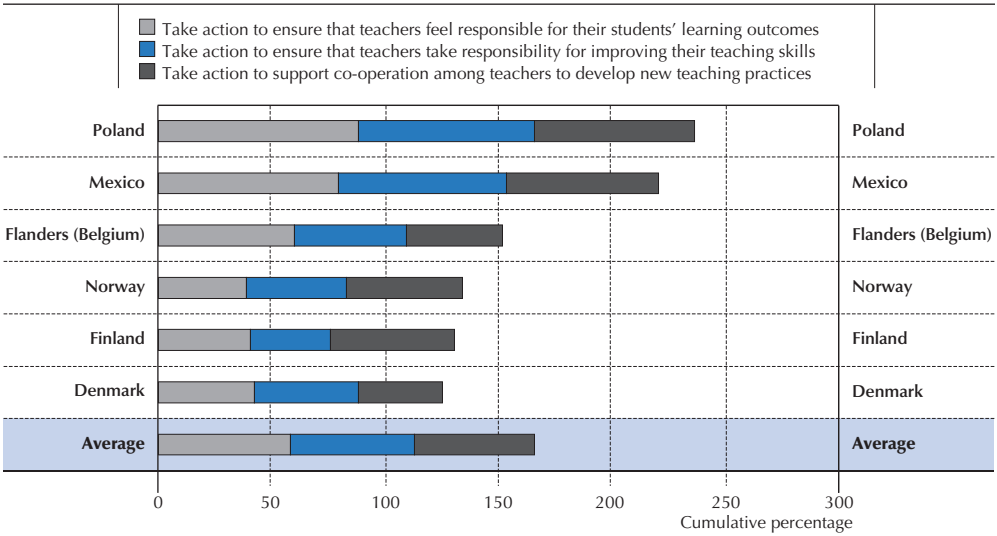
For Denmark; Finland; Flanders, Belgium; Mexico; Norway; and Poland, accounts of principals' educational leadership in primary education are available. Figure 6.1 shows the percentage of primary school principals who report that they "often" or "very often" participate in instructional leadership actions (see Annex A for the composition of the instructional leadership index).

As Figure 6.1 indicates, on average, principals in Poland and Mexico seem more often engaged in instructional leadership actions within their schools than do those in Denmark, Finland and Norway. Compared to principals in lower secondary education, the reported support of co-operation among teachers to develop new teaching practices, and the degree to which principals ensure that teachers take responsibility for the learning outcomes of their students and for improving their own teaching skills, is more or less comparable (see the section in Chapter 3 on *Instructional leadership in lower secondary schools across countries and economies*). In Denmark, Finland and Norway, primary school principals, however, seem to indicate less involvement in educational leadership than do lower secondary school principals, whereas in Flanders, Belgium and Poland, the opposite seems to be the case (Table 6.1).

■ Figure 6.1 ■

Engagement in instructional leadership in primary education

Percentage of primary education principals across countries who report having engaged "often" or "very often" in instructional leadership actions during the 12 months prior to the survey



Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "often" or "very often" engage in instructional leadership actions.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.1.

StatLink http://dx.doi.org/10.1787/888933369808

Figure 6.2 presents the percentage of upper secondary school principals who report that they "often" or "very often" participate in instructional leadership actions. For upper secondary education, data are available for Abu Dhabi, United Arab Emirates; Australia; Denmark; Finland; Georgia; Iceland; Italy; Mexico; Norway; Poland; and Singapore.

Figure 6.2 reveals strong commonalities between principals' engagement in instructional leadership in lower and upper secondary education. As in lower secondary education, principals in Abu Dhabi, United Arab Emirates report being, on average, more involved in instructional leadership than in other systems. At the other end of the continuum, upper secondary principals in Denmark and Norway indicate that they are, on average, less engaged in supporting co-operation among their teachers and in ensuring that teachers take responsibility for their students' learning and for improving their own teaching skills. Although some minor differences between primary, lower secondary and upper secondary principals seem to be present within some systems, the major differences in engagement in instructional leadership appear to be explained by specifics of the individual countries (Table 6.2).

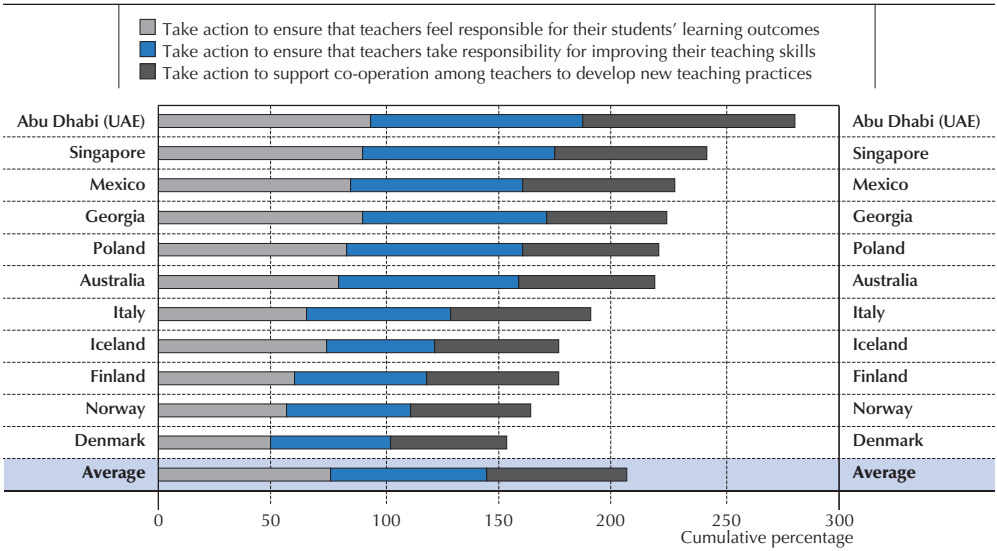
Distributed leadership in primary and upper secondary education

Figure 6.3 presents the percentage of primary school principals who agree or strongly agree that their school provides staff, parents or guardians and students with opportunities to actively participate in school decisions (see Annex A for the composition of the distributed leadership index).

▪ Figure 6.2 ▪

Engagement in instructional leadership in upper secondary education

Percentage of upper secondary education principals across countries who report having engaged "often" or "very often" in instructional leadership actions during the 12 months prior to the survey



Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "often" or "very often" engage in instructional leadership actions.

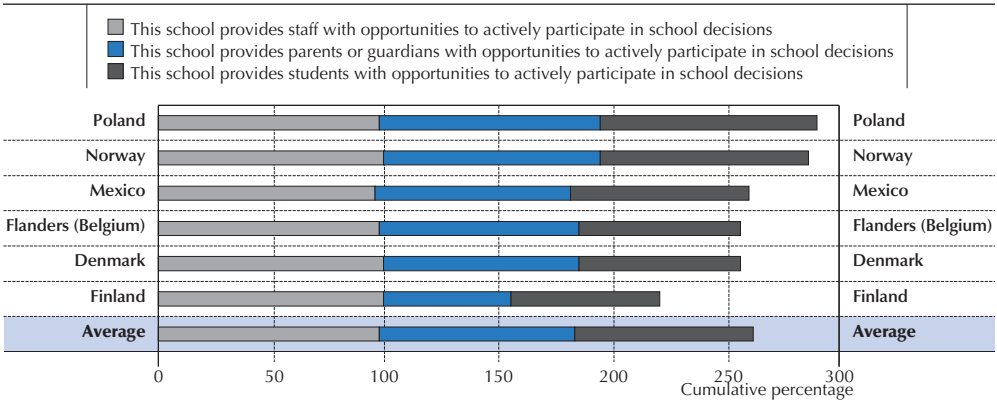
Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.2.

StatLink http://dx.doi.org/10.1787/888933369810

▪ Figure 6.3 ▪

Engagement in distributional leadership in primary education

Percentage of primary education principals who report that they "agree" or "strongly agree" with the following distributed leadership statements about their school



Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "agree" or "strongly agree" with distributed leadership statements about their school.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.3.

StatLink http://dx.doi.org/10.1787/888933369828

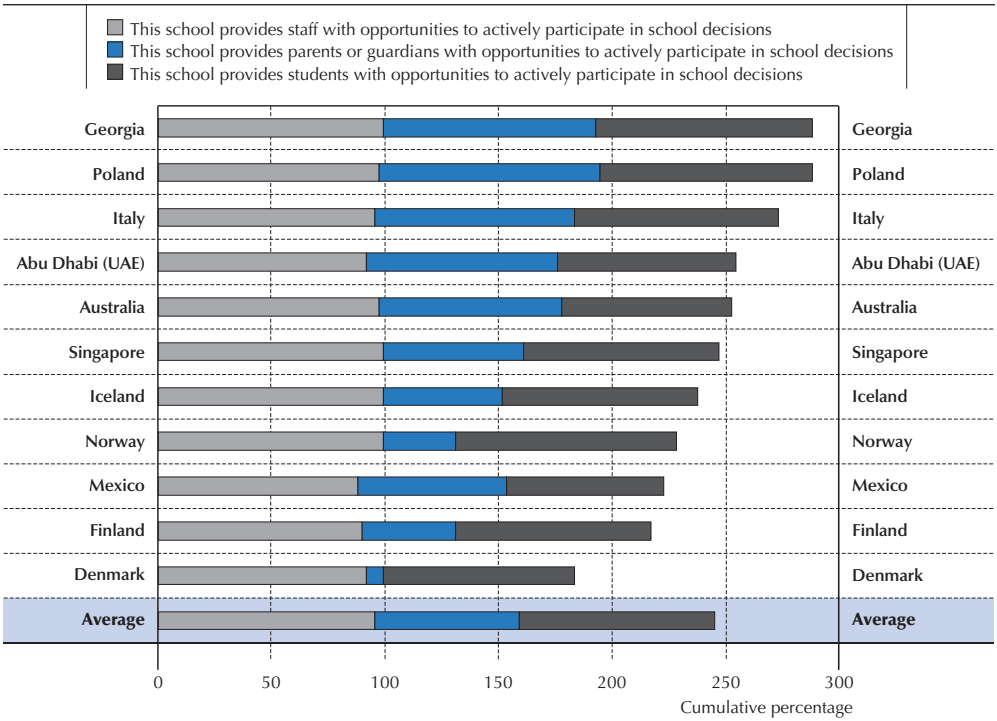
Figure 6.3 shows that, on average, principals in Norway and Poland work in schools that engage more strongly in providing opportunities for stakeholders to be involved in school decisions than principals in countries such as Denmark and Finland (Table 6.3). Again, based on the average involvement of primary school principals in distributed leadership, the positioning of systems largely resembles the ranking of countries and economies in lower secondary education (see the section in Chapter 3 on *Distributed leadership in lower secondary schools across systems*).

Figure 6.4 indicates that the opportunities for stakeholders to engage in school decisions do not differ substantially in lower and upper secondary education. For a number of countries, however, particularly Denmark and Norway, principals seem to report that they grant substantially fewer opportunities to parents to participate in school decisions compared to lower secondary schools. A similar trend in parent participation appears to be reported by principals in Finland and Iceland. In countries such as Georgia and Poland, on the other hand, no meaningful differences are found in the participation of parents or guardians in school decisions across primary, lower secondary and upper secondary schools (Table 6.4).

■ Figure 6.4 ■

Engagement in distributional leadership in upper secondary education

Percentage of upper secondary education principals who report that they "agree" or "strongly agree" with the following distributed leadership statements about their school



Note: Countries and economies are ranked in descending order, based on the average percentage of principals indicating that they "agree" or "strongly agree" with distributed leadership statements about their school.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.4.

StatLink http://dx.doi.org/10.1787/888933369832

PROFESSIONAL LEARNING COMMUNITIES IN PRIMARY AND UPPER SECONDARY EDUCATION

Louis and Marks (1998) report that primary and secondary schools may differ with regard to elements of professional learning communities. In their analyses, they report that, in the United States, features of professional learning communities were more frequently found among elementary schools than middle schools and were least present within high schools (see also Louis, Dretzke and Wahlstrom, 2010). Moreover, Wahlstrom and Louis (2008) have shown that the effect of reflective dialogue, collective responsibility, deprivatised practice and shared norms on teaching practices in schools differs considerably among school sectors. While teachers in primary schools who engaged more in these professional learning community actions generally also had stronger teaching practices, such a relationship was found in middle and high schools only for teachers' engagement in reflective dialogue and deprivatised practice.

To what extent countries differ regarding several aspects of professional learning communities was presented in Chapter 4 for lower secondary education. In this section, professional learning community characteristics are described for primary and upper secondary education in the participating countries in TALIS. Professional communities are conceived, in line with Chapter 4, as consisting of five factors: reflective dialogue; deprivatisation of practice or feedback on instruction; collaborative activity; a shared sense of purpose; and a collective focus on student learning. Since the analysis for each educational level consisted of different samples of countries and economies, caution should be taken when comparing results across levels.

Reflective dialogue

Reflective dialogue refers to the extent to which teachers engage in professional conversations about specific educational issues, directed towards further improving their teaching (see Box 4.1 for a description of items).

As Figure 6.5 shows, teachers in Mexico in primary and upper secondary education on average perceive greater changes in their knowledge and skills on teaching and assessment based on the feedback they receive than do teachers in other countries and economies. Next to them, upper secondary teachers in Abu Dhabi, United Arab Emirates, also perceive more impact on their own competencies from the feedback they receive than teachers in most other systems. These findings for primary and upper secondary education resemble the accounts of lower secondary teachers in these countries and economies. Similarly, in Flanders, Belgium and in Finland, both primary and lower secondary teachers are relatively less engaged in reflective dialogue within their school, and in Australia, Denmark, Finland, Iceland and Norway, teachers in lower secondary education – as with those in upper secondary education – report experiencing less frequently any changes as a result of professional conversations about specific educational issues in schools.

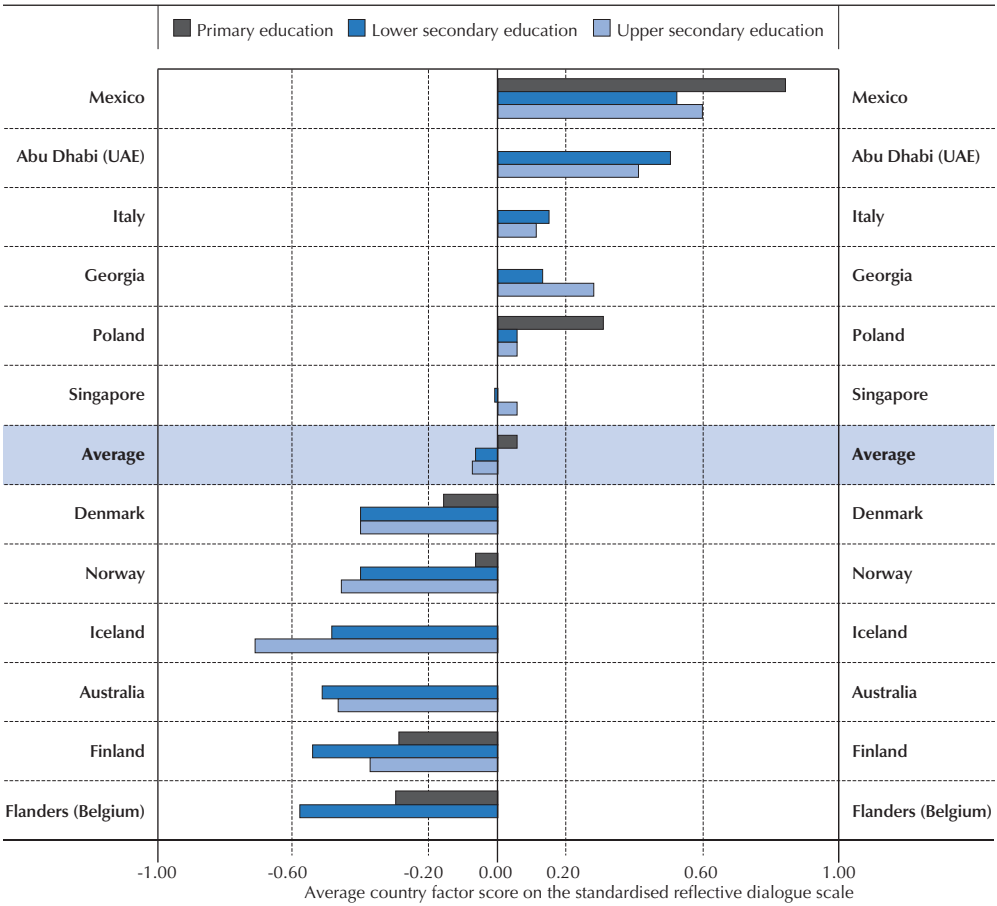
Deprivatised practice by classroom observation

Deprivatised practice refers to teachers observing other teachers' classes, with the goal of providing feedback on their teaching. This issue is measured in TALIS through identifying whether other teachers within the school provide feedback following classroom observations. Figure 6.6 presents the mean percentage of teachers per country reporting such feedback.

