

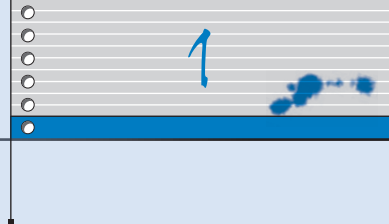
# Creating Effective Teaching and Learning Environments: First Results from TALIS

## EXECUTIVE SUMMARY



Teaching And Learning International Survey





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This document summarises results from the main report which can be found at [www.oecd.org/edu/TALIS](http://www.oecd.org/edu/TALIS)





# Introduction

## THE OECD TALIS SURVEY

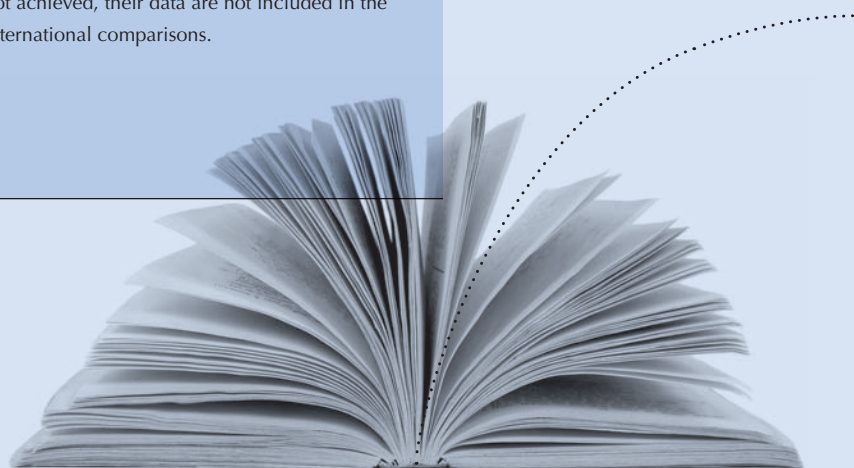
OECD's Teaching and Learning International Survey (TALIS) provides the first internationally comparative perspective on the conditions of teaching and learning, providing groundbreaking insights into some of the factors that lie behind the differences in learning outcomes that OECD's Programme for International Student Assessment (PISA) has revealed. It aims to help countries review and develop policies to make the teaching profession more attractive and more effective.

With a focus on lower secondary education in both the public and private sectors, TALIS examines important aspects of professional development; teacher beliefs, attitudes and practices; teacher appraisal and feedback; and school leadership in the 23 participating countries.

*TALIS is the first teacher survey...*

*...to cover key issues affecting teachers of lower secondary education and their work.*

OECD countries	Partner countries
Australia	Brazil
Austria	Bulgaria
Belgium (Flemish Community)	Estonia
Denmark	Lithuania
Hungary	Malaysia
Iceland	Malta
Ireland	Slovenia
Italy	Note: TALIS was also conducted in the Netherlands but as the required sampling standards were not achieved, their data are not included in the international comparisons.
Korea	
Mexico	
Norway	
Poland	
Portugal	
Slovak Republic	
Spain	
Turkey	



*In each of  
the 23 countries...*

TALIS looks at these factors through the eyes of teachers and school principals. This innovative approach was chosen in order to examine how the intended school and teacher policies of education systems are actually perceived and implemented in schools and classrooms, recognising that the best intentions will only yield results if effectively and consistently implemented in the frontline. Future surveys will build on this to monitor how the profession will evolve in response to new challenges.

*... schools and  
teachers were  
randomly selected to  
take part.*

Three features of the survey need to be taken into account when interpreting the results. First, responses from teachers and principals offer important insights, but they are subjective reports. Great care was taken in the design and instrumentation of the survey to ensure that the data are reliable and valid across countries and cultures. However, they need to be interpreted in the context of the perspectives of other stakeholders. Second, TALIS identifies associations between various characteristics of teachers and schools, but cannot establish cause and effect. Third, cross-country comparisons must always take account of cultural influences on the meaning of responses. The TALIS results are discussed with these considerations in mind.

To establish a robust statistical picture, around 200 schools were randomly selected in each country to participate in the survey. In each school, one questionnaire was filled in by the school principal and another by 20 randomly selected teachers. The questionnaires each took about 45 minutes to complete and could be filled in on paper or on-line. In total, TALIS sampled around 90 000 teachers representing more than 2 million teachers in the participating countries.

*The development and  
implementation of  
TALIS was guided by  
governments.*

TALIS is the product of a collaborative effort between the countries participating in TALIS, the experts and institutions that worked within the framework of an international project consortium, and the OECD. Collaboration and support from the European Commission has helped TALIS address important information needs of the Commission. Education International has facilitated consultations with educational unions throughout the development, implementation and analysis of the results. TALIS has emerged from the OECD's international educational indicators programme, INES. It also draws on the OECD's 2005 review of teacher policy, which identified important gaps in international data.

## CONDITIONS FOR EFFECTIVE LEARNING

TALIS looks at a range of features that shape teaching and learning. But how strongly do these characteristics affect learning itself? While TALIS does not directly measure student learning and learning outcomes, it looks at important features that shape effective learning. Special emphasis was given i) to how successful teachers feel in addressing the educational challenges they face (self-efficacy) and ii) to what extent classrooms are orderly and conducive to learning (classroom disciplinary climate).

Reports of self-efficacy have been shown to be linked to productivity and influence people's actions in the workplace. When teachers envisage effective teaching as a skill that can be acquired, this feeling of self-efficacy can help them better analyse and solve problems. Conversely, those teachers confronting a low feeling of self-efficacy can experience self-doubt and become preoccupied with evaluative concerns if efforts proved unsuccessful.

Classroom climate not only has been shown to affect student outcomes and attainment but is a prominent policy issue in a number of countries and regions. The actions of students within classrooms and the creation of a safe and productive learning environment are important for many schools and can be a challenging dimension of teachers' work. For example, TALIS finds that one teacher in four in most countries loses at least 30% of lesson time to disruptive student behaviour or administrative tasks, and some teachers lose more than half (Figure 4.10 in the main report). Furthermore, across countries, 60% of teachers are in schools whose school principal reports that classroom disturbances hinder learning (Table 2.8a in the main report). In all countries this is a problem in a relatively high proportion of schools and poses a significant challenge for effective teaching.

TALIS looked at how far factors such as aspects of professional development or varying teaching practices were associated with self-efficacy and classroom disciplinary climate. It then adjusted this effect by accounting for background factors such as the socio-economic characteristics of schools. Finally, for each factor for which significant effects had been found, additional estimates accounted for factors in other categories where the effects were significant. The associations that remain after these adjustments, measured in a "final model", are noted below and discussed in detail in Chapter 7 of the full report.

*TALIS looked at how well teachers feel prepared to address the challenges they face...*

*...as well as the quality of classroom climate, one in four teachers losing at least 30% of learning time because of disruptive student behaviour or administrative tasks.*





*Teachers who have undertaken more professional development tend to feel better equipped to deal with teaching challenges...*

Only in Australia was the number of days that teachers spent on professional development significantly associated with classroom disciplinary climate, once all other factors had been taken into account (Table 7.5 in the main report). On the other hand, in around half of the countries (Denmark, Estonia, Iceland, Italy, Korea, Lithuania, Malaysia, Malta, Mexico, Portugal and Slovenia), teachers who had received more professional development reported significantly higher levels of self-efficacy (Table 7.5a in the main report). TALIS also suggests that teachers' participation in professional development goes hand in hand with their mastery of a wider array of methods to use in the classroom, even if it is not clear to what extent professional development triggers or responds to the adoption of new techniques (Table 4.7 in the main report).