▪ Figure 6.5 ▪

Reflective dialogue scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores on the professional learning community scale "reflective dialogue" scale in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "reflective dialogue" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1, 6.5 and 6.6.

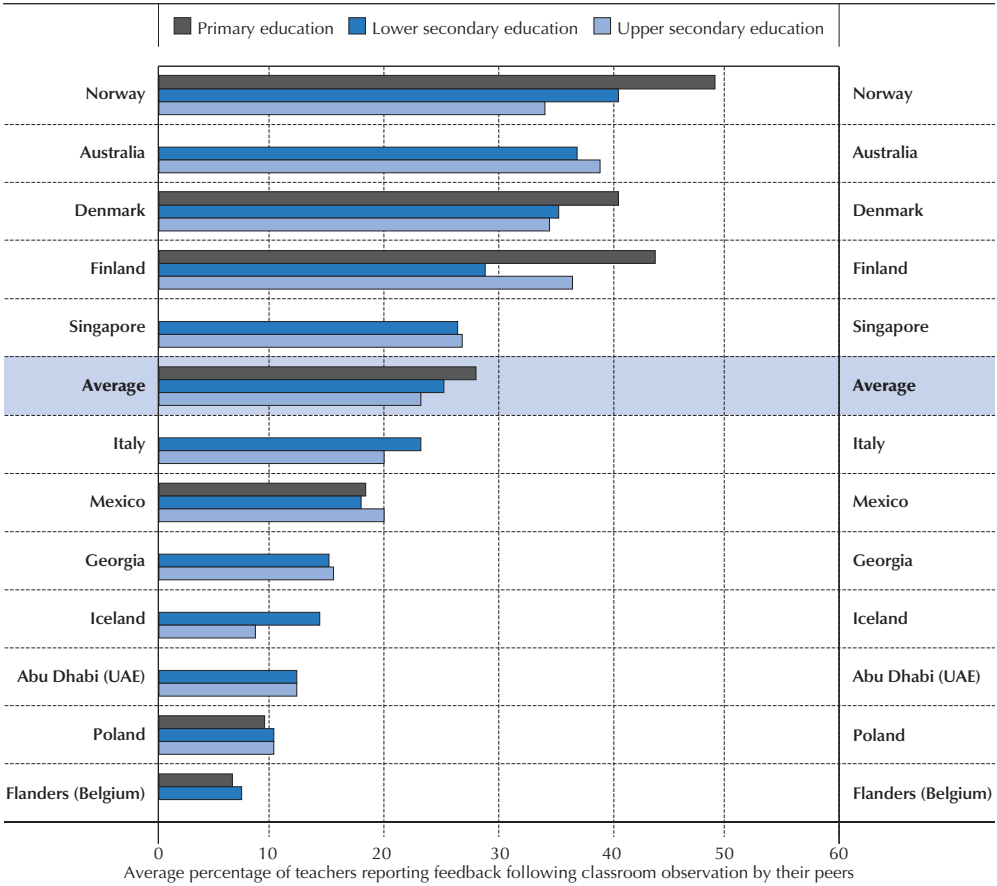
StatLink http://dx.doi.org/10.1787/888933369846

As Figure 6.6 reveals, primary school teachers in the three Norden countries, Denmark, Finland and Norway receive considerably more feedback from their colleagues following a visit to their classroom than do teachers in Flanders, Belgium; Mexico; and Poland. In general, the feedback teachers in primary school receive from their fellow teachers reflects accounts from teachers in lower secondary schools. Moreover, the reports of teachers in primary and lower secondary education seem to suggest that, in countries and economies like Flanders, Belgium; Mexico; and Poland, in which teachers do not frequently visit their colleagues' classroom and provide them with feedback, no difference is present between primary and secondary education.

■ Figure 6.6 ■

Deprivatised practice factor, by country and economy, in primary, lower secondary and upper secondary schools

Average percentage of teachers reporting classroom observations by other teachers in primary, lower secondary and upper secondary schools



Note: Countries and economies are ranked in descending order, based on the average percentage of teachers per system reporting classroom observations by fellow teachers in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369853

In Denmark, Finland and Norway, in which classroom observations by other teachers are more common, the feedback received based on these observations seems to be reported relatively more often by primary than by lower (and upper) secondary teachers. Although interpretation of these differences should be cautioned, it might indicate that it is more feasible for teachers to observe their colleagues' lessons in primary than in secondary education. As these three Norden countries have a system of basic education in which primary and lower secondary education are provided in a single school, but with a transition from class-oriented to subject-oriented teaching at the start of the lower secondary phase, this could imply that classroom observations are less easily organised within (often relatively small) subject departments, or that the professional autonomy of subject teachers is less amenable for opening up the classroom.

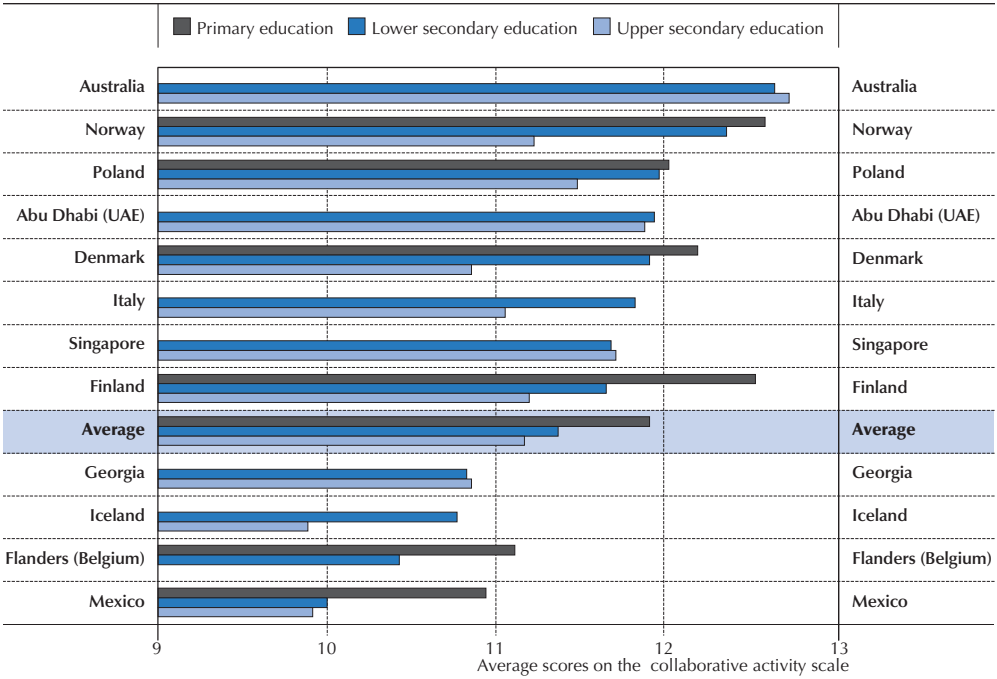
Collaborative activity of teachers

Collaborative activity represents a measure of the extent to which teachers engage in co-operative practices. Teachers were asked to indicate how often, on average, they were engaged in an exchange of teaching materials with colleagues, discussions about the learning development of specific students, working with other teachers in their school to ensure common standards in evaluations for assessing student progress, and attending team conferences. Figure 6.7 presents the country means for teacher collaboration in primary and upper secondary education, in addition to lower secondary education.

▪ Figure 6.7 ▪

Collaborative activity scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores on the professional learning community scale "collaborative activity" in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "collaborative activity" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369862

Figure 6.7 reveals that teachers in primary, lower secondary and upper secondary schools seem to differ regarding their involvement in co-operative practices with other staff in the school. In the participating countries and economies, teachers in primary education seem to collaborate more than teachers in lower secondary education and upper secondary education. As the averages in Figure 6.7 for primary, lower secondary and upper secondary education are based on the diverse countries and economies participating in each of these sectors, these cannot be interpreted straightforwardly. Nevertheless, in some systems, such as Finland, differences in collaborative activity between teachers in primary, lower secondary and upper secondary education indeed seem to be apparent. In other countries

and economies, like Poland, these differences are less pronounced or absent. As far as the difference between lower and upper secondary education is concerned, no substantial differences are found for Abu Dhabi, United Arab Emirates; Australia; Georgia; and Singapore.

Shared sense of purpose

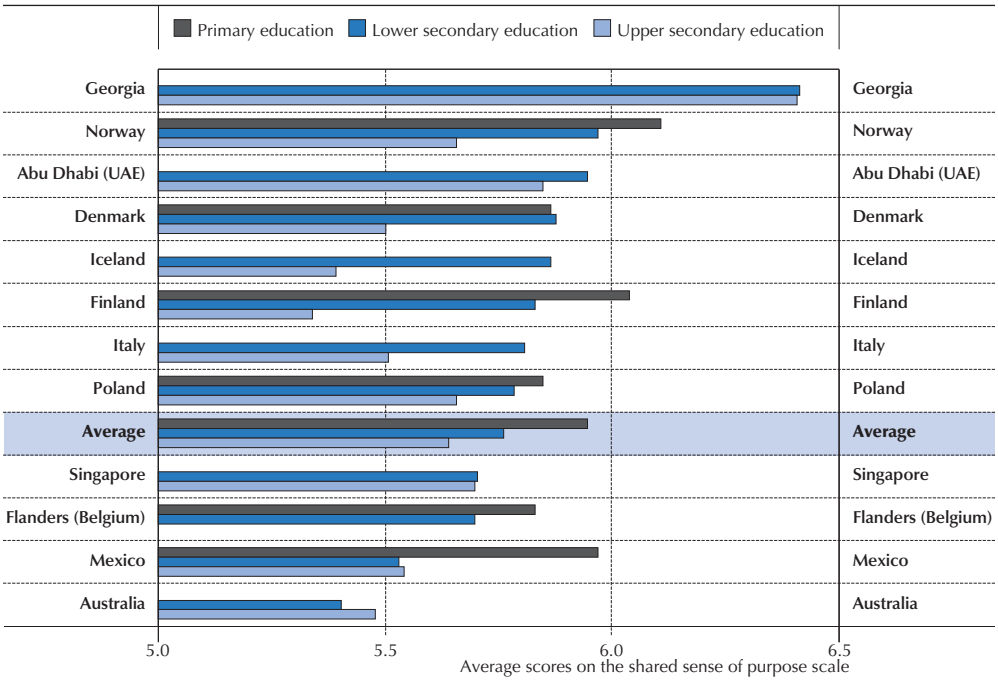
Shared sense of purpose represents the teachers' degree of agreement with the school's mission and its operational principles. To what degree teachers in school have a shared sense of purpose is identified in TALIS by means of whether the school has a culture of shared responsibility for school issues and whether there is a collaborative school culture characterised by mutual support.

Figure 6.8 indicates differences in a shared sense of purpose across primary, lower secondary and upper secondary schools. In Finland and Norway, teachers in primary education tend to share a sense of purpose relatively more than teachers in lower secondary education and upper secondary education. In Mexico, teachers in primary education indicate that there is a stronger collaborative culture at their school than do teachers in lower and upper secondary education. These differences in a shared sense of purpose are, however, less apparent in other systems.

Figure 6.8

Shared sense of purpose scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores on the professional learning community scale "shared sense of purpose" in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "shared sense of purpose" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369870

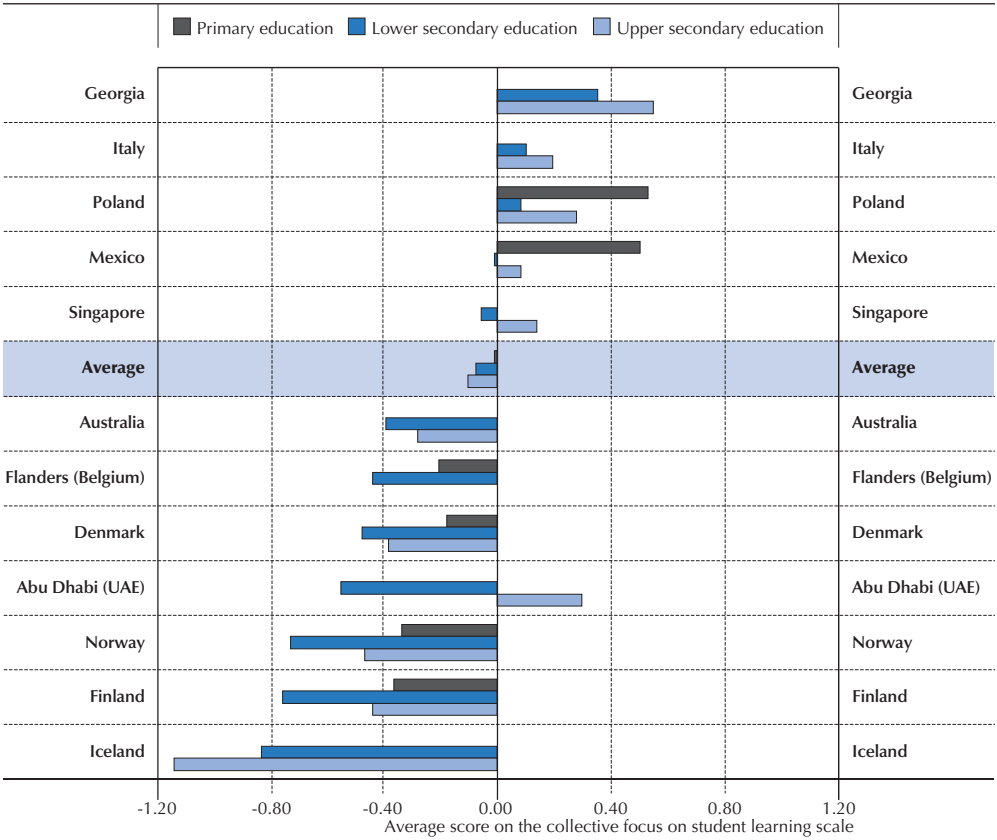
Collective focus on student learning

A collective focus on student learning indicates a high level of teachers' commitment to students' success. Figure 6.9 indicates that countries and economies in which lower secondary schools place more emphasis on various aspects of student performance and the teaching competencies of teachers than do other systems, generally also do so in primary and upper secondary education. In Mexico and Poland, teachers in primary as well as lower secondary education more often express a collective focus on student learning than do teachers in Finland and Norway. Similarly, in Finland, Iceland and Norway, upper secondary teachers, in addition to lower secondary teachers, are among the teachers who, on average, indicate a less collective focus on student learning in their schools. This means that differences in a collective focus on learning seem to be less dependent on the level of education than on country-specific factors.