*...but professional development and intervention need to be targeted at individual teachers.*

TALIS identifies close associations between factors such as a positive school climate, teaching beliefs, co-operation between teachers, teacher job satisfaction, professional development, and the adoption of different teaching techniques (Table 4.12, Table 7.5a and Table 7.6a in the main report). For all of these factors, much of the variation identified was in differences among individual teachers rather than among schools or countries (e.g. Figure 4.3 in the main report). The implication is that by addressing teachers' attitudes, beliefs and practices as a whole, there is scope for considerable improvement in teaching and learning, but that this may require individualised support for teachers rather than just whole-school or system-wide interventions.

*Teacher appraisal and feedback can be important instruments to raise self-efficacy, and public recognition can reinforce this relationship.*

In a number of countries, the appraisal and feedback which teachers receive is mirrored in the beliefs in their own teaching abilities, in other words, when they receive feedback on their work, the more they trust in their abilities to address teaching challenges (Table 7.7a in the main report). However, this relationship is not always visible when other factors are accounted for, suggesting that third factors are at play too. In some countries, teachers reported higher levels of self-efficacy when they had received public recognition as a result of the appraisal (Austria, Belgium (Fl.), Estonia, Hungary, Ireland, Italy, Korea, Lithuania, Malta, Norway and Spain) and also when innovative practices were part of appraisal and feedback (Brazil, Iceland and Portugal) (Table 7.7a in the main report).

School evaluation and teacher appraisal show little relationship with classroom climate, in particular once other factors have been taken into account (Table 7.7 in the main report). School evaluation was also not markedly associated with teacher efficacy (Table 7.7a in the main report).

*Teachers holding different beliefs have contrasting experiences of classroom climate...*

Two alternative views of teaching emphasise, on the one hand, the teacher's role in transmitting knowledge and providing correct solutions, and on the other, the teacher's role as a facilitator of active learning by students who seek out solutions for themselves. Comparing teacher beliefs with classroom disciplinary climate, the analysis found that in Hungary, Italy, Korea, Poland and Slovenia, teachers with "constructivist" beliefs that regard students as active participants in the process of acquiring knowledge are more likely to report positive classroom disciplinary climate. In contrast, teachers who favour the "direct transmission" of knowledge are more likely to report a *negative* classroom disciplinary climate in the seven countries where there is a detectable net effect (Belgium (Fl.), Korea, Norway, Poland, Portugal, Slovenia and Spain). The choice of competing teacher beliefs is



a particularly significant issue for Korea, Poland, and Slovenia, where both of the above effects were observed (Table 7.6 in the main report).

In virtually all TALIS countries, there is a relation between teachers' beliefs and their classroom practices. In particular, teachers who employ student-oriented practices are more likely to be those who take a "constructivist" view of teaching; that is, teachers who believe that students should be more active participants in the learning process tend to follow this through in practice. On the other hand, there is no consistent pattern to the association between teachers' beliefs and more structured lessons and teaching (Table 4.9 in the main report).

On the other hand, *both* "constructivist" and "direct transmission" beliefs were positively associated with self-efficacy in most TALIS countries (Table 7.6a in the main report). Even though these are competing views of teaching, this result indicates that holding any strong view about technique tends to be associated with confidence in one's own effectiveness.

*...but tend to have confidence in their own teaching whichever beliefs they hold strongly.*

It is noteworthy that female teachers report using structuring and student-oriented practices more often than their male counterparts and are also more likely to say that they engage in co-operation with colleagues (Table 4.3 in the main report).

Structured teaching practices were associated with a good classroom disciplinary climate in around half of the countries (Australia, Austria, Belgium (Fl.), Bulgaria, Hungary, Ireland, Italy, Korea, Mexico, Portugal and Spain), and in some cases this effect was strong (Table 7.6 in the main report). These practices were also associated with greater teacher self-efficacy in around the same number of countries, many the same ones (Australia, Austria, Belgium (Fl.), Iceland, Ireland, Korea, Malaysia, Mexico, Norway, Portugal and Spain). Similar results were found for teachers who adopted student-oriented teaching practices but the number of countries where such positive associations were evident was smaller (Table 7.6a in the main report).

*Some teaching practices are more closely associated with classroom climate and self-efficacy than others.*

Teacher co-operation tended not to be strongly associated with classroom disciplinary climate, but in just under half of the countries teachers who engaged in more progressive forms of collaboration such as team teaching were more likely to feel more effective (Austria, Belgium (Fl.), Bulgaria, Estonia, Hungary, Iceland, Korea, Poland, Portugal and Spain) (Table 7.6a in the main report).

Those teachers who said that they involved students in enhanced activities such as project work were more likely in some countries to experience a worse classroom disciplinary climate (Austria, Belgium (Fl.), Lithuania and Malaysia), and had mixed reports of their self-efficacy (positive relationship in Ireland, Italy and Poland but a negative relationship in Austria) (Tables 7.6 and 7.6a in the main report). It is, of course, difficult to discern what is cause and effect as teachers may, for example, employ project work in particularly difficult classroom conditions.



## Illustrative TALIS question 1

11. During the last 18 months, did you participate in any of the following kinds of professional development activities, and what was the impact of these activities on your development as a teacher?							
<i>For each question below, please mark one choice in part (A). If you answer "Yes" in part (A) then please mark one choice in part (B) to indicate how much impact it had upon your development as a teacher.</i>							
		(A) Participation		(B) Impact			
		Yes	No	No impact	A small impact	A moderate impact	A large impact
a)	Courses/workshops (e.g. on subject matter or methods and/or other education-related topics)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b)	Education conferences or seminars (where teachers and/or researchers present their research results and discuss educational problems)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c)	Qualification programme (e.g. a degree programme)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d)	Observation visits to other schools	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e)	Participation in a network of teachers formed specifically for the professional development of teachers	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f)	Individual or collaborative research on a topic of interest to you professionally	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
g)	Mentoring and/or peer observation and coaching, as part of a formal school arrangement	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

## PREPARING AND SUPPORTING A HIGH-QUALITY TEACHING FORCE

Education systems seek to provide teachers with opportunities for on-going professional development to fully prepare them for their work and to retain a high-quality teacher workforce. TALIS examined the take-up of professional development, the degree of unsatisfied demand for development and the factors that support or hinder meeting development needs.

Several findings from TALIS underline the need for a better preparation of teachers. More than one teacher in three is in a school whose principal thinks that the school suffers from a shortage of qualified teachers (Table 2.5 in the main report). This ranges from 12% in Poland to the great majority in Estonia, Mexico and Turkey. The factors hindering instruction that are most frequently cited are a lack of equipment and a lack of instructional support personnel. TALIS makes it possible to analyse various relations between different resource shortages. For example, there is a strong relationship between schools in which a shortage of instructional support staff and of other support staff hinders instruction, an indication that a squeeze on non-teacher resources can affect these two problems together. On the other hand there seems to be no correspondence between a shortage of qualified teachers and average class size. TALIS also found that in some countries, negative aspects of teacher behaviour such as absenteeism or lack of pedagogical preparation often hinder instruction. In Italy and Mexico for example, the majority of teachers are in schools whose principals thought that unprepared teachers hindered instruction (Table 2.8 in the main report).