■ Figure 6.9 ■

Collective focus on student learning scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores on the professional learning community scale "collective focus on student learning" in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the professional learning community scale "collective focus on student learning" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 4.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369887

RELATIONSHIP BETWEEN EDUCATIONAL LEADERSHIP AND ESTABLISHING A PROFESSIONAL LEARNING COMMUNITY IN PRIMARY AND UPPER SECONDARY SCHOOLS

To determine the relationship between educational leadership and professional learning communities, a multilevel analysis was performed (see Chapter 4, Box 4.2 or Annex B). Figure 6.10 and Figure 6.11 specify whether positive or negative relations were found for the two educational leadership indices, school context variables and teacher characteristics in relation to the professional learning community scales.

Leadership and professional learning communities in primary education

Figure 6.10 examines the relationship between instructional and distributed leadership, school context factors and teacher characteristics, as well as aspects of a professional learning community. The analyses concern data from principals and teachers in primary schools in Denmark; Finland; Flanders, Belgium; Mexico; Norway; and Poland.

▪ Figure 6.10 ▪

Effect of leadership and other school and teacher characteristics on the establishment of professional learning communities in primary education

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Educational leadership					
Instructional leadership	+	+	+	+	
Distributed leadership			+		
School context					
School location (hamlet, village or small town)					
Town					
City or large city				+	
School type (public)					
Private government dependent	–				
Private government independent					
School size (300 or fewer students)					
301-600 students			–	+	
601-1 200 students			–		
more than 1 200 students	n/a	n/a	n/a	n/a	n/a
School autonomy on staffing (no autonomy)					
Mixed autonomy			+		
High autonomy			+		
School autonomy on budgetting (no autonomy)					
Mixed autonomy	+				+
High autonomy	–				
School autonomy on instruction (no autonomy)					
Mixed autonomy					
High autonomy					
Percentage foreign language students (0%)					
1-10% of students			+		
11-30% of students					
31-60% of students		+			
more than 60% of students				+	
Percentage students with special needs (0%)					
1-10% of students					
11-30% of students					
31-60% of students	–				
more than 60% of students					
Percentage low SES students (0%)					
1-10% of students	–			+	
11-30% of students				+	
31-60% of students					
more than 60% of students		–			

■ Figure 6.10 ■

Effect of leadership and other school and teacher characteristics on the establishment of professional learning communities in primary education *(continued)*

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Teacher characteristics					
Gender (females)	–			–	–
Employment status (less than 50% full-time hours [fth])					
50-70% fth					
71-90% fth				+	
more than 90% fth				+	
Subject (other subjects)					
Humanities subjects	+			+	
Science subjects			–	+	+
Teaching experience	–			–	+
Teachers' formal education (below ISCED5)					
ISCED5B		+	–		
ISCED5A			–		–
ISCED6					
Self-efficacy classroom management		+		–	
Self-efficacy instruction	+	–	+	+	+
Self-efficacy student engagement	+				
Teacher autonomy					–

Note: The signs refer to either a positive (+) or a negative (–) relationship between one of the predictor variables and one of the professional development scales in primary education. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a grey sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found and n/a means "not applicable". The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 6.7-6.11).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.7, 6.8, 6.9, 6.10 and 6.11.

As Figure 6.10 reveals, a stronger engagement of primary school principals in instructional leadership is related to more reflective dialogue and more collaboration among teachers, a stronger practice of teachers observing other teachers' classes with the goal of providing feedback on their teaching, and a shared sense of purpose. Principals who take steps to support co-operation among teachers to develop new teaching practices, and who encourage teachers' responsibility for their teaching skills and students' learning outcomes, more often work in schools where teachers are inclined to exchange practices. In these schools, teachers more often exchange teaching materials with colleagues, engage in discussions about the learning development of specific students, work together to ensure common standards in evaluations for assessing student progress, and attend team conferences.

Moreover, principals who engage in instructional leadership more often work in schools in which teachers receive feedback from their colleagues, and use this feedback to improve their own teaching practices. This may indicate that teachers not only feel more secure in asking other staff for assistance and advice, but also are genuinely dedicated to further improving their teaching for the benefit for their students.

For distributed leadership, on the other hand, hardly any significant relationships with the various dimensions of professional learning communities are present, except for a shared sense of purpose. When the school provides staff with opportunities to actively participate in school decisions, and also involves parents and students in decision making within the school, teachers feel a greater shared responsibility for their school's issues because they work at a school in which people are willing to support each other. Similar to the relationship between distributed leadership and a shared sense of

purpose in lower secondary education, this finding suggests that some schools succeed in building a collaborative culture, when stakeholders feel that they might have a say in school issues and their opinion is valued. As a high percentage of schools across countries engages teachers in some way in school decision making, the finding further suggests that, to create a shared sense of purpose, inclusion of students and their parents or guardians is also important. This might lead to a broader shared mission or vision, towards which all relevant parties in school are dedicated and which they collaboratively try to achieve.

Tables 6.12 to 6.16 contain multilevel analyses in which primary and lower secondary schools in Denmark; Finland; Flanders, Belgium; Mexico; Norway; and Poland are compared. As the tables show, in these countries and economies primary schools do not report greater reflective dialogue among their staff, more deprivatised practice, a greater sense of purpose or more staff collaboration. Only with regard to a collective focus on student learning do primary school teachers express a stronger concern with student learning than secondary school teachers. These findings only partly corroborate earlier findings by Wahlstrom and Louis (2008), and Louis, Dretzke and Wahlstrom (2010). However, these findings also suggest that the development of professional learning communities in lower secondary schools is to be further improved.

Instructional and distributed leadership is an important lead for improving reflective dialogue, deprivatised practice, a greater sense of purpose and a stronger collective focus on student learning. Tables 6.12 to 6.16 reveal that instructional leadership is more likely to enhance reflective dialogue, deprivatised practice, a greater sense of purpose and a collective focus on student learning in primary education than in lower secondary education. Similarly, distributed leadership is more likely to enhance a shared sense of purpose in primary than in lower secondary education.

Leadership and professional learning communities in upper secondary education

Figure 6.11 presents the relationship between instructional and distributed leadership and a professional learning community in upper secondary education, while accounting for school context factors and teacher characteristics. The analyses concern data from principals and teachers in upper secondary schools in Abu Dhabi, United Arab Emirates; Australia; Denmark; Finland; Georgia; Iceland; Italy; Mexico; Norway; Poland; and Singapore. The findings in upper secondary education reflect, to a large extent, earlier findings for the relationship between educational leadership and professional learning communities in lower secondary education.

Instructional leadership in upper secondary schools is positively related to the reflective dialogue of teachers. This indicates that upper secondary teachers are more inclined to engage in professional conversations about specific educational issues, directed towards further improving their teaching in schools in which their principals show greater instructional leadership.

Moreover, distributed leadership is positively related to a shared sense of purpose in upper secondary schools. This finding, which is also reported for primary and lower secondary education, is robust across the various levels of education. Therefore, involving students and their parents or guardians, alongside the staff of the school, seems to create a culture of shared responsibility for school issues, which is characterised by mutual support. Whereas in lower secondary education, distributed leadership was found to be positively related to reflective dialogue of teachers and teacher collaboration, for upper secondary schools these effects are not found.

■ Figure 6.11 ■

Effect of leadership and other school and teacher characteristics on the establishment of professional learning communities in upper secondary education

	Reflective dialogue	Deprivatised practice	Shared sense of purpose	Collaborative activity	Collective focus on student learning
Educational leadership					
Instructional leadership	+				
Distributed leadership			+		
School context					
School location (hamlet, village or small town)					
Town					
City or large city	–				
School type (public)					
Private government dependent					–
Private government independent		+			+
School size (300 or fewer students)					
301-600 students			–		
601-1 200 students			–		
more than 1 200 students			–		
School autonomy on staffing (no autonomy)					
Mixed autonomy					
High autonomy					
School autonomy on budgetting (no autonomy)					
Mixed autonomy					
High autonomy				+	+
School autonomy on instruction (no autonomy)					
Mixed autonomy					
High autonomy	-				
Percentage foreign language students (0%)					
1-10% of students					
11-30% of students					
31-60% of students					
more than 60% of students					
Percentage students with special needs (0%)					
1-10% of students					
11-30% of students	+	–		+	
31-60% of students	+			+	
more than 60% of students	–	+	–	–	
Percentage low SES students (0%)					
1-10% of students		–		+	
11-30% of students				+	
31-60% of students		–			
more than 60% of students		–			+
Teacher characteristics					
Gender (females)	–	–		–	–
Employment status (less than 50% full-time hours [fth])					
50-70% fth				+	
71-90% fth			–	+	
more than 90% fth	+		–	+	
Subject (other subjects)					
Humanities subjects					
Science subjects		–	+		
Teaching experience	–	+		–	+
Teachers' formal education (below ISCED5)					
ISCED5B					
ISCED5A	–		–		
ISCED6	–		–	–	
Self-efficacy classroom management	–	+			
Self-efficacy instruction				+	
Self-efficacy student engagement	+	–	+	+	+
Teacher autonomy	+		+	+	

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the professional development scales in upper secondary education. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a grey sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 6.17-6.21).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.17, 6.18, 6.19, 6.20 and 6.21.

As Figure 6.11 reveals, only a few school context factors affect the various characteristics of professional learning communities in upper secondary education in the participating countries. In general, next to a stronger engagement in deprivatised practice, teachers in private government independent schools have a stronger collective focus on student learning than public school teachers have. Moreover, in schools with a higher percentage of students with special educational needs, teachers are more engaged in reflective dialogue and collaboration – except for teachers in schools with very high numbers of students with special educational needs. Relatively more teacher collaboration is also found in schools with relatively higher numbers of low socio-economic status (SES) students. These findings corroborate findings reported in Chapter 4 on lower secondary education. However, in contrast to lower secondary schools, a higher percentage of students with special educational needs is not related to a higher sense of purpose among upper secondary teachers.

Moreover, teachers who have a full-time or nearly full-time appointment at their school are more inclined to collaborate with other teachers. This finding, which was also apparent in lower secondary schools, may originate from the fact that these teachers simply have more opportunities to engage in collaborative activities with other teachers as they spend more time at school. However, this could also mean that these teachers more often have co-ordinating duties, as heads of subject departments or otherwise, which put them in a position in which they co-operate more with other staff.

With regard to teaching experience or a teacher's formal education, no consistent patterns are found across the various characteristics of professional learning communities, nor across primary, lower secondary and upper secondary education, except for schools in which relatively more teachers work who graduated from a second stage of education (ISCED6). On average, teachers in these schools engage less in a reflective dialogue and show less a shared sense of purpose. In upper secondary schools, these teachers are also less engaged in teacher collaboration.

A further, robust indicator of facets of a professional learning community in schools is teachers' self-efficacy, particularly their self-efficacy in student engagement. Teachers who feel more certain that they are able to engage students in learning also are more engaged in collaborative activities in school and report to be more often involved in reflective dialogue. This could point to the fact that teachers feel more confident engaging in these professional learning activities, but it seems plausible that teachers' confidence might also be enhanced through their engagement in collaboration.

Tables 6.22 to 6.26 contain multilevel analysis in which lower and upper secondary schools in Abu Dhabi, United Arab Emirates; Australia; Denmark; Finland; Georgia; Iceland; Italy; Mexico; Norway; Poland; and Singapore are compared. As the tables show, in these systems, lower secondary schools do not differ from upper secondary schools with regard to reflective dialogue among their staff, deprivatised practice, a shared sense of purpose and staff collaboration. Upper secondary schools, however, show a stronger focus on collaboration on student learning than do lower secondary schools. These findings suggest that the development of professional learning communities in lower and upper secondary schools does not differ substantially.

To conclude, in both primary, lower secondary and upper secondary education, instructional leadership is consistently related to professional learning community characteristics in schools. More specifically, teachers who work in schools in which principals show greater instructional leadership are more engaged in reflective dialogue within their schools and in collaborative activities in primary and lower secondary schools. Moreover, principals who exert greater distributed leadership find themselves in schools in which the staff share more of a sense of purpose.

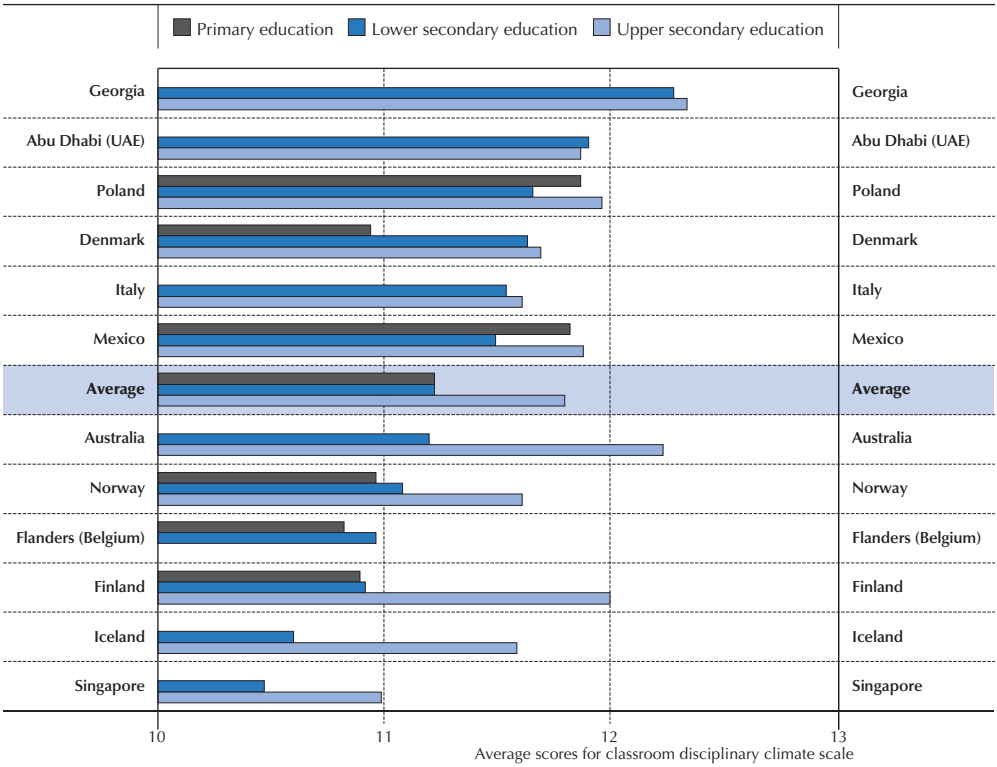
LEARNING CLIMATE IN PRIMARY AND UPPER SECONDARY EDUCATION

To what extent countries and economies differ regarding several aspects of a learning climate was presented in Chapter 5 for lower secondary education. In this section, learning climate characteristics are described for primary and upper secondary education for the countries and economies participating in TALIS. Learning climate is conceived, as previously described in Chapter 5, as consisting of an orderly classroom environment, and positive teacher student relations. Since the analysis for each educational level consisted of different samples of countries and economies, caution should be taken when comparing results across levels.

▪ Figure 6.12 ▪

Classroom disciplinary climate scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores for the learning climate scale "classroom disciplinary climate" in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the learning climate scale "classroom disciplinary climate" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369891

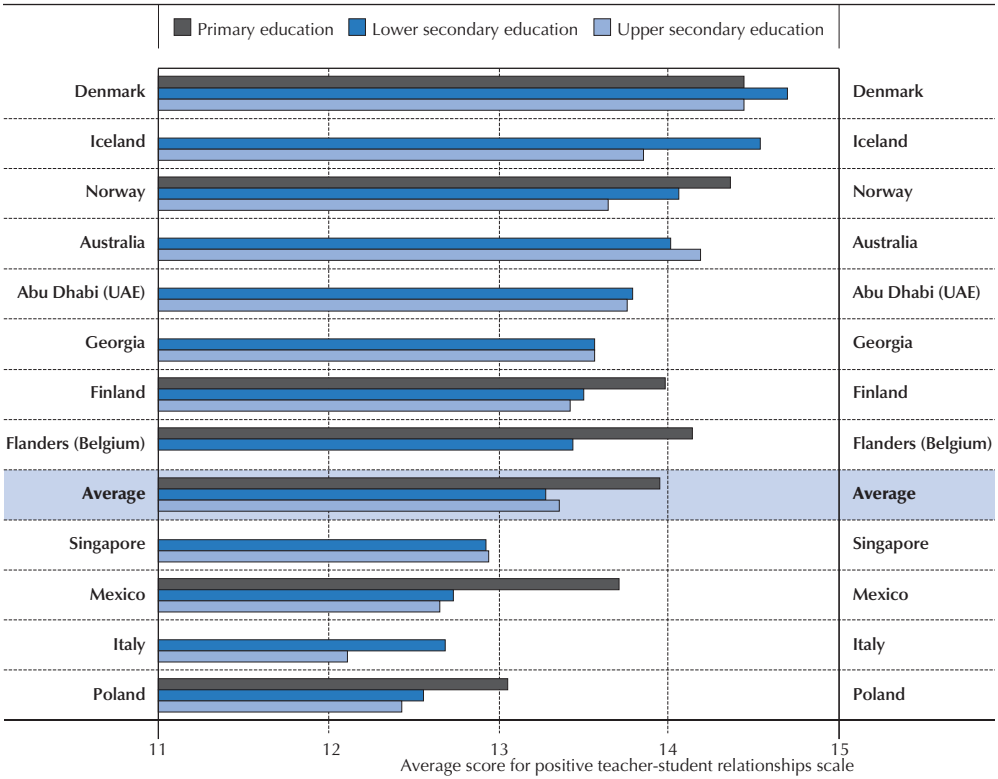
Figure 6.12 presents system averages on classroom disciplinary climate in primary, lower secondary and upper secondary schools. As the figure shows, teachers in primary education in Denmark; Flanders, Belgium; Finland; Mexico; Norway; and Poland report, on average, a disciplinary climate in their classes

that is similar to the accounts of teachers in lower secondary education (see also Table 6.5). Similarly, in upper secondary education, teachers indicate a disciplinary classroom climate that is comparable to the figures presented in Chapter 5 for lower secondary teachers. In a few countries, most notably Australia, Finland and Iceland, teachers in upper secondary schools rate the disciplinary climates in their classroom significantly higher than do teachers in lower secondary education.

■ Figure 6.13 ■

Positive teacher-student relationships scale, by country and economy, in primary, lower secondary and upper secondary education

Average scores for the learning climate scale "positive teacher-student relationships" in primary, lower secondary and upper secondary education



Note: Countries and economies are ranked in descending order, based on the average system score on the learning climate scale "positive teacher-student relationship" in lower secondary education.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 5.1, 6.5 and 6.6.

StatLink http://dx.doi.org/10.1787/888933369905

As Figure 6.13 shows, teachers in upper secondary education in the various countries and economies report, on average, teacher student relationships that second the accounts of teachers in lower secondary education (see also Table 5.6). With regard to primary education, however, teachers in Flanders, Belgium; Finland; Mexico; and Poland, in particular, indicate more often that teachers are concerned with students' well being, that they are interested in their students' opinions and that they offer their students help if needed.

RELATIONSHIP BETWEEN EDUCATIONAL LEADERSHIP AND CREATING A LEARNING CLIMATE AT PRIMARY AND UPPER SECONDARY SCHOOL

To determine the relationship between educational leadership and learning climates, a multilevel analysis was performed (see Chapter 5, Box 5.2 or Annex B). Figure 6.10 and Figure 6.11 specify whether positive or negative relations were found for the two educational leadership indices, school context variables and teacher characteristics in relation to the learning climate scales.

Leadership and learning climate in primary education

Figure 6.14 presents, for primary schools, the relationship between instructional and distributed leadership, school context factors and teacher characteristics, and aspects of a learning climate. As the figure reveals, a stronger engagement of primary school principals in distributed leadership is related to more positive teacher student relationships within a school. A friendly, trustworthy and helpful relationship is found in schools in which the principals create opportunities for students and their parents or guardians to have a say in school decisions. This is likely to result in a greater sense of belonging among students and parents, as well as a common responsibility felt by all key stakeholders in and around the school for the functioning of the school.

For disciplinary classroom climate, no significant relationship with either instructional or distributed leadership is found. This suggests that creating an orderly atmosphere in class relies less on leadership actions or responsibilities distributed to students and parents, but more on teachers and their students in class. This explanation is supported by the findings that teacher experience – in addition to teachers' self-efficacy in classroom management and student engagement – is positively related to a disciplinary classroom climate, suggesting that teachers' competencies play a role in creating an orderly atmosphere in class. Similarly, the presence of foreign language students and, to some degree, low SES students, seems to negatively affect the disciplinary classroom climate. The presence of these students in class might also be interpreted as having students who need extra attention, which may divert other students in class from learning activities, or may mean a less orderly classroom environment, since not all students who need extra help will receive assistance in time.

Furthermore, Figure 6.14 reveals that a classroom disciplinary climate is more often found in hamlets, villages or small towns. This might indicate that it would be easier for teachers to create an orderly classroom environment in smaller communities, where people within the school and within their village or town know each other well, creating social bonding and social control. As for lower secondary education, teachers' formal education is negatively related to positive teacher-student relations in school. This could mean that teachers who did not acquire an ISCED5B level or higher degree are only granted a position in their school because they work well with the children. Those who are relatively less formally qualified and who do not perform well would probably have left the school earlier. Only a relatively small percentage of teachers have a formal qualification below ISCED5B. Teachers' self-efficacy in classroom management and instruction is positively related to favourable teacher-student relations within the school, similar to the findings in lower secondary education (see Chapter 5).

Tables 6.29 and 6.30 contain multilevel analyses in which primary and lower secondary schools in Denmark; Finland; Flanders, Belgium; Mexico; Norway; and Poland are compared. As the tables show, for disciplinary classroom climate and positive teacher student relationships, no significant differences are reported for primary and lower secondary schools. The effect of educational leadership on learning climate varies little between primary and lower secondary schools. Only distributed leadership in lower secondary education seems to contribute less to positive teacher student relationships than in primary education.

■ Figure 6.14 ■

Effect of leadership and other school and teacher characteristics on the establishment of a learning climate in primary education

	Classroom disciplinary climate	Positive teacher-student relationships
Educational leadership		
Instructional leadership		
Distributed leadership		+
School context		
School location (hamlet, village or small town)		
Town	–	
City or large city	–	
School type (public)		
Private government dependent		
Private government independent		
School size (300 or fewer students)		
301-600 students		–
601-1 200 students		–
more than 1 200 students	n/a	n/a
School autonomy on staffing (no autonomy)		
Mixed autonomy		+
High autonomy		
School autonomy on budgetting (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on instruction (no autonomy)		
Mixed autonomy	+	
High autonomy		–
Percentage foreign language students (0%)		
1-10% of students	–	
11-30% of students		
31-60% of students	–	–
more than 60% of students	–	
Percentage students with special needs (0%)		
1-10% of students		
11-30% of students		
31-60% of students		
More than 60% of students	–	–
Percentage low SES students (0%)		
1-10% of students	–	
11-30% of students	–	–
31-60% of students		–
more than 60% of students		
Teacher characteristics		
Gender (females)		–
Employment status (less than 50% full-time hours [fth])		
50-70% fth		
71-90% fth	+	
more than 90% fth	+	
Subject (other subjects)		
Humanities subjects		
Science subjects		–
Teaching experience	+	
Teachers' formal education (below ISCED5)		
ISCED5B	+	–
ISCED5A		–
ISCED6		
Self-efficacy classroom management	+	+
Self-efficacy instruction		+
Self-efficacy student engagement	+	
Teacher autonomy	–	–

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the learning climate scales in primary education. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a grey sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found and n/a means "not applicable". The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 6.27 and 6.28).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.27 and 6.28.

Leadership and learning climate in upper secondary education

Figure 6.15 presents, for upper secondary education, the relationship between instructional and distributed leadership, school context factors and teacher characteristics, and aspects of a learning climate. The outcomes for educational leadership and learning climate second the findings from primary education. Only a stronger engagement of upper secondary school principals in distributed leadership is related to more positive teacher student relationships within schools. For a disciplinary classroom climate, no significant relationship with either instructional or distributed leadership is found. The arguments presented earlier as possible explanations for these findings also seem to hold for secondary education. With regard to the relatively limited influence of the principal on a classroom disciplinary climate, this seems even more plausible in upper secondary schools, given the usually greater size of school, and the relatively more autonomous position of teachers in these schools.

■ Figure 6.15 ■

Effect of leadership and other school and teacher characteristics on the establishment of a learning climate in upper secondary education

	Classroom disciplinary climate	Positive teacher-student relationships
Educational leadership		
Instructional leadership		
Distributed leadership		+
School context		
School location (hamlet, village or small town)		
Town		
City or large city		
School type (public)		
Private government dependent		+
Private government independent		+
School size (300 or fewer students)		
301-600 students	–	–
601-1 200 students	–	–
more than 1 200 students		–
School autonomy on staffing (no autonomy)		
Mixed autonomy		
High autonomy	+	+
School autonomy on budgetting (no autonomy)		
Mixed autonomy		
High autonomy		
School autonomy on instruction (no autonomy)		
Mixed autonomy		
High autonomy		
Percentage foreign language students (0%)		
1-10% of students		
11-30% of students		
31-60% of students		
more than 60% of students		
Percentage students with special needs (0%)		
1-10% of students	–	–
11-30% of students	–	–
31-60% of students	–	
More than 60% of students		
Percentage low SES students (0%)		
1-10% of students		
11-30% of students	–	
31-60% of students	–	
more than 60% of students	–	

■ Figure 6.15 ■

Effect of leadership and other school and teacher characteristics on the establishment of a learning climate in upper secondary education *(continued)*

	Classroom disciplinary climate	Positive teacher-student relationships
Teacher characteristics		
Gender (females)	–	**–**
Employment status (less than 50% full-time hours [fth])		
50-70% fth	**–**	
71-90% fth		–
more than 90% fth		
Subject (other subjects)		
Humanities subjects		
Science subjects		**+**
Teaching experience	**+**	
Teachers' formal education (below ISCED5)		
ISCED5B		
ISCED5A		
ISCED6	+	**–**
Self-efficacy classroom management	**+**	+
Self-efficacy instruction		**+**
Self-efficacy student engagement	**+**	**+**
Teacher autonomy	**+**	+

Note: The signs refer to either a positive (+) or a negative (-) relationship between one of the predictor variables and one of the learning climate scales in upper secondary education. A bold sign indicates that the relationship was statistically significant at $p < 0.01$, and a normal sign denotes a statistical significance of $p < 0.05$. The blanks mean that no significant relationship at $p \leq 0.05$ was found. The full tables of the analyses for classroom disciplinary climate and positive teacher-student relationships are to be found only on line via StatLinks (Tables 6.31 and 6.32).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20; Table 6.31 and 6.32.

Context factors and teacher characteristics found in primary and lower secondary schools resemble, to some extent, the situation in upper secondary schools. As far as teachers' self-efficacy in classroom management, instruction and student engagement is concerned, in upper secondary education, more or less the same mechanisms seem to be at play as in primary and lower secondary education. With regard to the favourable effects of private schooling on teacher student relationships, and the negative relationship between student population and a disciplinary classroom climate, similar findings were also found for upper secondary education. Notably different from primary and lower secondary education is the finding that school size in upper secondary school seems to a have greater impact on the school's learning climate. Larger upper secondary schools are negatively related to an orderly classroom climate and positive teacher student relationships.

SUMMARY

In this chapter, instructional and distributed leadership, as well as professional learning community and learning climate characteristics in primary and upper secondary education, are described and compared to findings in previous chapters on lower secondary education. The findings for primary and upper secondary education reveal that differences in instructional and distributed leadership between countries are relatively robust across sectors. For both factors, more or less the same ranking of countries is found in primary and upper secondary education as in lower secondary education.

The chapter further examined the relationships between instructional and distributed leadership, school context factors and teacher characteristics on one hand, and aspects of professional learning communities and a learning climate on the other. The findings point out that a stronger engagement

in instructional leadership is related to a stronger focus on teacher collaboration in primary and lower secondary schools. Moreover, across all educational levels, instructional leadership is positively related to the reflective dialogue of teachers. This indicates that teachers in these schools are more inclined to engage in professional conversations about specific educational issues, directed towards further improving their teaching in schools in which their principals exert greater instructional leadership.

A further consistent finding across primary, lower secondary and upper secondary education is that schools who provide the staff with opportunities to actively participate in school decisions and who also involve parents and students in decision making at their school, work with teachers who feel a greater shared responsibility for their school's issues because they work at a school in which people are willing to support each other. This finding suggests that some schools succeed in building a collaborative culture when stakeholders feel that they might have a say in school issues and their opinion is valued. Moreover, a stronger engagement of school principals in distributed leadership is related to more positive teacher-student relationships in their school.

The outcomes of the analyses for primary and upper secondary education thus corroborate previous findings in Chapter 4 and 5 that instructional and distributed leadership have a positive relationship with several aspects of professional learning communities, but only impact creating positive teacher student relationships at school to some extent.

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Annex A

TECHNICAL NOTES ON MEASURES DERIVED FROM THE TALIS 2013 TEACHER AND PRINCIPAL QUESTIONNAIRES

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

ANNEX A

TECHNICAL NOTES ON MEASURES DERIVED FROM THE TALIS 2013 TEACHER AND PRINCIPAL QUESTIONNAIRES

This Annex gives provides notes regarding the interpretability of the data, along with an overview of the indices, scales and other measures derived from the TALIS 2013 teacher and principal questionnaires used in the analyses. Information is given on how some new index measures were constructed and operationalised. More general technical details can be found in the *TALIS 2013 Technical Report* (OECD, 2014b).

Notes regarding the interpretation of the data

This section lists issues to be noted regarding the sampling or field operations that should be considered when interpreting the data reported for the following systems:

- Flanders (Belgium): The ISCED level 2 sampling was done based on "administrative units" rather than on schools; users should, therefore, be careful when comparing "school-level" estimates.
- Israel: The sampling excluded Ultra-Orthodox schools.
- Japan: In a number of schools, some teachers who should have been included were mistakenly excluded (e.g. part time, special educational needs).
- Korea: The data collection occurred in the early part of the year following the TALIS reference year.
- Malaysia: Many issues were discovered with coverage (established at about 90%), reconciliation of the sampled schools with the sampling frame, teacher sampling, data inconsistencies and deviations from the prescribed protocols of the survey. Schools where information could not be corrected or confirmed were rejected.
- Mexico: In the ISCED 3 sample, six schools were rejected because of unapproved teacher sampling procedures.
- Serbia: Users should use caution because not all school listings could be confirmed and differences between school listings and sampling frame information could not be explained.
- Portugal: Azores and Madeira were excluded from data collection.
- Singapore: The ISCED 2 and ISCED 3 coverage falls below 95% after the exclusion of 27 private schools.
- United States: Data from the United States are located below the line in selected tables in this report and not included in the calculations for the international average. This is because the United States did not meet the international standards for participation rates. To maintain a minimum level of reliability, the TALIS technical standards, which the United States was not able to meet, require that at least 75% of schools (after replacement) and at least 75% of teachers within the selected schools participate in the survey.