### How common is professional development in the teaching force?

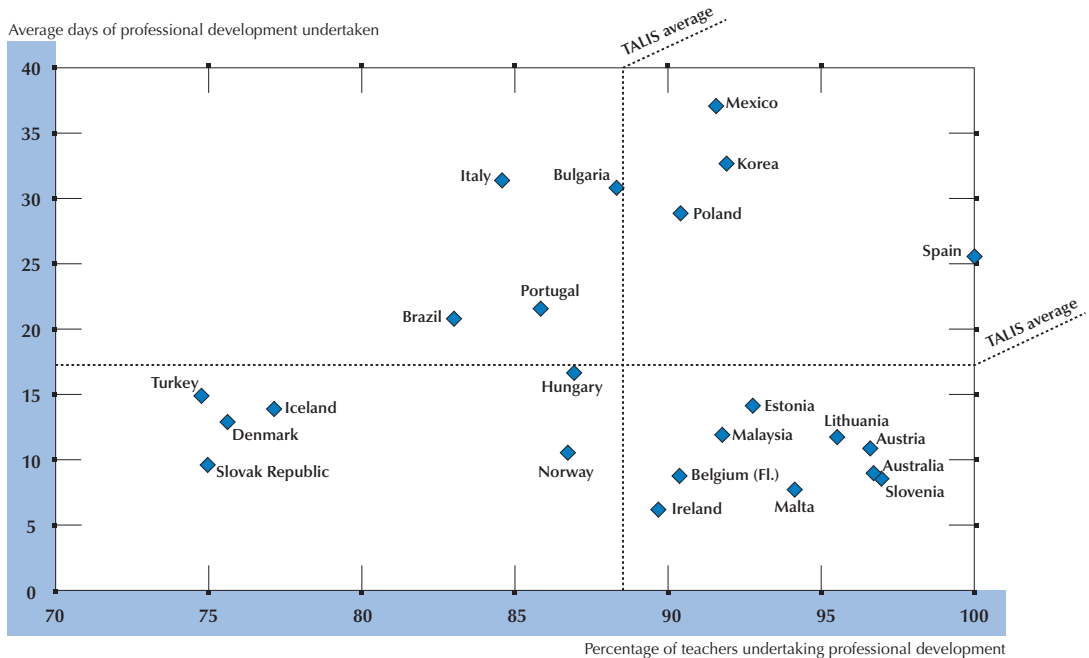
Nearly nine teachers in ten reported taking part in a structured professional development activity during the 18 months preceding the survey. This is generally a high participation rate, but there is considerable variation in:

- The proportion of teachers participating in different countries: in Denmark, the Slovak Republic and Turkey, one in four reported no professional development. Given the broad definition of professional development used in the survey, this may be a concern (Table 3.1 in the main report).
- The intensity of participation: in some countries teachers' average participation is a handful of days a year, while in Mexico and Korea it is 30 days or more (Table 3.1 in the main report).
- Equity issues raised by the participation of various groups within countries: older teachers for example are under-represented and within-country variation is greatest in Italy, Korea, Mexico, Poland and Spain (Table 3.1a and Table 3.1d in the main report).
- The type of professional development activities (Table 3.2 in the main report).


*The great majority of teachers participate in professional development...*

Figure 1

### Comparison of the level and intensity of participation in professional development (2007-08)



Source: OECD, TALIS Database.

StatLink  <http://dx.doi.org/10.1787/607807256201>

#### How well are teachers' professional development needs being met?

*...but half do not think this meets their needs...*

Although the great majority of teachers received some professional development over the previous 18 months, 55% on average reported that they would have liked more. However, teachers' views on this varied widely: In Belgium (Fl.) and Slovenia, two-thirds of teachers felt that they had received enough professional development, while in Brazil, Malaysia and Mexico, over 80% did not. While some degree of unmet need can be expected, its extent in some of the countries will need closer examination (Table 3.3 in the main report).

*...with unmet demand concentrated in areas relating to dealing with heterogeneous learning groups, ICT and student behaviour.*

Teachers' demand for more professional development appears concentrated in certain areas. In particular, one teacher in three reports a high level of need for teaching students with special learning needs. This indicates a serious issue in terms of teachers' capacity to deal with heterogeneous learning groups. Teachers also frequently mentioned ICT teaching skills and student behaviour as areas in which they required more development (Table 3.4 in the main report). It is noteworthy in this context that one teacher in four in most countries reports losing at least 30% of learning time because of disruptive student behaviour or administrative tasks. Since the greatest amount of variation in loss of teaching time is among different

teachers within schools, policy attention will need to focus on addressing the skills and dispositions of individual teachers, rather than improving overall school climate and discipline.

On average in TALIS countries, two-thirds of teachers paid nothing for the professional development they participated in, and a similar proportion received time from their employers to undertake it. This indicates a significant investment in teachers' professional development on the part of schools and public authorities (Table 3.5 in the main report).

*Two-thirds of teachers paid nothing for their professional development...*

However, where teachers paid for their own development, they tended to do more. Those who paid the full cost undertook over twice as much training as those who received it free (Table 3.5a in the main report). This partly reflects the fact that courses that are paid for tend to lead to professional qualifications and are more time-consuming. Teachers paying for their professional development are also more likely to feel that they need more than they get. This suggests that free provision is not necessarily the only way of stimulating participation.

*...but free participation is not the only way to stimulate participation.*

### **How to meet unsatisfied demand for professional development?**

TALIS asked teachers who wanted more professional development to explain what prevented them from undertaking it. The most common reason, cited by nearly half, is conflict with their work schedule (Table 3.7 in the main report). Almost as many cite the lack of suitable professional development, and these teachers tended to engage in less development activity. Indeed in the three countries where participation in professional development is lowest (Denmark, Slovak Republic and Turkey) this was the main reason, though in Denmark lack of employer support was also a significant barrier. Those who cited schedule conflict tended to undertake more than average professional development, often in courses leading to qualifications with heavy demands on time which can be difficult to meet.

*Work pressures and lack of suitable opportunities are cited as reasons for insufficient professional development.*

As shown in Figure 2, the great majority of teachers reported that the professional development they take part in, across a range of activities, had a moderate or high impact. The greatest perceived impact is in teacher research and qualification programmes (Table 3.8 in the main report).

*The greatest impact of professional development was reported in teacher research and qualification programmes, but these were also the activities with the least participation.*

These are activities in which relatively few teachers participate, although typically for more days.

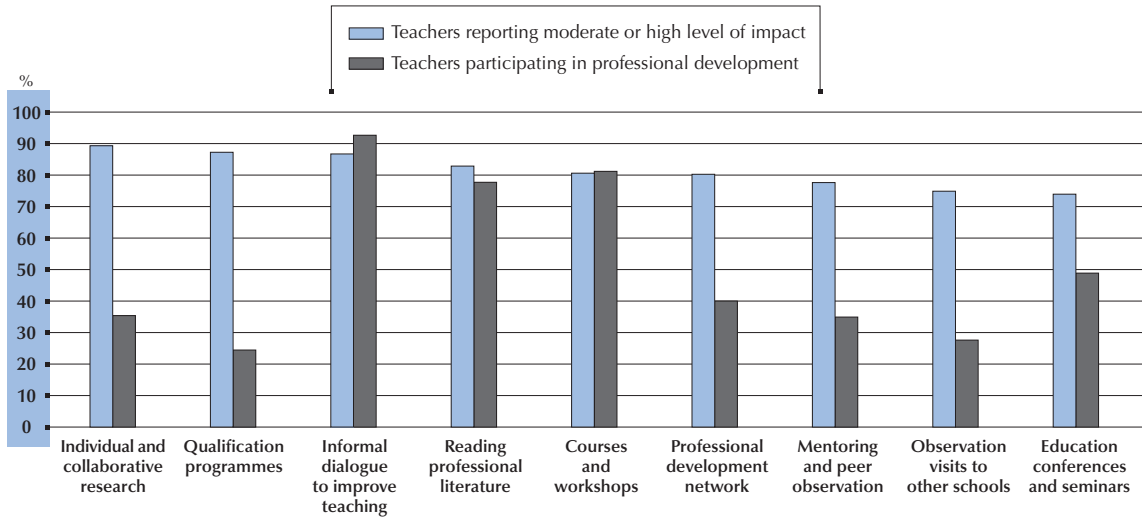
These findings point to two issues which policy makers and school leaders need to address. First, teachers who participate in qualification courses commit considerable time and money to these courses, which they think are effective. Yet relatively few participate in this type of activity and those who do often feel frustrated by the lack of sufficient time to devote to them. This suggests a need to review the amount of time and money made available to teachers for such courses.