Operationalisation of the conceptual framework

Each aspect of the general conceptual framework (see Figure 1.1) is operationalised in one or more measures or indices. These are described below and sorted according to the numbering in the conceptual framework (A to E). Most of the indices are derived directly from the TALIS 2013 database and are used in the TALIS 2013 main report (OECD, 2014a). Others are constructed for the purpose

of this report. For the new indices, the items used from the principal or teacher questionnaire are described below.

A. School context indicators associated with professional community and learning climate

School location. The urbanisation grade of the school location is available in the TALIS database, being item TC2G09. It is recoded into three ordinal categories: 1 for "hamlet, village or small town (15 000 people or fewer)", 2 for "town (15 000 to 100 000 people)", and 3 for "city or large city (more than 100 000 people)". Hamlet, village or small town (category 1) is considered as a reference category in the multilevel analyses.

School type. School type indicates whether the principal's school is public, private dependent or private independent. Information about the school type comes from the principal item TC2G10 in combination with TC2G11A and TC2G11B. If the school is publicly managed, the school is coded public (school type = 1). If the school is privately managed, but at least 50% of the funding comes from the government or the teaching personnel is funded by the government, the school is coded private dependent (school type = 2). If the school is privately managed and less than 50% of the funding comes from the government and the teaching personnel is not funded by the government, the school is coded private independent (school type = 3). Public schools (category 1) are used as the reference in the multilevel analyses.

School size. The current school enrolment in all grades or ages in the principal's school (TC2G14) is used in the analyses as school size. The number of students ranges from 1 to 4 335. For the multilevel analyses, school size is recoded into a ordinal variable with 1 for "< = 300 students", 2 for "301-600 students", 3 for "601-1 200 students" and 4 for " > = 1 200 students".

Percentage of students who speak a foreign language. The percentage of students whose first language is different from the language of instruction is estimated by the principal (TC2G15A). The variable is coded by five ordinal categories, ranging from 1 for "none", 2 for "1-10%", 3 for "11-30%", 4 for "31-60%", and 5 for "more than 60%". The first category is used as reference category in the multilevel analyses.

Percentage of students with special educational needs. The percentage of students with special educational needs is also estimated by the principal (TC2G15B). The five ordinal categories of this variable are similar to those for the percentage of students who speak a foreign language. The first category ("none") is used as reference in the multilevel analyses.

Percentage of students with a low socio-economic status (SES). The percentage of students who come from socio-economically disadvantaged homes (TC2G15C) is estimated by the principal in the same way as the two latest variables The variable consists of five ordinal categories, ranging from 1 for "none" to 5 for "more than 60%". The first category ("none") is used as reference in the multilevel analyses.

School autonomy. The principals were asked about the level of school autonomy. This is operationalised in the TALIS database by three indices: the degree to which the responsibility for decision making in budgeting (PBDGTAUT), staffing (PSTFFAUT) and instructional policies (PINSTAUT) is held at the school level, as opposed to at a local or national government level. Each school autonomy index was coded as 1 "no autonomy", 2 for "mixed autonomy" and 3 for "autonomy". School autonomy for budgeting contains items about establishing teachers' starting salaries, determining teachers' salary increases

and deciding on budget allocations within the school. School autonomy for staffing is constructed from items about appointing or hiring teachers and about dismissing or suspending teachers from employment. School autonomy for instructional policies is created using items about establishing student disciplinary policies and procedures, establishing student assessment policies, determining course content and which courses are offered. The first category ("no autonomy") of the three school autonomy indices is used as reference in the multilevel analyses.

B. School leadership indicators

Instructional leadership. PINSLEADS is the first of two scales in the TALIS 2013 database that are useful for measuring the school leadership of the principal. It reflects the main characteristics of effective school leaders. The following items of the principal questionnaire were included in the scale: taking actions to support co-operation among teachers to develop new teaching practices (TC2G21C), ensuring that teachers take responsibility for improving their teaching skills (TC2G21D), or feeling responsible for their students' learning outcomes (TC2G21E). The coding of each item is ordinal and ranged from 1 "never or rarely" to 4 "very often". The scale for instructional leadership is considered to be continuous.

Distributed leadership. PDISLEADS is the second scale in the TALIS 2013 database that measures aspects of the principal's school leadership. The degree of distributed leadership is constructed from three statements: the staff of the school has opportunities to actively participate in school decisions (TC2G22A), parents or guardians have opportunities to actively participate in school decisions (TC2G22B), and students have opportunities to actively participate in school decisions (TC2G22C). The coding of each statement is ordinal and ranged from 1 "strongly disagree" to 4 "strongly agree". Distributed leadership is scaled continuously.

Time spent on educational leadership. In the principal questionnaire of TALIS 2013, some items are available that measure practical aspects of the principal's educational leadership. The first item is the percentage of time a principal spends throughout the school year on curriculum and teaching related tasks and meetings (TC2G19B). This percentage is considered as continuous.

Educational leadership practice policy. Another two items are available in the principal questionnaire that measure educational leadership in practice. They measure the principal's engagement during the last 12 months in developing educational goals/programmes (TC2G20A) and a professional development plan for his or her school (TC2G20B). They are combined in a new summative ordinal scale called Educational leadership practice policy. The coding is 0 for "not engaged", 1 for "engaged in either educational goals/programmes or a professional development plan", and 2 for "engaged in both".

B1. Principal characteristics associated with school leadership

Principal's gender. Item TC2G1 of the TALIS 2013 principal questionnaire indicates whether the principal is male (1) or female (2).

Principal's formal education. The principal's highest level of completed formal education is asked by means of item TC2G03. The coding of this item is ordinal: 1 for "below ISCED level 5", 2 for "ISCED level 5B", 3 for "ISCED level 5A" and 4 for "ISCED level 6".

Principal's ability training programme. Three items in the principal questionnaire refer to relevant additional formal education of the principal. They are about completing a school administration or

principal training programme/course (TC2G06A), a teacher training/education programme or course (TC2G06B) and an instructional leadership training or course (TC2G06C). The three items of the principal's ability training programme are recoded into a three dummy variables with 0 for "never" and 1 for "yes".

Principal's developmental activities. The principal questionnaire asked about three different developmental activities undertaken during the last year. These are activities in a professional network, mentoring or research (TC2G07A1); in courses, conferences or observational visits (TC2G07B1); and in other professional development activities (TC2G07C1). The three items of the principal's development activities are recoded into three dummy variables with 0 for "never" and 1 for "yes".

Experience as a principal. The experience as a principal is expressed by the number of years the principal has worked as a principal in total (TC2G04B). The range for principals in lower secondary education is from 0 to 47 years.

Experience with other school management roles. The number of years the principal has worked in management roles other than as a principal is also requested in the TALIS 2013 principal questionnaire (TC2G04C). The actual range for principals in lower secondary education is 0 to 42 years.

Experience as a teacher. The principal's experience as a teacher was measured by the number of years the principal has worked as a teacher in total (TC2G04D). The observed range for principals in lower secondary education is 0 to 49 years.

Teaching obligation. Item TC2G05 of the principal questionnaire indicates whether the principal has a teaching obligation him- or herself. The response categories are recoded into a dummy variable that indicates whether the principal has current teaching obligations, irrespective of the size of his or her employment status: 0 for "no" and 1 for "yes".

C. Teacher characteristics associated with professional community and learning climate

Teacher's gender. Item TT2G01 of the TALIS 2013 teacher questionnaire indicates whether the teacher is male (1) or female (2).

Teacher's employment status. The employment status of the teacher, combining all of his or her current teaching jobs, is represented in the TALIS 2013 databases by item TT2G03. The original scaling is reversed to facilitate the interpretation of the variable: 1 for "part-time, less than 50% of full-time hours (fth)", 2 for "part-time, 50-70% fth", 3 for "part-time, 71-90% fth", and 4 for "full-time, more than 90% fth".

Science subjects. The subject(s) a teacher currently teaches to ISCED level 2 students is represented by the items TT2G15A to TT2G15L of the teacher questionnaire. The subject(s) are divided in two groups and recoded into two dummy variables. The first subject dummy variable indicates whether the teacher teaches science subjects in the current school year: 1 for "mathematics, science or technology" and 0 for "other subjects".

Humanities subjects. The second subject dummy variable indicates whether the teacher teaches language, humanities or an arts subject(s) in the current school year. The coding is 1 for "reading, writing or literature, social studies, modern foreign languages, ancient Greek or Latin, arts or religion", and 0 for "other subjects".

Teacher's number of years teaching. The teacher's working experience is represented by item TT2G05B of the TALIS 2013 teacher questionnaire. It indicates the total number of years the teacher has worked as a teacher so far. The actual teaching experience of teachers in the lower secondary education ranges from 0 to 58 years.

Teacher's formal education. The teacher's highest level of completed formal education is requested in the teacher questionnaire (TT2G10). The scaling corresponds with the indicator for the principal's formal education: from 1 for "below ISCED level 5" to 4 for "ISCED level 6".

Teacher's self-efficacy. This is measured by means of the TALIS 2013 scale for teacher self-efficacy. The scale combines three subscales: efficacy in classroom management (SECLSS), efficacy in instruction (SEINSS) and efficacy in student engagement (SEENGS). The three subscales are used in the multilevel analysis and originate from the items TT2G34A to TT2G34L in the teacher questionnaire.

Teacher autonomy. The scale for teacher autonomy is based on the following items of the principal's questionnaire: TC2G18F3, TC2G18G3, TC2G18I3, TC2G18J3, and TC2G18K3. The scale indicates the amount of educational content tasks in which teachers have an active role in decision making, according to the principal. Teachers may share this decision making responsibility with other stakeholders, like the principal, other members of the school management team, school governing board, local municipality or regional/national authority. For the construction of the scale, the factor scores obtained by an exploratory factor analyses are used. The Cronbach's alpha of the scale is 0.77 for teachers in lower secondary education.

D. Learning climate according to the teachers

Classroom disciplinary climate. This is measured by means of the TALIS scale for classroom disciplinary climate (TCDISCS). The scale indicates to what degree learning is hindered by noise and disruption in the classroom.

Collective focus on student learning. The collective focus on student learning is based on the items TT2G29A to TT2G29E of the teacher questionnaire. The items reflect the teacher's received feedback on student performance (TT2G29A), knowledge and understanding of the subjects fields (TT2G29B), pedagogical competencies in teaching the subject fields (TT2G29C), student assessment practices (TT2G29D) and student behaviour and classroom management (TT2G29E). For constructing the scale *collective focus on student learning*, the factor scores are used. The Cronbach's alpha of the scale is 0.83.

Positive teacher-student relationships. The TALIS scale for teacher student relationship (TSCTSTUDS) is used in the analyses. It measures to what extent the teacher is willing to listen to the needs of students and give some extra help and assistance.

E. Professional community according to the teachers

Collaborative professional activity. The collaborative activity of the teachers is best represented by a scale in the TALIS 2013 database: TCEXCHS. TCEXCHS is constructed by the items TT2G33D, TT2G33E, TT2G33F and TT2G33G of the teacher questionnaire. As the Cronbach's alpha of TCEXCHS is sufficiently high (0.73), it was decided to use TCEXCHS without any adaptation in the analyses of this project.

Reflective dialogue. Reflective dialogue refers to the extent to which teachers are engaged in professional conversations about specific educational issues. In the teacher questionnaire, items TT2G30H to TT2G30L refer to this issue. They indicate the teachers' perceived positive change on 1) feedback on classroom practice, 2) knowledge and understanding of the main subject field(s), 3) teaching practice, 4) methods for teaching students with special educational needs, and 5) use of student assessments to improve student learning. The five items are included in an exploratory factor analyses, and for constructing the scale *reflective dialogue*, the factor scores are used. The Cronbach's alpha is 0.89.

Collective focus on student learning. The collective focus on student learning is based on items TT2G29A to TT2G29E of the teacher questionnaire. The items reflect the teacher's received feedback on student performance (TT2G29A), knowledge and understanding of the subjects fields (TT2G29B), pedagogical competencies in teaching the subject fields (TT2G29C), student assessment practices (TT2G29D) and student behaviour and classroom management (TT2G29E). For constructing the scale *collective focus on student learning*, the factor scores are used. Cronbach's alpha of the scale is 0.83.

Deprivatised practice by classroom observation. Deprivatised practice refers to teachers observing other teachers' classes with the goal of providing feedback on their teaching. The item TT2G28A5 (feedback from other teachers following direct observation) reflects this issue well.

Deprivatised practice by feedback of another teacher. The other items of TT2G28 are also relevant with respect to deprivatised practice. Five items indicate the feedback on teaching by another teacher based on student surveys about the teacher's teaching (TT2G28B5), assessment of the teacher's content knowledge (TT2G28C5), analysis of the teacher's student's test scores (TT2G28D5), self assessment of the teacher's work (TT2G28E5), and surveys of discussions with parents or guardians (TT2G28F5). They are included into an exploratory factor analyses. The factor scores are used for construction of the scale. The factor score of these items make up the scale *deprivatised practice by feedback of another teacher*. Cronbach's alpha is 0.76.

Shared sense of purpose. A shared sense of purpose reflects the teachers' degree of agreement for the school's mission and its operational principles. Two items measure this issue: the school has a culture of shared responsibility for school issues (TT2G44D) and a collaborative culture which is characterised by mutual support (TT2G44E). Both items correlate well (Spearman's rho = 0,659, $p < 0.001$) and are used for a summative scale, called *shared sense of purpose*, that ranges from 2 to 8.

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Annex B

METHODS AND TECHNIQUES OF ANALYSIS

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

ANNEX B
METHODS AND TECHNIQUES OF ANALYSIS

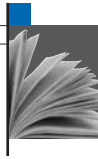
Multilevel latent class analyses

Multilevel latent class analyses were performed using four indicators: instructional leadership; distributed leadership; time spent on educational leadership; and educational leadership practice policy. By means of a latent class analyses, it was studied whether the principals of lower secondary schools can be classified systematically into a restricted number of groups (also called clusters or classes) based on the patterns in the principals' scores on the four indicators. The aim of the analyses is to maximise the between-group heterogeneity and the within-group homogeneity. This means, in this case, that principals who belong to the same cluster are as similar as possible with respect to observed values on the four indicators. On the other hand, principals who belong to different clusters have a scoring on the four indicators as dissimilar as possible. Latent class analyses have some important advantages over the traditional kind of cluster analyses: 1) the scoring of the indicators may have different levels of measurement, 2) the indicators may be correlated and 3) the analyses are model based. The third advantage implies that the model fit and the loading of the indicators to the clustering can be tested. Furthermore, the cluster membership probability is calculated for every principal, before the principal is allocated to the cluster with the highest membership probability. The basic idea of multilevel latent class analysis is that the hierarchical structure of the TALIS database is also taken into account: the principals (level 1 units) are nested within countries (level 2 units). It is assumed that the probability of belonging to a certain group class (cluster on a higher level) may differ across countries and economies. More technical details are to be found in Vermunt (2008). The multilevel latent class analyses are performed using the software package Latent Gold (version 4.5) (Vermunt and Magidson, 2005).

To make sure that the contribution of each country in the multilevel latent class analyses is the same, the final school weight (SCHWGT) was standardised per system. This is done by dividing SCHWGHT by the system mean SCHWGHT with, as a result, the average new school weight variable equalling one in each country and economy. The extremely peaked distribution of the scoring for distributed leadership and instructional leadership caused severe clustering interpretation problems. One value in the centre of the distribution contained about 10% of all observed distributed leadership scores and appeared to be a cluster in itself. Therefore, it was decided to recode the scoring of distributed leadership and also instructional leadership and time spent on educational leadership into corresponding variables with, respectively, 15[1], 11[2] and 16[3] ordinal categories.