*Policy makers and practitioners need to ensure that incentives and support for professional development are better aligned with the types of activity that are effective in meeting teachers' needs.*

The second issue is the broader phenomenon of high unmet need, which 42% of teachers associate with a lack of suitable professional development on offer. This suggests that a sound assessment of provision and support against development needs should be a priority in many countries.


Figure 2

## Comparison of impact and participation by types of development activity (2007-08)



Activities are ranked in descending order of the percentage of teachers reporting a moderate or high impact of the professional development they took.

Source: OECD, TALIS Database.

StatLink  <http://dx.doi.org/10.1787/607807256201>

## IMPROVING TEACHING PRACTICE

Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes. TALIS examines a variety of these which previous research has shown to be relevant to school improvement and effectiveness.

### How do teaching beliefs and practices differ across countries?

Two alternative views of teaching emphasise, on the one hand, the teacher's role in transmitting knowledge and providing correct solutions, and on the other, the teacher's role as a facilitator of active learning by students who seek out solutions for themselves. The latter "constructivist" view of teaching generally has more support among the teachers surveyed than the former "direct transmission" view (Figure 4.2 in the main report).

As shown in Figure 3, the constructivist view is most dominant in northwest European countries, Scandinavia, Australia and Korea. It has less dominance over the direct transmission view in Brazil, southern Europe and Malaysia. Indeed, in Italy and Malaysia, teachers' preference for the two views is more equal.

While these results present the two views in competition, teachers who supported one view of teaching were not necessarily less likely to support the other, suggesting that many see them as complementary. The exceptions are Austria, Australia and Iceland, the countries with the strongest support for the constructivist view, and where teachers who support that view tend not to support the idea of direct transmission (Table 4.1 in the main report).

In the classroom, teachers in all countries reported using practices aimed at ensuring learning is well structured ("structuring practices") more often than they used student-oriented practices, such as adapting teaching to individual needs. Both of these teaching practices are used more often than activities such as project work ("enhanced activities"), which require more active participation by the student. This pattern is true in every country (Figure 4.4 in the main report). Since each of these practices can raise student achievement, there may be scope for countries that make less use of student-oriented and enhanced activities to improve their results by using them more.

It is notable also that the domination of structuring practices among countries is to some extent contrary to the general preference for constructivist beliefs, which would be expected to be more closely aligned to student-oriented practices. The factors that prevent teachers from putting their beliefs about teaching into practice require further investigation but this may nevertheless be a source of frustration for teachers.

Teachers of mathematics place greater emphasis on structuring. Teachers in the humanities report that they are relatively more likely to assign project work and other forms of enhanced activities, and subjects that teach practical skills, to use more student-oriented practices (Figure 4.5 in the main report). This shows the importance of maintaining a balanced curriculum to enable students to learn how to take responsibility for their learning, and suggests that there may be scope for mathematics teachers to broaden their repertoire.

*Teachers tend to be more inclined to see their role as supporting active learning rather than directly transmitting information...*

*...but more so in Northern and Western European countries, Australia and Korea than in Southern Europe, Brazil or Malaysia.*

*Structured practices are more common than student-oriented practices, or project work...*

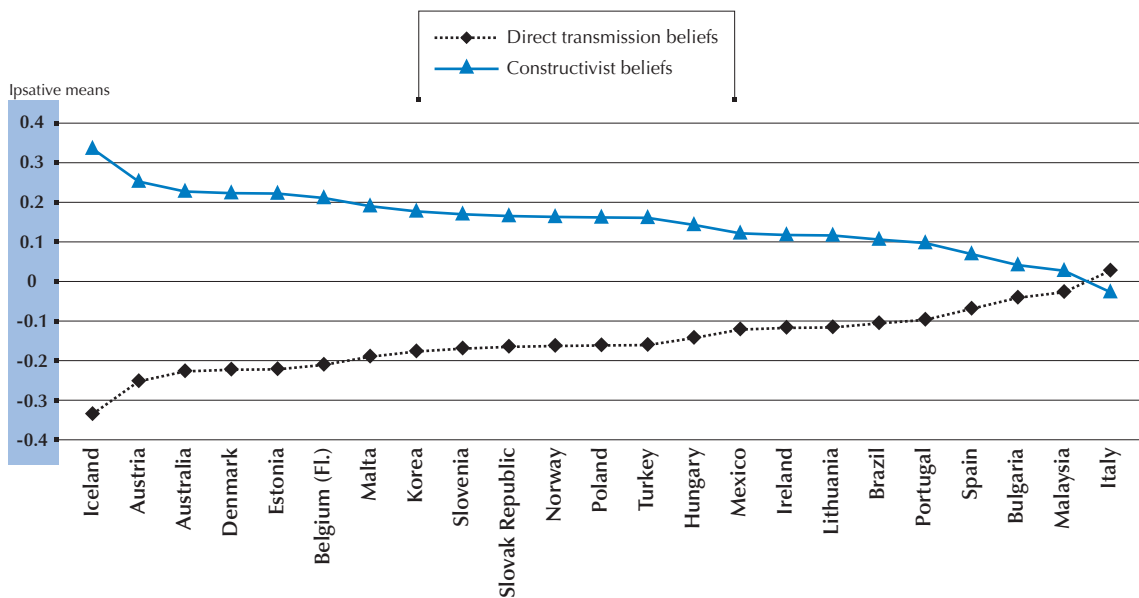
*...and variation by teaching subject illustrates the importance of a balanced curriculum.*



Figure 3


### Country profiles of beliefs about the nature of teaching and learning (2007-08)

Country mean of ipsative scores



Countries are ranked by the strength of preference among teachers in each country between direct transmission beliefs about teaching and constructivist beliefs about teaching. So, teachers in Iceland show the strongest preference for constructivist beliefs, over direct transmission beliefs.

Source: OECD, TALIS Database.

StatLink  <http://dx.doi.org/10.1787/607814526732>

### How do teachers use their teaching time and how successful do they consider themselves in their work?

*There is also scope for strengthening teachers' collaboration, beyond exchanging ideas.*

Co-operation by teachers in all countries takes the form of exchanging and co-ordinating ideas and information more often than direct professional collaboration such as team teaching (Figure 4.7 in the main report). However, there are big differences among countries, with professional collaboration relatively more common in Poland, the Slovak Republic and Turkey, and much less common in Belgium (Fl.), Slovenia and Spain. There is scope to enhance this form of co-operation, which research has shown to raise school effectiveness.

*Most lesson time is spent teaching, but in some cases disruption and administration cause significant loss of teaching time.*

At least half of teachers in most countries spend over 80% of the lesson time on teaching and learning. However, in some cases time is lost because students are disruptive or because teachers have to deal with administrative tasks. One teacher in four in most countries loses at least 30% of lesson time to these two factors, and some teachers lose more than half (Figure 4.10 in the main report). The greatest amount of variation in lost teaching time is among different teachers within schools. This suggests a need to address the skills and dispositions of individual teachers, not just the overall school climate and discipline.

Teachers were asked about their relations with students as an indicator of school climate. Teacher-student relations varied considerably within countries, although Norway stood out as a country in which over 95% of teachers reported better relations with students than the international average (Figure 4.13 in the main report). Within countries, a considerable amount of variation is due to differences among schools, but two-thirds of all variation is among teachers regardless of school or country differences. This suggests that some teachers need extra support to ensure a climate in which to teach effectively.

TALIS asked teachers about their job satisfaction and about how successful they feel they are with regard to their students' education (self-efficacy). In both cases differences across countries and across schools are generally small, but Norwegian teachers stand out as well above average on both measures. High scores for job satisfaction were also reported by teachers in Austria and Belgium (Fl.), while the opposite was true particularly in Hungary. Korean teachers were on average the least positive about their self-efficacy compared with other countries (Figure 4.15 in the main report). Around 90% of overall variation on these measures is among teachers within schools. This again suggests that interventions may need to focus on individual teachers rather than on schools or school systems.

*Teacher-student relations vary across countries, but most variation is within schools, suggesting that some teachers need extra support to establish an effective learning environment.*

*Teachers in the same school also vary in terms of job satisfaction and belief in their effectiveness.*

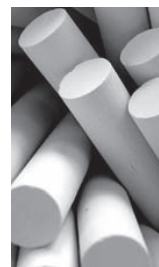


## Illustrative TALIS question 2

29. We would like to ask about your personal beliefs on teaching and learning. Please indicate how much you disagree or agree with each of the following statements.					
<i>Please mark one choice in each row.</i>					
		Strongly Disagree	Disagree	Agree	Strongly Agree
a)	Effective/good teachers demonstrate the correct way to solve a problem.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b)	When referring to a “poor performance”, I mean a performance that lies below the previous achievement level of the student.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c)	It is better when the teacher – not the student – decides what activities are to be done.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d)	My role as a teacher is to facilitate students’ own inquiry.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e)	Teachers know a lot more than students; they shouldn’t let students develop answers that may be incorrect when they can just explain the answers directly.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f)	Students learn best by finding solutions to problems on their own.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
g)	Instruction should be built around problems with clear, correct answers, and around ideas that most students can grasp quickly.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
h)	How much students learn depends on how much background knowledge they have – that is why teaching facts is so necessary.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
i)	Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
j)	When referring to a “good performance”, I mean a performance that lies above the previous achievement level of the student.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
k)	A quiet classroom is generally needed for effective learning.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

## SUPPORTING EFFECTIVE TEACHING THROUGH APPRAISAL AND FEEDBACK

TALIS shows that strong school-level evaluation tends to feed through to better teacher appraisal and feedback, which in turn can feed through to improvements in the classroom. This is true not just for evaluation in general but for specific aspects of teaching, such as teaching students from diverse backgrounds. These links provide useful guidance for shaping the framework for evaluating schools to facilitate and improve the work of teachers.



### How do teachers view appraisal and feedback on their work?

An important finding of TALIS is that teachers generally respond positively to appraisal and feedback (Table 5.7a in the main report). They tend to report that it is fair and helpful for their work and that it increases their job satisfaction and to a lesser extent their job security. In addition, teachers report that it significantly increases their development as teachers (Table 5.7 in the main report).

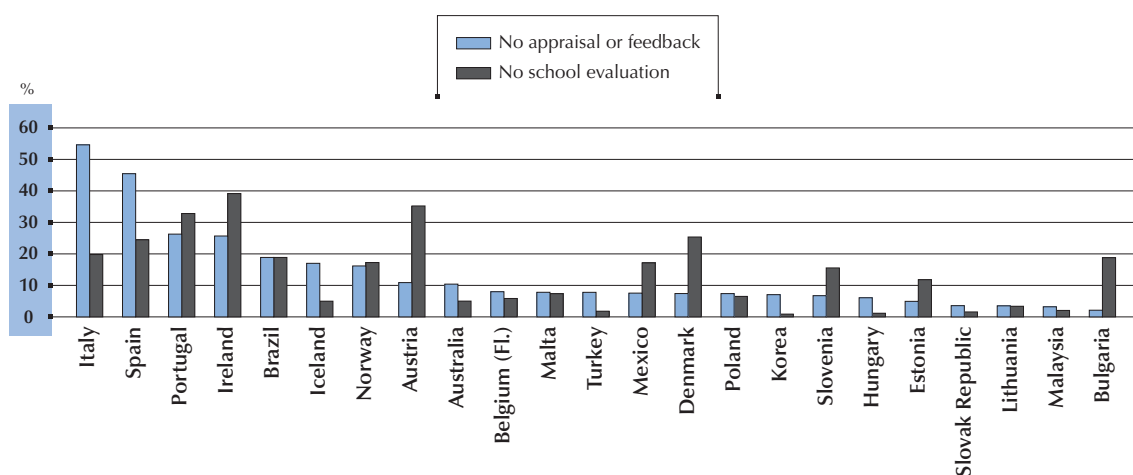
*Teachers tend to feel positive about their appraisal and feedback...*

Eight teachers in ten reported that they had received some kind of appraisal or feedback on their work and most were carried out by managers or other teachers within their school (Table 5.3 in the main report).

Teachers' positive perceptions of appraisal and feedback show that it is possible to overcome concerns about such practices.

Figure 4

### Teachers who received no appraisal or feedback and teachers in schools that had no school evaluation in the previous five years (2007-08)



*Countries are ranked in descending order of the percentage of teachers who have received no appraisal or feedback.*

Source: OECD, TALIS Database.

StatLink <http://dx.doi.org/10.1787/607856444110>

*...and see this as having an impact on their teaching skills...*

Not only do teachers report that the appraisal and feedback they receive improves their teaching skills, they also report that it leads to changes in specific aspects of their teaching. Greater emphasis on an aspect of teachers' work in appraisal and feedback is more likely to lead to changes in that area (Figure 5.8 – Figure 5.13 in the main report).

*...especially where it is supported with effective school evaluation.*

Between 70% and 80% of teachers work in schools whose school principal reported that school evaluations had an effect on feedback to the school, the appraisal of management and teachers, and helping teachers improve their teaching skills (Table 5.2 in the main report). This shows why school-level evaluation can be an important driver of school improvement.

*But the framework for evaluating education in schools is weak in a number of areas and countries...*

At the same time, on average across TALIS countries 13% of teachers receive no appraisal and feedback on their work as teachers in their school as shown in Figure 4. This was particularly apparent in Ireland and Portugal where over one-quarter of teachers had no appraisal and feedback and in Italy and Spain where around half of teachers had none (Table 5.3 in the main report).

Furthermore, on average just under one-third of teachers across TALIS countries worked in schools that had not been subject to an external evaluation in the previous five years. An average of one-fifth worked in schools that had not conducted a self-evaluation (Table 5.1 in the main report).