The setting of the number of principal clusters (L1) ranged between two and five. The setting of the number of system group classes ranged between one and five (L2). The best solution of the latent class analyses is determined in the first place by a good overall fit of the model with a restricted number of clusters and group classes. The following criteria are used:

- the Bayesian Information Criterion (BIC) is relatively low
- the percentage of classification error is below 15%
- the classification certainty (entropy R^2, measuring the between-group heterogeneity) is at least 0.75
- a cluster of principals contains at least 10% of the units
- the cluster solution at both levels is parsimonious.



In the second place, the model solutions with respect to clustering principals and group classification of countries and economies for the best-fitting models are compared using the following criteria:

- a class of countries and economies contains at least 10% of the units
- each indicator contributes significantly to the clustering or classification (Wald test, $\alpha = 0.01$)
- the clusters and classes are interpretable.

With this, the lines suggested by Lukočienė, Varriale and Vermunt (2010), Collins and Lanza (2010), and Vermunt (2003) were generally followed.

Results

The main results of the first step in the multilevel latent class analyses are presented in Table B.1.

Table B.1 Model fit statistics of the multilevel latent class analyses for ISCED-2 principals

	Model specification	BIC(LL)	N parameters	Classification error	Entropy R^2
Model 1	2-Cluster 1-GClass	83518.53	46	0.1742	0.44
Model 2	3-Cluster 1-GClass	83333.79	51	0.2063	0.47
Model 3	4-Cluster 1-GClass	83297.75	56	0.2365	0.42
Model 4	5-Cluster 1-GClass	83282.73	61	0.2227	0.37
Model 5	2-Cluster 2-GClass	82445.77	48	0.1221	0.57
Model 6	3-Cluster 2-GClass	82312.58	54	0.1342	0.49
Model 7	4-Cluster 2-GClass	82229.74	60	0.2047	0.5
Model 8	5-Cluster 2-GClass	82239.05	66	0.2523	0.48
Model 9	2-Cluster 3-GClass	82337.98	50	0.1119	0.59
Model 10	3-Cluster 3-GClass	81822.15	57	0.1612	0.6
Model 11	4-Cluster 3-GClass	81400.17	64	0.1198	0.74
Model 12	5-Cluster 3-GClass	81297.95	71	0.1525	0.72
Model 13	2-Cluster 4-GClass	82273.79	52	0.1086	0.61
Model 14	3-Cluster 4-GClass	81693.93	60	0.1607	0.77
Model 15	4-Cluster 4-GClass	81138.11	68	0.1396	0.74
Model 16	5-Cluster 4-GClass	81191.63	76	0.1548	0.69
Model 17	2-Cluster 5-GClass	82265.26	54	0.1068	0.62
Model 18	3-Cluster 5-GClass	81639.57	63	0.1593	0.77
Model 19	4-Cluster 5-GClass	80926.58	72	0.1225	0.77
Model 20	5-Cluster 5-GClass	80922.44	81	0.148	0.73

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

Table B.1 shows that the BIC decreases continuously as the number of group classes (GClass) and clusters increases. This indicates that the more cluster and group groups are differentiated, the better the overall model fit is. So, Model 20, with five principal clusters and five country and economy group classes, seems to be the best fitting model presented in Table B.1. However, when the other criteria for model fit are examined, another conclusion is drawn. In accordance with the selecting procedure presented by Vermunt (2003), the focus is on the lowest level (principals) before looking at a higher level in the analyses (countries and economies). Model 20 resulted in a solution with a larger proportion of estimation error (15%), a lower entropy R^2 (0.73) and is more complex when compared to Model 11, 14, 15, 18 and 19 with a similar fit. Comparing these latter models, it turns out that Model 11 has the best combination of fit criteria and is the less complex. The classification error and entropy R^2 of Model 11 are, respectively, 12% and 0.74. Model 11 is chosen to be the best model of all presented models in Table B.1.

The next step in the analysis is to determine whether Model 11 with the best overall fit also meets the second set of criteria. The sizes of the three country/economy group classes are, respectively, 52%, 31% and 17%. Therefore, all classes are bigger than the minimum level 10% of the total number of systems. All indicators contribute significantly to the four principal clusters (Wald tests: all $p < 0.001$) and – more important when the number of units is large – the loading of three of the four indicators are considered as relevant. The loading (R^2) of instructional leadership is 0.25, of distributed leadership 0.51, of time spent on educational leadership 0.07 and of educational leadership practice policy 0.25. These values for loading indicate that distributed leadership can be considered as the most important, followed by instructional leadership. The time a principal spends on educational leadership is the less relevant value for the clustering.

The last mentioned criterion of step 2 in the latent class analyses might even be the most important: the interpretability of the principal clusters. If the four clusters can be defined well based on the scoring of the four indicators for school leadership, then the cluster solution is interpretable. Tables B.2 to B.5 present, for each indicator, the distribution of the principals' scores over the four clusters. The area that is shaded grey indicates the categories of the indicator with the highest proportion of principals (Table B.2, B.3, B.4: > 5%; Table B.5: > 20%).

Table B.2 Distribution of principals, by cluster, for distributed leadership

Distributed leadership	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)
3-4	0.0	0.2	0.0	0.3
4-5	0.0	0.0	0.0	0.1
5-6	0.0	0.4	0.0	0.5
6-7	0.0	0.4	0.0	0.5
7-8	0.0	3.3	0.0	3.9
8-9	0.0	14.1	0.0	15.7
9-10	0.0	13.6	0.0	14.3
10-11	0.0	20.0	0.0	19.9
11-12	0.3	43.9	0.5	41.3
12-13	54.3	4.0	65.4	3.5
13-14	16.1	0.0	16.0	0.0
14-15	5.2	0.0	4.3	0.0
15-16	8.2	0.0	5.5	0.0
16-17	11.7	0.0	6.5	0.0
17-18	4.1	0.0	1.9	0.0
Mean	13.7	10.4	13.3	10.3

Note: The area that is shaded indicates the categories of the indicator with the highest proportion of principals: > 5%.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

Table B.2 indicates that the principals in Clusters 1 and 3 are characterised as principals with a high level of distributed leadership. The principals in Clusters 2 and 4 have a medium or low level of distributed leadership.

The principals classified in Clusters 1 and 2 can be specified as principals with a relatively high level of instructional leadership, as opposed to principals in Clusters 3 and 4 (Table B.3).

Table B.3 Distribution of principals, by cluster, for instructional leadership

Instructional leadership	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)
5-6	0.0	0.1	1.6	2.4
6-7	0.1	0.3	2.8	3.9
7-8	0.3	0.8	3.9	4.8
8-9	4.7	10.0	29.3	32.9
9-10	7.0	11.5	19.9	20.3
10-11	7.7	9.9	10.1	9.3
11-12	45.6	46.5	27.7	23.2
12-13	10.0	8.0	2.8	2.1
13-14	6.8	4.3	0.9	0.6
14-15	16.6	8.2	1.0	0.6
15-16	1.2	0.5	0.0	0.0
Mean	11.9	11.2	9.8	9.5

Note: The area that is shaded indicates the categories of the indicator with the highest proportion of principals: 5%.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

Table B.4 Distribution of principals, by cluster, for the percentage of time a principal spends on educational leadership

Percentage of time spent on educational leadership	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)
0-5	2.4	2.2	7.9	6.6
6-10	11.5	10.8	25.3	22.7
11-15	10.3	9.9	15.3	14.8
16-20	29.9	29.4	30.3	31.2
21-25	13.1	13.1	9.0	9.9
26-30	20.5	21.1	9.6	11.3
31-35	3.9	4.1	1.2	1.6
36-40	4.9	5.2	1.1	1.4
41-45	0.7	0.8	0.1	0.2
46-50	1.8	2.0	0.2	0.3
51-55	0.2	0.2	0.0	0.0
56-60	0.6	0.7	0.0	0.1
61-65	0.0	0.1	0.0	0.0
66-70	0.2	0.2	0.0	0.0
71-75	0.0	0.1	0.0	0.0
76-80	0.0	0.1	0.0	0.0
Mean	23.4	23.9	17.4	18.3

Note: The area that is shaded indicates the categories of the indicator with the highest proportion of principals: > 5%.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

Table B.4 demonstrates the unimportance of the indicator for the percentage of time spent on educational leadership for the clustering of the principals. The clusters differ little with respect to this indicator. In Cluster 1 and 2, the principals spend, on average, a bit more than 20% of their time on educational leadership activities. In Cluster 3 and 4, this average percentage is somewhat lower: 18%.

Table B.5 Distribution of principals, by cluster, for educational leadership practice policy

Educational leadership practice policy	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)
0	0.6	0.6	13.6	17.1
1	13.2	13.2	45.2	47.2
2	86.2	86.3	41.3	35.7
Mean	1.9	1.9	1.3	1.2

Note: The area that is shaded indicates the categories of the indicator with the highest proportion of principals: > 20%).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

The educational leadership practice policy of Clusters 1 and 2 is the most elaborated (Table B.5). Almost 90% of the principals reported that they were engaged in the development of both educational goals/educational programmes for his or her school and a professional development plan. In Clusters 3 and 4, this percentage is much lower (41% and 36%).

The inspection of the clustering results also reveals that the typology of the principals is quite strongly related to the typology of the countries. Table B.6 shows the distribution of the principal clustering over the country and economy group classes.

Table B.6 Distribution of principals, by principal cluster and country and economy group classes

	Country and economy group class 1 (%)	Country and economy group class 2 (%)	Country and economy group class 3 (%)
Principal cluster 1	72	18	17
Principal cluster 2	16	8	72
Principal cluster 3	9	46	1
Principal cluster 4	3	28	11
Total	100	100	100

Note: The area that is shaded indicates the categories of the indicator with the highest proportion of principals: > 20%).

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

The principals who belong to the 18 systems of Country and Economy Group Class 1 are mainly (70%) classified in Cluster 1. Most of the principals of Country and Economy Group Class 2 (56%, N=12 systems) are classified in Cluster 3 and 4. Principals of Country and Economy Group Class 3 (N=6 countries) are mainly (72%) attributed to Cluster 2. This is marked in Table B.6 by the grey cells.

Summarising the above presented results reveals a clear characterisation of the principal clusters and country and economy group classes. Table B.7 provides this. The sign indicates whether the principals in the particular cluster scored below average (–), on average (o) or above average (+). The percentage of time a principal spends on educational leadership is not presented because of its weak contribution to the clustering solution.

Table B.7 Summary of the four clustering solutions from the multilevel latent class analyses

Principal Cluster 1:		**Principal Cluster 2:**	
▪ distributed leadership:	+	▪ distributed leadership:	–
▪ instructional leadership:	+	▪ instructional leadership:	+
▪ educational leadership practice policy:	+	▪ educational leadership practice policy:	+
Mainly originate from country **class 1**:		Mainly originate from country **class 3**:	
Abu Dhabi (United Arab Emirates)		England (United Kingdom)	
Alberta (Canada)		Israel	
Australia		Italy	
Brazil		Japan	
Bulgaria		New Zealand	
Chile		Slovak Republic	
Czech Republic			
Georgia			
Korea			
Latvia			
Mexico			
Malaysia			
Poland			
Romania			
Russian Federation			
Serbia			
Singapore			
Shanghai (China)			
Principal Cluster 3:		**Principal Cluster 4:**	
▪ distributed leadership:	+	▪ distributed leadership:	–
▪ instructional leadership:	–	▪ instructional leadership:	–
▪ educational leadership practice policy:	o	▪ educational leadership practice policy:	o
The following countries **(country class 2)** have principals who can mainly be classified as cluster 3 or 4 principals:			
Croatia			
[Cyprus][1]			
Denmark			
Estonia			
Finland			
Flanders (Belgium)			
France			
Iceland			
Netherlands			
Portugal			
Spain			
Sweden			

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD (2013), *Teaching and Learning International Survey (TALIS): 2013 complete database*, http://stats.oecd.org/index.aspx?datasetcode=talis_2013%20.

Multilevel analyses

In this report, it is investigated, for lower secondary education (ISCED 2), whether aspects of school leadership are related to professional learning community on the one hand and positive learning climate on the other. In addition, it is studied whether these effects are still demonstrable if accounting for school context and teacher characteristics and whether the relationships in lower secondary education (ISCED 2) are different from primary education (ISCED 1) and upper secondary education (ISCED 3).

Working out the research questions in detail lead to extensive multilevel analyses. Data from principals and teachers in lower secondary education (ISCED 2) in TALIS 2013 are used for the main analyses. The principal dataset and teacher dataset are matched by, successively, the unique country, school and teacher identifiers (IDCNTRY, IDSCHOOL and IDTEACH).

All multilevel analyses are performed with the software packet MLwin (version 2.19) (Rasbash et al., 2012). The hierarchical structure of the TALIS 2013 dataset is taken into account by differentiating three levels. Teachers (level 1) are nested within schools (level 2), and schools are nested within countries (level 3). The sampling design of TALIS 2013 is considered in the analyses by using the final teacher weight (TCHWGT) and final school weight (SCHWGT) as raw weights at, respectively, levels 1 and 2. The described procedure of the multilevel analyses for ISCED 2 is replicated for the ISCED 1 and ISCED 3 datasets of TALIS 2013.

Five aspects of a professional learning community are specified: collaborative professional activity; reflective dialogue; collective focus on student learning; deprivatised practice by feedback of another teacher; and shared sense of purpose; and two are specified for the learning climate within a school: classroom disciplinary climate and positive teacher student relationships. This means that there are seven response variables, all coming from the teacher questionnaire and measured on a continuous scale. A basic kind of multilevel model was used, namely random intercept models (Snijders and Bosker, 2012). The procedure is as follows and was repeated for all response variables. First, an empty model is estimated (Model 0). Such a model reveals the basic estimates for the random parts of the model: the variance at levels 1, 2 and 3. The variances of the empty model are the starting point to calculate the explained percentage of total variance of the more elaborated models. Secondly, distributed leadership and instructional leadership are added as predictors to the empty model (Model 1). With Model 1, the gross effects of the two most important school leadership aspects on professional community and learning climate are estimated. The third step in the multilevel analyses is adding school context characteristics to Model 1 as covariates. A set of seven predictors are added simultaneously: location, type and size of the school, percentage of students who speak a foreign language, with special educational needs and a low socio-economic status (SES), and school autonomy. This reveals Model 2. The model indicates the restricted net effect of school leadership aspects on professional learning community and learning climate. The fourth step is expanding Model 2 with teacher characteristics. Ten characteristics are added as a set of covariates: teacher's gender, employment status, number of years teaching, formal education, efficacy in classroom management, efficacy in instruction, efficacy in student engagement, teaching science and/or humanities subjects and teacher's autonomy. This results in Model 3, the most extensive model to estimate the net effect of school leadership aspects on professional learning community and learning climate.

Additionally, several extra multilevel analyses were performed to investigate whether integrated school leadership is more strongly related to professional learning community and learning climate than are distributed leadership or integrated leadership separately. For the construction of integrated leadership, the results of the latent class analyses are used. Four clearly different clusters of principals and four group

classes of countries and economies could be differentiated. Based on the scoring on three of four aspects of school leadership, a principal is assigned to the cluster with the highest probability. A principal's cluster number and country and economy group class number are considered as measures of integrated leadership. They are saved and added to the dataset for the multilevel analyses. The same procedure was then followed for the multilevel analyses as described above (Model 0 to 3) with only one exception: the predictors distributed leadership and integrated leadership in Model 1 to 3 are replaced by the principal's cluster number and country and economy group class number. The results of the models with integrated leadership are compared with similar models with distributed leadership and integrated leadership.