*...and teachers' appraisal and feedback depends on a robust culture of school evaluation.*

In schools that are not evaluated, teachers are less likely to benefit from appraisal or feedback. In Korea, for example, a teacher in a school that has not been evaluated is more than twice as likely not to receive appraisal or feedback as one in a school that has been evaluated. This suggests that where school evaluation takes place, appraisal and feedback for individual teachers is encouraged.

### **How do education systems reward effective teaching?**

*Teachers do not receive recognition for effective teaching...*

As shown in Figure 5, on average across TALIS countries, three-quarters of teachers report that they would receive no recognition for increasing the quality of their work. A similar proportion report that they would receive no recognition for being more innovative in their teaching. In addition, only around one half of teachers across TALIS countries reported that their school principal used effective methods to determine teachers' performance (Table 5.9 in the main report). This says little for a number of countries' efforts to promote schools as centres of learning which foster continual improvement.

*...most teachers work in schools that do not reward effective teachers and do not dismiss poor performing teachers...*

Three-quarters of teachers reported that, in their school, the most effective teachers do not receive the most recognition and that their school principal does not take steps to alter the monetary rewards of a persistently underperforming teacher (Table 5.9 in the main report). A similar proportion reported that, in their school, teachers would not be dismissed because of sustained poor performance.

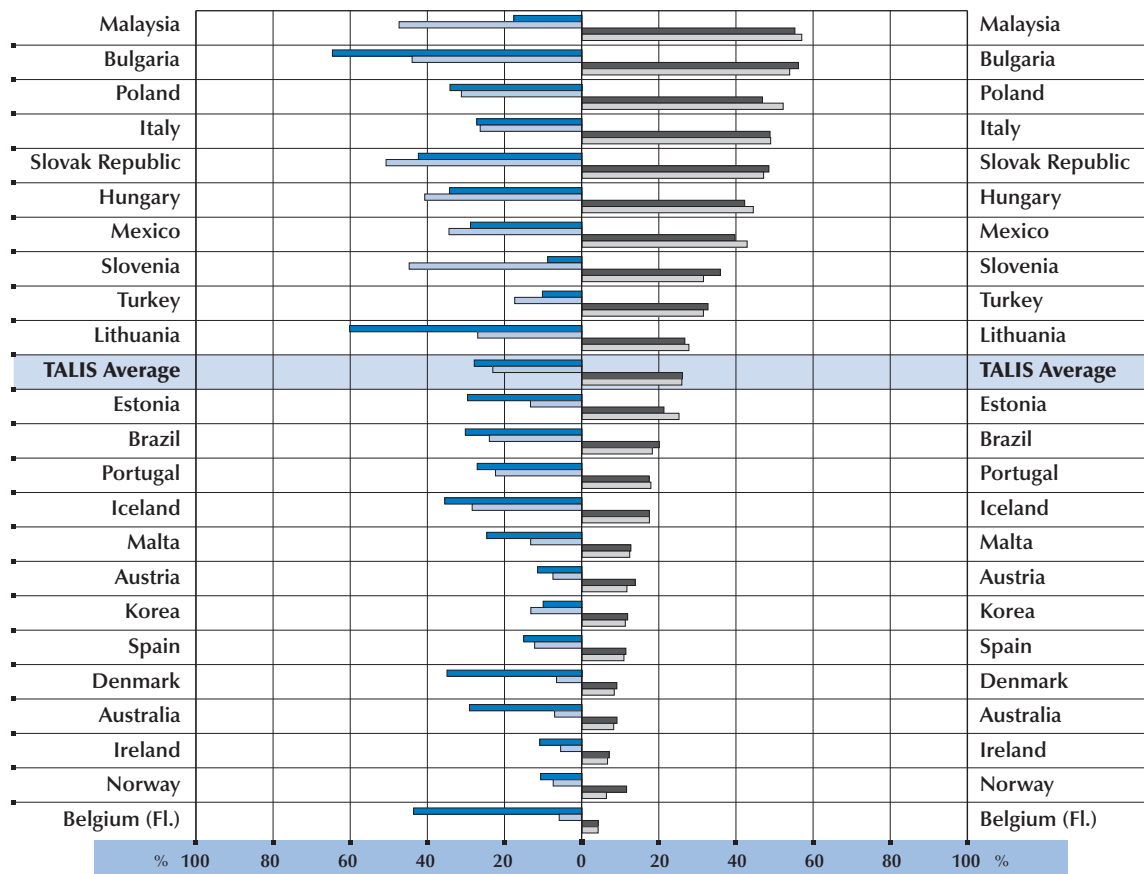
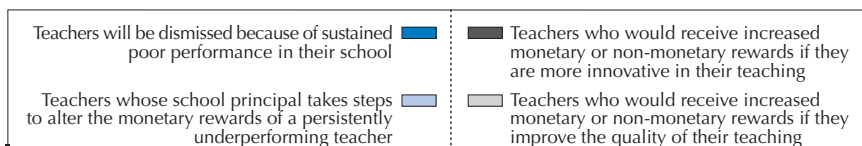
The findings suggest that there are substantial opportunities for strengthening – in most cases creating – links between teacher appraisal and feedback and the rewards and recognition teachers receive.

*...and feedback tends to have limited impact on material reward systems or career advancement...*

School evaluations and teacher appraisal and feedback have little financial impact. On average across TALIS countries, only around 10% of teachers' appraisal and feedback is linked to any kind of monetary reward and for only 16% is it linked to career advancement (Table 5.5 in the main report). In addition, school evaluations are linked to the remuneration of only one-quarter of teachers and less than four teachers in ten work in schools where school evaluations are linked to the school budget (Table 5.2 in the main report).

Figure 5

Perception of teachers of appraisal and feedback and its impact in their school (2007-08)



Countries are ranked in descending order of percentage of teachers reporting to receive increased monetary or non-monetary rewards for an improvement in the quality of their teaching.

Source: OECD, TALIS Database.

StatLink <http://dx.doi.org/10.1787/607856444110>



## SHAPING THE DEVELOPMENT OF TEACHERS THROUGH EFFECTIVE SCHOOL LEADERSHIP



School leadership plays a vital role in teachers' working lives and on their effectiveness. A revolution in the model of school leadership in recent years has seen a substantial shift from a largely bureaucratic administration to a paradigm of "leadership for learning" with the school principal as instructional leader. TALIS is the first international survey to address in detail the management behaviour and style of school principals in secondary schools and to look at the presence of new trends in school leadership and their impact on teachers.

*Instructional leadership often goes hand in hand with administrative leadership.*

### How do leadership styles vary?

TALIS looked at five aspects of management behaviour: management of school goals, actions to improve teachers' instruction, direct supervision of teachers, accountability to internal and external stakeholders, and management of rules and procedures. For each, the results show variation in practice across countries. The results are summarised by describing the two styles of leadership: instructional and administrative. Instructional leadership is characterised by actions to support or improve teachers' instruction and to set the school's goals and curriculum development. Administrative leadership is characterised by actions to manage the accountability to stakeholders and setting and managing administrative procedures. These are not mutually exclusive, and elements of both are needed for effective school leadership (Table 6.3 in the main report).

Instructional leadership is used to very different degrees in different countries. In a number of TALIS countries, it is present to a considerable degree (particularly in Brazil, Poland and Slovenia) although, in the same countries, administrative leadership is also visible. Countries where administrative leadership is particularly evident are Bulgaria and Malaysia, whereas the opposite is true most notably in Denmark. Overall, school principals who are strong instructional leaders are more likely to be strong administrative leaders as well. This contradicts the notion that these are alternative styles.

### How does school leadership relate to the development of teachers?

In around one-third of countries (Belgium (Fl.), Estonia, Hungary, Malaysia, Norway, Poland, Spain and Turkey), female school principals were more likely than their male counterparts to adopt a stronger instructional leadership style (Table 6.12 in the main report). In some, they are more likely to show administrative leadership when they hold "constructivist" beliefs about instruction. Otherwise, TALIS found no link between management styles and the professional or demographic characteristics of school principals.

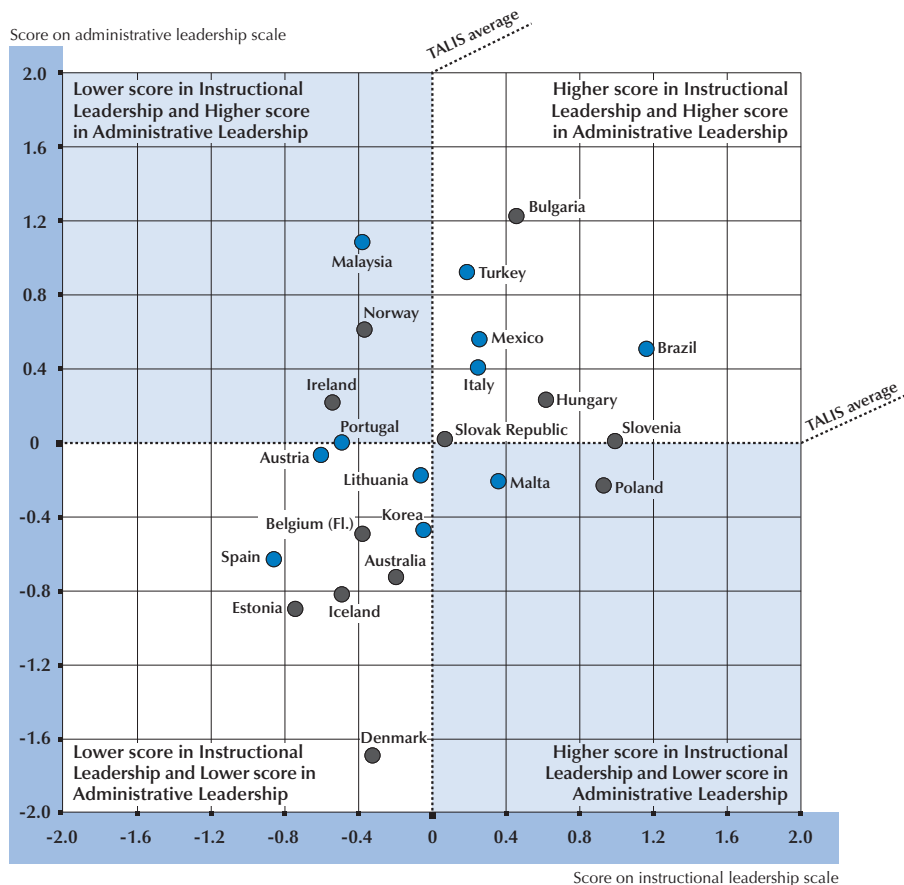
In several countries (Belgium (Fl.), Bulgaria, Estonia, Korea, Mexico, Norway, Portugal and Turkey), school principals tend to be stronger as instructional leaders where

*There are few consistent patterns between management styles and the professional and demographic characteristics of school principals.*




Figure 6

## School principals according to their management styles (2007-08)



Countries in gray have a higher than average principal involvement in decision making, while countries in blue have a lower than average involvement.

Source: OECD, TALIS Database.

StatLink  <http://dx.doi.org/10.1787/608025205225>

innovative teaching practices are considered important in school evaluations. But no general pattern associating characteristics of schools with leadership styles emerges.

A school's leadership style has no pronounced relation to teachers' beliefs about teaching, to their teaching practices or to classroom climate (Tables 6.4 and 6.5 in the main report). However, where positive associations are found they are more likely to be with the greater use of instructional leadership. For example, in Hungary, Iceland, Lithuania, Malaysia, Mexico, Norway and Poland instructional leadership is associated with greater teacher co-operation (Table 6.6 in the main report) and in Denmark, Hungary, Iceland, Malta, Mexico and Portugal with better teacher-student relations (Table 6.7 in the main report).

*Some countries show positive benefits of instructional leadership...*

...which often relates to the ways in which teachers are appraised, and the link between appraisal and professional development.

In more than half of the TALIS countries there is a greater chance of teacher appraisal recognising the participation in professional development by teachers in schools where strong instructional leadership is present (Table 6.9 in the main report). In most countries, school principals in such schools are also more likely to use further professional development to address teachers' weaknesses identified in appraisals. However, there is no discernible relation between leadership style and the overall amount of teachers' professional development, nor does it appear to influence whether teachers think that they have received an adequate amount of professional development.

### Illustrative TALIS question 3

15. Below you can find statements about your management of this school. Please indicate the frequency of these activities and behaviours in this school during the current school year.					
<i>Please mark one choice in each row.</i>					
		Never	Seldom	Quite often	Very often
a)	I make sure that the professional development activities of teachers are in accordance with the teaching goals of the school.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b)	I ensure that teachers work according to the school's educational goals.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c)	I observe instruction in classrooms.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d)	I use student performance results to develop the school's educational goals.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e)	I give teachers suggestions as to how they can improve their teaching.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f)	I monitor students' work.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
g)	When a teacher has problems in his/her classroom, I take the initiative to discuss matters.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
h)	I inform teachers about possibilities for updating their knowledge and skills.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
i)	I check to see whether classroom activities are in keeping with our educational goals.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
j)	I take exam results into account in decisions regarding curriculum development.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
k)	I ensure that there is clarity concerning the responsibility for coordinating the curriculum.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
l)	When a teacher brings up a classroom problem, we solve the problem together.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
m)	I pay attention to disruptive behaviour in classrooms.	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

## A PROFILE OF LOWER SECONDARY TEACHERS AND THEIR SCHOOLS

TALIS establishes a profile of lower secondary teachers and their schools in order to contextualise its findings.

In every TALIS country, most teachers are female: almost 70%, on average, rising to 80-85% in Bulgaria, Estonia, Lithuania, the Slovak Republic and Slovenia. Two concerns about this imbalance are the potential lack of role models for disengaged boys and a possible effect on teaching shortages if men do not consider teaching careers. Mexico, Spain and Turkey are more balanced, with over 40% of male teachers (Table 2.1 in the main report).

*Teachers in lower secondary schools are mostly female...*

On the other hand, only 45% of school principals across countries are female, suggesting a “glass ceiling” for promotion possibilities within schools (Table 2.1 in the main report).

The age profile of teachers varies considerably across countries but the workforce is ageing in many. In most cases, the majority of teachers are over 40. On average across TALIS countries, the percentage of teachers over 50 is nearly double the percentage of teachers under 30. On average, 27% are over 50 (and 40% or more in Austria and Norway and over 50% in Italy) and only 15% are under 30 (but 33% in Malta and 44% in Turkey) (Table 2.1 in the main report). Many countries will soon need to replace a large number of retiring teachers.

*...and the workforce is ageing.*

Teaching is a relatively stable profession with high job security. Across TALIS countries some 85% of teachers are on permanent contracts. Nearly two-thirds have taught for more than ten years, and in Austria and Italy the majority have over 20 years of service (Table 2.3 in the main report).