Notes

1. SPSS syntax: recode PDISLEADS (3.000000000 thru 4=3.5) (4.000000001 thru 5=4.5) (5.000000001 thru 6=5.5) (6.000000001 thru 7=6.5) (7.000000001 thru 8=7.5) (8.000000001 thru 9=8.5) (9.000000001 thru 10=9.5) (10.000000001 thru 11=10.5) (11.000000001 thru 12=11.5) (12.000000001 thru 13=12.5) (13.000000001 thru 14=13.5) (14.000000001 thru 15=14.5) (15.000000001 thru 16=15.5) (16.000000001 thru 17=16.5) 17.000000001 thru 18=17.5) into PDISLEADS_cat.

2. SPSS syntax: recode PINSLEADS (5.000000000 thru 6=5.5) (6.000000001 thru 7=6.5) (7.000000001 thru 8=7.5) (8.000000001 thru 9=8.5) (9.000000001 thru 10=9.5) (10.000000001 thru 11=10.5) (11.000000001 thru 12=11.5) (12.000000001 thru 13=12.5) (13.000000001 thru 14=13.5) (14.000000001 thru 15=14.5) (15.000000001 thru 16=15.5) into PINSLEADS_cat.

3. SPSS syntax: recode TC2G19B (0 thru 5 =5) (6 thru 10=10) (11 thru 15=15) (16 thru 20=20) (21 thru 25=25) (26 thru 30=30) (31 thru 35=35)(36 thru 40=40) (41 thru 45=45) (46 thru 50=50) (51 thru 55=55) (56 thru 60=60) (61 thru 65=65) (66 thru 70=70) (70 thru 75=75) (76 thru 80=80) into TC2G19B_cat.

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Annex C

EMPLOYMENT, CAREER AND LEGAL FRAMEWORK OF PRINCIPALS

A note regarding Israel

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

ANNEX C
EMPLOYMENT, CAREER AND LEGAL FRAMEWORK OF PRINCIPALS

Table C.1 Employment status of principals

Country	Employment status		
	Who is the employer of school leaders?	What is the employment status of school leaders?	Can school leaders be employed on fixed-term contracts?
	1	2	3
Abu Dhabi (United Arab Emirates)	Central educational authority; The Abu Dhabi Education Council-ADEC (public schools) Individual contracts under the ADEC supervision (private schools)	Civil Service status (public schools only)	Yes, school leaders with civil servant status (public schools)
Alberta (Canada)	School authorities	Employees of the school authority	Yes
Australia	State education authorities or governments; local education authorities; school, school board or committee[1]	Civil servant status; Salaried employee status	Yes, both school leaders with civil servant status and salaried employee status (maximum period of time varies nationally)
Brazil	m	m	m
Bulgaria	Central educational authority or government (Ministry of Education for state schools) Provincial/regional education authorities (The Regional Inspectorate of Education for regional schools)	Salaried employee status	
Chile	School organising bodies (sustainers)	Salaried employee status	Public schools: yes (5-year contract with possibility to re-apply) Government-dependent private schools: yes (for a maximum of 2 years)[2]
Croatia	State education authority (public schools only)	Civil servant status (public schools) Salaried employee status (private schools)	Public schools: 5-year contract with the possibility to reapply
Cyprus[3]	m	m	m
Czech Republic	Local education authority is responsible for appointing a school leader[4]	Public schools: civil servant status Private schools: salaried employee status	Public schools: No Private schools: Yes, school principals with salaried employee status (at the discretion of school organising bodies)
Denmark	ISCED levels 1 and 2 (public schools): local education authorities ISCED level 3 (all schools): school boards	State civil servant status; salaried employee status	m
England (United Kingdom)	Local authorities; academy trusts (stand-alone and multi-academy trusts)	Salaried employee status	Yes
Estonia	Central government; local education authorities[5]	Salaried employee status	No
Finland	Local education authorities	Salaried employee status	No[6]
Flanders (Belgium)	School organising bodies (public schools and government-dependent private schools)	Civil servant status	Yes
France	Central government, state education authorities	Civil servant status (public schools) Salaried employee status, paid by the government (private schools)	No, for school principals with civil servant status Yes, for school principals with salaried employee status
Georgia	m	m	m
Iceland	ISCED levels 1 and 2: local education authorities ISCED level 3: central education authorities	ISCED levels 1 and 2: salaried employee status ISCED level 3: civil servant status	Yes, both school leaders with civil servant status and salaried employee status (for a maximum of 2 years)
Israel	ISCED levels 1 and 2: central government; corporation or non-profit organisation ISCED 3: local education authorities; corporation or non-profit organisation	ISCED levels 1, 2 and 3: civil servant status; salaried employee status	ISCED level 1 and 2: no ISCED level 3: yes, school leaders with salaried employee status only

Table C.1 Employment status of principals *(continued)*

Country	Employment status		
	Who is the employer of school leaders?	What is the employment status of school leaders?	Can school leaders be employed on fixed-term contracts?
	1	2	3
Italy	Central education authority through regional branches (public schools only)	Public Administration employees with contractual status[7]	School principals are hired on an "unlimited-time individual contract" Principals are appointed to their posts for 3-5 years at a time, after which they may be reassigned to the same or different posts for another 3-5 year period
Japan	Local education authorities (public schools) School organising bodies (private schools)	Civil servant status (public schools) Salaried employee status (private schools)	Yes
Korea	Central government	Civil servant status	No
Latvia	State authorities (for state schools), Local municipalities' authorities (for public schools), Legal or private person (for private schools)	Salaried employee status	No
Malaysia	m	m	m
Mexico	ISCED levels 1 and 2 (public schools): state education authorities ISCED level 3 (public schools): central education authorities; state education authorities ISCED level 3 (all schools managed by autonomous agencies): autonomous and private institutions (e.g. universities)	ISCED levels 1, 2 and 3: salaried employee status	ISCED levels 1 and 2: no ISCED level 3: yes (varies between 6 months up to 4 years)
Netherlands	School organising bodies (competent authorities)	Civil servant status (public schools) Salaried employee status (private schools)[8]	Yes, both school leaders with civil servant status and salaried employee status (e.g. as interim director)
New Zealand	School Board of Trustees	Civil servant status; salaried employee status	Yes, both school leaders with civil servant status and salaried employee status
Norway	Local education authorites[9]	Salaried employee status	Yes
Poland	Local education authorities (communes, districts or other governing bodies)	Civil servant status; salaried employee status	Yes (5-year contract for all school principals with the possibility of renewal)
Portugal	Central education authority	Civil servant status	No
Romania	m	m	m
Russian Federation	m	m	m
Serbia	m	m	m
Shanghai (China)	m	m	m
Singapore	Central educational authority/government (Ministry of Education)	Civil servant status[10]	No, school leaders serve full-time and are not on contracts[11]
Slovak Republic	School and/or school organising bodies (in case of schools that do not have a legal personality)	Civil servant status	Yes (5-year contract for all school principals with the possibility of renewal)
Spain	State education authorities (public schools); school organising bodies (private schools)	Civil servant status (public schools) Salaried employee status (private schools)	Yes (for a maximum of 4 years in public schools)[12]
Sweden	Local education authorities; school organising bodies (independent schools)	Salaried employee status[13]	Yes

Notes:

a: information not applicable because the category does not apply; m: information not available.

1. Australia is a federation of eight states/territories. There are differences in employment practices between states and territories, as well as differences between public (government) and private (non-government) institutions. In private schools that are part of a system (systemic non-government school systems), school leaders are often appointed by the local education authority. In independent private schools, school leaders are appointed by the school board or committee.

2. Chile: After two years, the contract automatically turns into a permanent type.

3. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

4. Czech Republic: According to law, a school leader is not an employee of a local education authority. A school leader is an employee of a school he/she is leading. Thus, he/she has both roles (is both an employer and an employee).

5. Estonia: School principals in public schools are appointed until their retirement. School principals in government-dependent private schools are appointed by school organising bodies. The salary of school principals is determined by the school owner (government, local authority or school organising body of a government-dependent private school).

6. Finland: School leaders are appointed until retirement.

7. Italy: Teachers also are public administration employees with a contractual status. However, as public managers, principals have a separate national contract with respect to teachers and other school staff.

8. Netherlands: The terms of employment for school leaders as civil servants and salaried employees are identical.

9. Norway: According to the Management in Education Act, Section 9-1, each school is to have sound professional, educational and administrative management. Teaching in schools shall be led by school principals. The school principals shall maintain familiarity with the day-to-day activities of the schools and endeavour to further develop the activities. Persons appointed as school principals must have pedagogical qualifications and the necessary leadership abilities.

10. Singapore: Principals are mainly in the Education Service, which is a part of the Civil Service.

11. Singapore: Principals are systematically rotated across schools to allow the infusion of fresh perspectives and the transfer of experiences and strengths between schools, as well as to expose principals to new situations with various opportunities and challenges as part of their career development. Principals are typically posted to a school for about 5-7 years before rotation to another school or appointment.

12. Spain: Principals in public schools are appointed for 4 years, but this can be renewed for 4 more years if they receive a positive evaluation and they are selected again.

13. Sweden: School leaders in Sami schools and special schools have civil servant status.

Source: Derived from information supplied by countries and economies participating in the project. The table should be interpreted as providing broad indications only and not having strict comparability across countries and economies.

Table C.2 Career development of principals

Country	Career development	
	What is the structure of the school leader's career?	What determines school leader career progression?
	1	2
Abu Dhabi (United Arab Emirates)	Multilevel career structure, with a salary scale for each career level (public schools)	School leader appraisal results
Alberta (Canada)	School authorities determine the qualifications for school leadership; most principals either possess or in the process of completing a program leading to a master's degree in leadership	The school authority for its employees; individual school leaders are free to pursue career advancement across jurisdictions
Australia	Multilevel career structure with a salary scale for each career level (number of levels varies nationally)	School leader appraisal results; merit selection process
Brazil	m	m
Bulgaria	Unique career stage with a single salary scale	Salary step increments based on length of service
Chile	Public schools: unique career stage with a single salary scale Government-dependent private schools: at the discretion of school organising bodies (sustainers)	Public schools: salary step increments based on length of service Government-dependent schools: at the discretion of school organising bodies (sustainers)
Croatia	Unique career stage with a single salary scale	Salary step increments based on length of service
Cyprus[1]	m	m
Czech Republic	No	Public schools: salary step increments based on length of service (years of working experience) Private schools: it is up to a school organising body
Denmark	None	a
England (UK)	None	m
Estonia	None	a
Finland	Unique career stage with a single salary scale (5 steps in schools with general programmes)	Certain steps on the salary scale according to the length of service
Flanders (Belgium)	Unique career stage with a single salary scale	Salary step increments based on length of service
France	Multilevel career structure with a salary scale for each career level (3 levels : 10 steps at level 1, 11 steps at level 2, 6 steps at level 3)	Salary step increments based on length of service and school leader appraisal results
Georgia	m	m
Iceland	ISCED levels 1 and 2: unique career stage with a single salary scale (18 steps) ISCED level 3: unique career stage with a single salary scale (9 steps)	ISCED levels 1 and 2: salary step increments based on length of service and age ISCED level 3: salary step increments based on length of service and school size
Israel	ISCED levels 1, 2: multilevel career structure, with a single salary scale for each level (4 levels, getting tenure at the end of first level) ISCED level 3: Career development is not structured by levels	ISCED levels 1 and 2: length of service; completion of professional development; school leader appraisal results ISCED level 3: length of service; completion of professional development
Italy	Unique career stage with a single salary scale	a[2]
Japan	Unique career stage with a single salary scale	Length of service and school leader appraisal results (public schools)
Korea	Multilevel career structure with a single salary scale (2 levels, 50 steps)	Length of service; completion of professional development; appraisal results (Appraisal for School Management)
Latvia	None	Length of service, completion of professional development (if the school leader is a teacher)
Malaysia	m	m
Mexico	ISCED levels 1 and 2: multilevel career structure, with a salary scale for each career level (through the National Teaching Career Programme [PNCM])[3] ISCED level 3: unique career stage with a single salary scale	ISCED levels 1, 2 and 3 appraisal results
Netherlands	School leader career structure and number of salary steps can depend on school size	School leader appraisal results
New Zealand	Unique career stage with a single salary scale	Salary step increments based on length of service and school leader appraisal results
Norway	Multilevel career structure with a salary scale for each career level (4 steps)[4]	School leader appraisal results; student results in some local education authorities
Poland	Unique career stage	a
Portugal	Teacher career structure (unique career stage with 10 steps in the salary scale)	Length of service; appraisal results; completion of professional development (same as for teachers)
Romania	m	m
Russian Federation	m	m

Table C.2 Career development of principals *(continued)*

Country	Career development	
	What is the structure of the school leader's career?	What determines school leader career progression?
	1	2
Serbia	m	m
Shanghai (China)	m	m
Singapore	Multilevel career structure, with a salary scale for each career level[5]	School leader appraisal results[6]
Slovak Republic	None	a
Spain	Unique career stage with a single salary scale (1 step)	a
Sweden	None Individual salary negotiated with the municipality/private school owner	Individual negotiation with the school owner, depending on principals performance

Notes:

a: information not applicable because the category does not apply; m: information not available.

1. Cyprus: see note 3, Table C.1.

2. Italy: With the development of a central policy framework for the mandatory periodic appraisal of school leaders, it is intended that appraisal results are taken into account as one factor for determining progression on the salary scale. At present, school leaders' salaries are based upon the following two parts (according to the National Contract (CCNL) for school leaders): a) a fixed economic element; and b) a variable element determined at a regional level based on school leaders' responsibilities (85%) and outcomes (15%). The salary portion is attributed for responsibilities based on the following criteria: a) school dimension (number of students, number of teachers and other school personnel); b) complexity of the managed school (different school levels and school types within the same institution); c) geographical context (socially deprived areas, underdeveloped areas). Thus, it is not really right to talk of "career progression" for Italian school heads, but only of higher or lower salaries for the flexible parts of their pay, determined by a number of criteria together with the results they obtain.

3. Mexico: Programa Nacional de Carrera Magisterial.

4. Norway: The salary scale only regulates the minimum salary. The salary is, for the most part, locally determined and, in general, substantially higher than the minimum level.

5. Singapore: There are three career tracks catering to the different talents, interests and aspirations of teachers: Leadership, Teaching, and Senior Specialist (see www.moe.gov.sg/careers/teach/career-information for details), and there is flexibility for teachers to make lateral movements across the three tracks for continuous professional growth. Under the leadership track, school leaders are promoted from within the ranks of the teaching service. School leaders can also take up leadership appointments at the Ministry headquarters to enable the transfer of experiences between schools and the Ministry headquarters for better understanding and development of policies.

6. Singapore: School leaders are appraised holistically, in areas such as curriculum leadership, character development of students, professional development, promoting a culture of learning, strategic planning and leadership, resource and process management, communications and partnerships with stakeholders.

Source: Derived from information supplied by countries and economies participating in the project. The table should be interpreted as providing broad indications only and not having strict comparability across countries and economies.

Table C.3 Leadership legal framework of principals

	Leadership legal framework			
	Are principals' duties and responsibilities governed by a legal framework? (if yes, please specify if it is country- or region-wide; if no, please go to column 10)	Are instructional leadership practices (i.e. promoting teacher collaboration, making teachers' responsible for students' results, improving teacher practice) included in the legal framework for principals?	Are distributional leadership practices (i.e. the inclusion of staff, parents and students) included in the legal framework for principals?	Are there any non-legal instruments, e.g. school leaders guidelines or general (country-wide or region-wide) frameworks that provide orientation to principals in terms of their responsibilities and duties?
Country	1	2	3	4
Abu Dhabi (United Arab Emirates)	Yes, principal's duties are governed by a country wide framework under the ADEC regulation (public and private schools)	Yes (both public and private schools)	Yes (both public and private schools)	Yes General guidelines provided to state schools deliver orientation to principals, vice principals and teacher's practice
Alberta (Canada)	Yes: a new professional practice standard for school leaders will be authorised by the provincial Minister of Education in 2016	The School Leader Standard outlines a series of competencies and related indicators that represent the outcomes of effective practice; strategies for demonstrating the competencies are the license of the practitioner although there will be resource documents prepared by the Ministry to assist them in choosing the most appropriate strategies	Yes	Currently, the 1997 Principal Quality Practice Guideline is used to inform practice; the new professional practice standard will replace the Guideline and will be mandatory across all school authorities
Australia	No[1]	The level of detail included in industrial instruments or employment contracts varies nationally	The level of detail included in industrial instruments or employment contracts varies nationally	Yes: the Australian Professional Standard for Principals and the Leadership Profiles (country-wide)
Brazil	m	m	m	m
Bulgaria	Yes Basic duties and responsibilities are described within the State Education Act In addition principals' work should be in compliance with many other state legal acts	Yes Described within the State Education Act and other state legal acts	Yes Described within the State Education Act and other state legal acts	Yes, through training and professional development[2]
Chile	Yes For public schools selection process is guided by the system of Senior Public Management (Sistema de Alta Dirección Pública) and also on their performance at the performance agreement each of them agrees with the local government[3] For private schools with public funding the regulations of the Superintendence and the Agency for Education Quality apply	No	No	Yes, the "Framework for Good School Administration and Leadership" (MBDLE, *Marco para la buena dirección y liderazgo escolar*) establishes orientations about these topics
Croatia	Yes: regulated by the Law on Education and the Law on Institutes	Yes: included in the Law on Education and the Law on Institutes	Yes: the Law on Education states that a school leader manages the school in co-operation with the school professional and governing bodies (school board, teachers' council, parents' council, students' council, etc.)	Yes: the Law on Education states that school leaders must develop their annual work program and the school's annual work programme on the basis of the guidelines provided by the Education and Teacher Training Agency
Cyprus[4]	m	m	m	m
Czech Republic	Yes Basic duties and responsibilities are described within the Education Act (country wide document)[5]	No	No	No
Denmark	m	m	m	m
England (UK)	Yes, head teachers and governing bodies' duties are set out in legislation (maintained schools) and funding agreements (academies)	m	m	m
Estonia	Yes: country-wide (Basic School and Upper Secondary School Act)	No	Yes: every school must have a Board of trustees and Teachers' Council Also, students have the right to form a student council[6]	Yes: the country-wide competencies framework for principal´s includes instructional and distributional leadership practices
Finland	m	m	m	m

Table C.3 Leadership legal framework of principals *(continued)*

	Leadership legal framework			
Country	Are principals' duties and responsibilities governed by a legal framework? (if yes, please specify if it is country- or region-wide; if no, please go to column 10)	Are instructional leadership practices (i.e. promoting teacher collaboration, making teachers' responsible for students' results, improving teacher practice) included in the legal framework for principals?	Are distributional leadership practices (i.e. the inclusion of staff, parents and students) included in the legal framework for principals?	Are there any non-legal instruments, e.g. school leaders guidelines or general (country-wide or region-wide) frameworks that provide orientation to principals in terms of their responsibilities and duties?
	1	2	3	4
Flanders (Belgium)	For principals in schools belonging to the Community Education Network (GO!) the duties and responsibilities are listed in the Decree governing the Community Education[7]	No[8]	No[9]	No
France	Yes (country-wide framework)	Yes	Yes	Yes (country- and region-wide general frameworks)
Georgia	m	m	m	m
Iceland	m	m	m	m
Israel	ISCED levels 1, 2 and 3: yes, the principals' duties and responsibilities governed by a national wide legal framework	Yes[10]	Yes[11]	No
Italy	Yes, there is a general national legal framework for all managers in public administration, with some specifics for school principals defined by law and also by national contract[12]	National contract for principals stipulates that a principal's administrative and management responsibilities must be exercised in accordance with school autonomy in interaction with the participatory bodies foreseen and in accordance with teachers' constitutional right of freedom to teach as they see fit[13]	The inclusion of various participatory and decision-taking bodies is foreseen by law at different levels of schooling The law also establishes which of these bodies the school head must involve in different decision-making processes[14]	No, only the already mentioned legal framework[15]
Japan	Yes country-wide and region-wide	Yes country-wide and region-wide	Yes	No
Korea	m	m	m	m
Latvia	Yes: the overall responsibility of principals is determined in the law on education	Yes: determined in the country by the education law	No[16]	No
Malaysia	m	m	m	m
Mexico	Yes, it is included in the Professional Service Teaching Law	Yes, included Professional Service Teaching Law	Yes, included in the Professional Service Teaching Law	No: at the national level, but each state is allow to have general guidelines for their principals
Netherlands	No	a	a	Yes, there is a register and a professional standard for school leaders However, these instruments do not have a legal framework
New Zealand	Yes[17]	No: however quasi-legal guidance is given	No: however quasi-legal guidance is given	Yes
Norway	Yes, some of principals'[11] duties and responsibilities are governed by a legal framework called "The Education Act"	No	No	Requirements and expectations for a principal are defined in a framework for school leadership as incorporated into the National Leadership Education for School Principals
Poland	m	m	m	m
Portugal	Yes, a country-wide framework	Yes	Yes[18]	No
Romania	m	m	m	m
Russian Federation	m	m	m	m
Serbia	m	m	m	m
Shanghai (China)	m	m	m	m
Singapore	No	a	a	Yes, there are professional and administrative guidelines for school leaders on their various areas of work, such as school administration, school curriculum, finance and accounts, personnel, etc.

Table C.3 Leadership legal framework of principals *(continued)*

Country	Leadership legal framework: Are principals' duties and responsibilities governed by a legal framework? (if yes, please specify if it is country- or region-wide; if no, please go to column 10)	Are instructional leadership practices (i.e. promoting teacher collaboration, making teachers' responsible for students' results, improving teacher practice) included in the legal framework for principals?	Are distributional leadership practices (i.e. the inclusion of staff, parents and students) included in the legal framework for principals?	Are there any non-legal instruments, e.g. school leaders guidelines or general (country-wide or region-wide) frameworks that provide orientation to principals in terms of their responsibilities and duties?
	1	2	3	4
Slovak Republic	Yes: the Act no. 596/2003 coll. on state administration in the school system and school self-government and the Act no. 245/2008 coll. on upbringing and education (the school act)	No	Yes	No
Spain	Yes: country- and region-wide	Yes	Yes	Yes: region wide
Sweden	Yes: a country-wide national syllabus	Yes: it is stated by law in national syllabus[19]	Yes: it is stipulated by the law in national syllabus	Yes: the National Agency for Education produces a lot of texts/ material to support principals (and teachers) in many aspects

Notes:

a: information not applicable because the category does not apply; m: information not available.

1. Australia: However, duties and responsibilities of principals may be detailed in relevant industrial instruments or employment contracts which vary nationally.

2. Bulgaria: The National Institute for Education and Training in Education Systems provides qualification courses and programmes for school principals.

3. Chile: Principals in public schools are also under the teaching act *(Estatuto Docente)* and also the regulations given by the Superintendence of Education and the Agency for Education Quality.

4. Cyprus: see note 3, Table C.1.

5. Czech Republic: Furthermore, a principal must manage a school in compliance with many other legal acts and legal notices (country-wide).

6. Estonia: The rights of these bodies are stipulated in the Basic School and Upper Secondary School Act.

7. Flanders (Belgium): For principals in schools from the other educational networks, the school organising body is responsible and can delegate duties and responsibilities to the principal.

8. Flanders (Belgium): It is possible that the school organising body asks these actions of the principal or that the principal does this within his/her duties and responsibilities, which are formulated in a broad sense.

9. Flanders (Belgium): It is possible that the school organising body asks these actions of the principal or that the principal does this within his/her duties and responsibilities, which are formulated in a broad sense.

10. Israel: However, implementation is monitored only in ISCED levels 1 and 2. In ISCED level 3, implementation is at the discretion of the school principal.

11. Israel: As above.

12. Italy: However, when they are appointed to a school, they are also given objectives to reach in their post.

13. Italy: While respecting the responsibilities of the different bodies foreseen within the school governance framework, the school head is also responsible for "coordinating and developing human resources" and for "promoting actions to ensure the quality of educational processes and [...] the teachers' freedom to teach, understood as freedom of research and teaching and methodological innovation". There is no mention of "instructional leadership practices" in the legal framework, as this would constitute an infringement on school autonomy.

14. Italy: It's a question of which consultative bodies and decision-taking bodies are foreseen by law at different levels of schooling and which the school head by law must involve in different decision-making processes. These indications are included in school law in general, which principals must abide by, and involve different stakeholder engagement possibilities in ISCED 2 and 3, as far as students are concerned. The national contract for principals also stipulates that a principal's administrative and management responsibilities must be exercised in accordance with school autonomy and in interaction with the participatory bodies foreseen and in accordance with the constitutional right guaranteeing teachers the freedom to teach as they see fit.

15. Italy: Provision is made by the Ministry of Education for professional development initiatives concerning the responsibilities and duties of school headship, especially regarding the complexities of administration. There are professional associations providing professional development on different aspects of school headship, including educational leadership.

16. Latvia: The school funder might determine distributional leadership practices. It is also possible to include them in the municipalities' level binding regulation if the funder is a municipality.

17. New Zealand: Provided through very high-level and minimalist statements. New Zealand has an open and flexible approach.

18. Portugal: The Director is elected by the General Board, which includes staff, parents and students representatives.

19. Sweden: Instructional leadership guidance is also part of principal training and in-service training.

Source: Derived from information supplied by countries and economies participating in the project. The table should be interpreted as providing broad indications only and not strict comparability across countries.

Annex D

ADDITIONAL TABLES ON SCHOOL LEADERSHIP FOR LEARNING

ANNEX D
ADDITIONAL TABLES ON SCHOOL LEADERSHIP FOR LEARNING

The following tables are available in electronic form only.

Chapter 3 *Additional tables on the determinants of principals' leadership styles*

http://dx.doi.org/10.1787/888933369955

WEB	**Table 3.1**	Engagement in instructional leadership in lower secondary education
WEB	**Table 3.2**	Engagement in distributed leadership in lower secondary education
WEB	**Table 3.3**	Instructional and distributed leadership, by principals' gender, in lower secondary education
WEB	**Table 3.4**	Instructional leadership, by principals' teaching experience, in lower secondary education
WEB	**Table 3.5**	Instructional leadership, by principals' training in instructional leadership, in lower secondary education
WEB	**Table 3.6**	Instructional leadership, by principals' teaching obligation, in lower secondary education
WEB	**Table 3.7**	Distributed leadership, by principals' formal education, in lower secondary education
WEB	**Table 3.8**	Distributed leadership, by principals' participation in professional development activities, in lower secondary education
WEB	**Table 3.9**	Distributed leadership, by school size, in lower secondary education
WEB	**Table 3.10**	Distributed leadership, by lack of parent or guardian involvement, in lower secondary education
WEB	**Table 3.11**	Distributed leadership, by lack of shared leadership with other school staff, in lower secondary education
WEB	**Table 3.12**	Types of leadership in lower secondary education

Chapter 4 *Additional tables on school leadership and professional learning communities*

http://dx.doi.org/10.1787/888933369966

WEB	**Table 4.1**	Professional learning community in lower secondary education
WEB	**Table 4.2**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "reflective dialogue" in lower secondary education
WEB	**Table 4.3**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "deprivatised practice" in lower secondary education
WEB	**Table 4.4**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "shared sense of purpose" in lower secondary education
WEB	**Table 4.5**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "collaborative activity" in lower secondary education
WEB	**Table 4.6**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "collective focus on student learning" in lower secondary education
WEB	**Table 4.7**	Multilevel analysis of school leadership types, school context and teacher characteristics on the professional learning community scale "reflective dialogue" in lower secondary education
WEB	**Table 4.8**	Multilevel analysis of school leadership types, school context and teacher characteristics on the professional learning community scale "deprivatised practice" in lower secondary education

WEB	**Table 4.9**	Multilevel analysis of school leadership types, school context and teacher characteristics on the professional learning community scale "shared sense of purpose" in lower secondary education
WEB	**Table 4.10**	Multilevel analysis of school leadership types, school context and teacher characteristics on the professional learning community scale "collaborative activity" in lower secondary education
WEB	**Table 4.11**	Multilevel analysis of school leadership types, school context and teacher characteristics on the professional learning community scale "collective focus on student learning" in lower secondary education

Chapter 5 Additional tables on school leadership and the development of a positive learning climate

http://dx.doi.org/10.1787/888933369972

WEB	**Table 5.1**	Learning climate in lower secondary education
WEB	**Table 5.2**	Multilevel analysis of school leadership, school context and teacher characteristics on the learning climate scale "classroom disciplinary climate" in lower secondary education
WEB	**Table 5.3**	Multilevel analysis of school leadership, school context and teacher characteristics on the learning climate scale "positive teacher-student relationships" in lower secondary education
WEB	**Table 5.4**	Multilevel analysis of school leadership types, school context and teacher characteristics on the learning climate scale "classroom disciplinary climate" in lower secondary education
WEB	**Table 5.5**	Multilevel analysis of school leadership types, school context and teacher characteristics on the learning climate scale "positive teacher-student relationships" in lower secondary education

Chapter 6 Additional tables on school leadership and development of a learning community in primary and upper secondary school

http://dx.doi.org/10.1787/888933369985

WEB	**Table 6.1**	Engagement in instructional leadership in primary education
WEB	**Table 6.2**	Engagement in instructional leadership in upper secondary education
WEB	**Table 6.3**	Engagement in distributed leadership in primary education
WEB	**Table 6.4**	Engagement in distributed leadership in upper secondary education
WEB	**Table 6.5**	Professional learning community and learning climate in primary education
WEB	**Table 6.6**	Professional learning community and learning climate in upper secondary education
WEB	**Table 6.7**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "reflective dialogue" in primary education
WEB	**Table 6.8**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "deprivatised practice" in primary education
WEB	**Table 6.9**	Multilevel analysis of school leadership, school context and teacher characteristics on the professional learning community scale "shared sense of purpose" in primary education
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TALIS

School Leadership for Learning

INSIGHTS FROM TALIS 2013

The OECD Teaching and Learning International Survey (TALIS) is the largest international survey of teachers and school leaders. Using the TALIS database, this report looks at different approaches to school leadership and the impact of school leadership on professional learning communities and on the learning climate in individual schools.

It looks at principals' instructional and distributed leadership across different education systems and levels. Instructional leadership comprises leadership practices that involve the planning, evaluation, co-ordination and improvement of teaching and learning. Distributed leadership in schools explores the degree of involvement of staff, parents or guardians, and students in school decisions.

How are principals' and schools' characteristics related to instructional and distributed leadership? What types of leadership are favoured across countries? What impact do they have on the establishment of professional learning communities and positive learning environments? The report notes that teacher collaboration is more common in schools with strong instructional leadership. However, about one in three principals does not actively encourage collaboration among the teaching staff in his or her school. There is room for improvement; and both policy and practice can help achieve it. The report offers a series of policy recommendations to help strengthen school leadership.

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