*Most teachers are long-serving and on permanent contracts.*

However, some teachers, particularly those first entering the profession, face the uncertainty and challenge of a fixed-term contract usually of a year or less. In Brazil, Iceland, Ireland and Portugal, at least one teacher in four is on a fixed-term contract (Table 2.3 in the main report). For many, these are requirements that must be successfully fulfilled before being granted a permanent contract. Policy makers need to balance the advantages of supporting an experienced, long-serving teaching force against the need for dynamism and “new blood”.

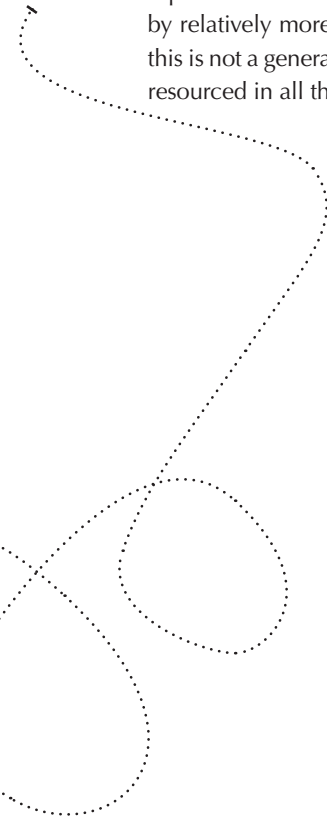
Three-quarters of teachers are in schools whose principals have little say over their pay. On the other hand, the great majority teach in schools with wide autonomy in other areas: around two-thirds teach in schools with considerable responsibility for hiring and firing, three-quarters in schools which formulate the school budget, and 95% in schools which establish their disciplinary procedures (Table 2.7 in the main report). School autonomy is an important factor in allowing school leaders to address the issues raised in this report, and devolution of responsibilities can make schools better placed to do so.

*Schools have autonomy over many things, but generally not teachers' pay.*

TALIS asked school principals about three aspects of teacher staffing levels: class sizes, the ratio of teachers to administrative/managerial staff, and the ratio of teachers to the number of pedagogical support personnel. The widest variation was in the last of these.

*Patterns of class size and support from other staff vary.*

At one end of the spectrum, Iceland has one pedagogical support staff for every six teachers, while Austria, Belgium (Fl.), Italy and Turkey have fewer than one for every 20 teachers. In certain countries there appears to be some trade-off between different aspects of resources. For example Mexico's high average class sizes are compensated by relatively more pedagogical support, while the reverse is true in Austria. However, this is not a general pattern: in a number of countries schools are relatively well or badly resourced in all these aspects (Table 2.4 in the main report).



# Conclusions

The first internationally comparative perspective on the conditions of teaching and learning that TALIS provides reveals major challenges for policy makers and for the teaching profession. More than one teacher in three works in a school whose principal thinks that the school suffers from a shortage of qualified teachers. The lack of adequate equipment and instructional support are other barriers hindering effective instruction. Added to this are, in some countries, negative aspects of teacher behaviour such as absenteeism or lack of pedagogical preparation. Teachers' reports of unmet demand for professional development, particularly in areas relating to catering for increasingly heterogeneous learning groups, the effective use of information and communication tools and student behaviour, signal that teachers themselves often do not feel sufficiently prepared to meet the challenges which they face. That is underscored by the fact that one in four teachers report losing at least 30% of learning time because of disruptive student behaviour or administrative tasks.

However, TALIS also provides many encouraging insights. Not only do the positive outcomes in some countries signal for others that the challenges can be successfully addressed, but there are patterns that suggest that teachers are embracing the challenges and actively seeking to advance their profession.

TALIS highlights better and more targeted professional development as one avenue towards improvement. It shows that teachers who participate in qualification courses commit considerable time and money to these courses, which they think are effective. At the same time, relatively few teachers participate in this type of activity and those who do often feel frustrated by the lack of sufficient time to devote to them. This suggests a need to review the amount of time and money made available to teachers for such courses. Another issue is the broader phenomenon of high unmet need, which 42% of teachers associate with a lack of suitable professional development on offer. This indicates that a sound assessment of provision and support against development needs should be a priority in many countries. The fact that a sizeable proportion of teachers are underwriting the full cost for their professional development is evidence that many teachers are willing to contribute their share to advancing their career and profession, though ability to pay needs also to be considered. TALIS also shows that there is generally much greater scope for teachers to learn from other teachers, with teachers reporting relatively infrequent collaboration of the teaching force within the school beyond a mere exchange of information. Improving this will require adequate instructional leadership as well as effective human resource development policies in schools.

The generally positive reception by teachers of the appraisal and feedback on their work provides another indication of the willingness of the profession to move forward. The fact that the more feedback teachers receive on their work, the more they trust in



their abilities to address teaching challenges suggests this to be another lever to raise learning outcomes. TALIS suggests that, in many countries, the onus is now on public policy to develop a more effective and supportive evaluation culture for schools and to ensure that the quality of the work of teachers is adequately recognised and rewarded.

The close associations between factors such as a positive school climate, teaching beliefs, co-operation between teachers, teacher job satisfaction, professional development, and the adoption of a range of teaching techniques are other indications that public policy can actively shape the conditions for effective learning. At the same time, the fact that much of the variation in these relationships lies in differences among individual teachers rather than among schools or countries underlines the need for individualised and targeted interventions for teachers rather than just whole-school or system-wide interventions that have traditionally dominated education policy.

The challenges for education systems are likely to intensify. Addressing them will require the creation of “knowledge-rich” evidence-based education systems, in which school leaders and teachers act as a professional community and have the authority to act, the necessary information to do so wisely, and access to effective support systems to assist them in implementing change. However, the results from TALIS suggest that, in many countries, education is still far from becoming a knowledge industry in the sense that *its own practices* are being transformed by knowledge about the efficacy of *its own practices*. In many other fields, people enter their professional lives expecting their practice to be transformed by research, but the patterns of participation in professional development and in the evaluation of teachers and their practices hint that this is not yet the case in education. However, the generally positive perceptions that teachers report about the appraisal and feedback they receive and the evidence of professional engagement to seek improvement that can be found in TALIS, are encouraging signs that education can become such a knowledge-rich profession.

The OECD will continue to develop instruments like TALIS to monitor how effectively countries rise to the challenges.



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# Creating Effective Teaching and Learning Environments: First Results from TALIS

## EXECUTIVE SUMMARY

This publication is the first report from the OECD's Teaching and Learning International Survey (TALIS). It provides quantitative, policy-relevant information on the teaching and learning environment in schools in 23 countries and has a focus on lower secondary education.

School effectiveness research consistently shows that the quality of the learning environment is the most important policy-malleable factor for positive student learning and student outcomes. In recognition of this, TALIS explores key policies and practices that shape the learning environment.

The important role that school leadership can play in creating effective schools is well documented. TALIS illustrates the roles and functions that school leaders adopt within schools – often facing quite different circumstances – and examines how these roles support teachers in their work. Retaining and developing effective teachers is a priority in all school systems and TALIS examines how teachers' work is recognised, appraised and rewarded and how well the professional development needs of teachers are being addressed.

Perhaps the most innovative aspect of TALIS is the insights it provides on the teaching beliefs that teachers bring to the classroom and the pedagogical practices that they adopt. TALIS cannot measure which practices or beliefs are most effective but it does show how these associate with some of the conditions that are pre-requisites for effective schooling.