

CHAPTER 3

The Professional Development of Teachers

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Highlights

- In the participating countries, an average of 89% of teachers in lower secondary education engaged in professional development. The 11% who did not are a source of concern. Around one in four teachers did not participate in professional development in Denmark, the Slovak Republic and Turkey.
- On average in TALIS countries, teachers participated in professional development for just under one day per month.
- A significant proportion of teachers think that professional development does not meet their needs: over half reported wanting more than they received during the previous 18 months.
- The aspect of their work for which teachers most frequently say they require professional development is “Teaching special learning needs students”, followed by “ICT teaching skills” and “Student discipline and behaviour”.
- Teachers who paid the full cost of professional development took part in more than those who received it free or at partial cost. This is partly because the more time-intensive development activities were more likely to be paid for by teachers themselves.
- Even when development is paid for by teachers, their demand is not satisfied: those who paid towards the cost were more likely to say they wanted more.
- The main reason for unfulfilled demand (according to teachers) is the conflict with their work schedule, but lack of suitable development opportunities is also a significant factor.
- The types of development that teachers regard as the most effective have, on average, lower rates of participation. However, those who do participate in these activities also devote more time to them than those participating in other activities, even though they are more likely to have to pay for them.
- This suggests a need not just for better support for teachers to participate in professional development, but for policy makers and school leaders to ensure that the development opportunities available are effective and meet teachers’ needs.

INTRODUCTION

In many countries, the role and functioning of schools are changing and so is what is expected of teachers. Teachers are asked to teach in increasingly multicultural classrooms; to place greater emphasis on integrating students with special learning needs in their classrooms; to make more effective use of information and communication technologies for teaching; to engage more in planning within evaluative and accountability frameworks; and to do more to involve parents in schools.

No matter how good pre-service training for teachers is, it cannot be expected to prepare teachers for all the challenges they will face throughout their careers. Education systems therefore seek to provide teachers with opportunities for in-service professional development in order to maintain a high standard of teaching and to retain a high-quality teacher workforce. As OECD's comparative review on teachers noted (OECD, 2005):

Effective professional development is on-going, includes training, practice and feedback, and provides adequate time and follow-up support. Successful programmes involve teachers in learning activities that are similar to ones they will use with their students, and encourage the development of teachers' learning communities. There is growing interest in developing schools as learning organisations, and in ways for teachers to share their expertise and experience more systematically.

The development of teachers beyond their initial training can serve a number of objectives (OECD, 1998), including:

- to update individuals' knowledge of a subject in light of recent advances in the area;
- to update individuals' skills, attitudes and approaches in light of the development of new teaching techniques and objectives, new circumstances and new educational research;
- to enable individuals to apply changes made to curricula or other aspects of teaching practice;
- to enable schools to develop and apply new strategies concerning the curriculum and other aspects of teaching practice;
- to exchange information and expertise among teachers and others, e.g. academics, industrialists; and
- to help weaker teachers become more effective.

To examine these issues, TALIS adopts a broad definition of professional development among teachers:

"Professional development is defined as activities that develop an individual's skills, knowledge, expertise and other characteristics as a teacher."

The definition recognises that development can be provided in many ways, ranging from the formal to the informal. It can be made available through external expertise in the form of courses, workshops or formal qualification programmes, through collaboration between schools or teachers across schools (e.g. observational visits to other schools or teacher networks) or within the schools in which teachers work. In this last case, development can be provided through coaching/mentoring, collaborative planning and teaching, and the sharing of good practices.

TALIS asked teachers about their professional development activities during the 18 months prior to the survey (Box 3.1). This period of time was chosen in order to cover activities over almost two school years in order to give a more representative picture and lessen possible distortions due to unusually busy or lean periods of development and to ensure a manageable period for teachers' recall.

Box 3.1 Types of professional development

TALIS asked lower secondary teachers about the professional development they had participated in during the 18 months prior to the survey. Teachers were first asked to indicate whether or not they had participated in each of the following activities:

- **courses/workshops** (e.g. on subject matter or methods and/or other education-related topics);
- **education conferences or seminars** (at which teachers and/or researchers present their research results and discuss education problems);
- **qualification programme** (e.g. a degree programme);
- **observation visits to other schools;**
- **participation in a network of teachers** formed specifically for the professional development of teachers;
- **individual or collaborative research** on a topic of professional interest; and
- **mentoring and/or peer observation and coaching**, as part of a formal school arrangement.

Teachers were able to indicate participation in multiple activities.

TALIS then asked teachers how many days of professional development they had attended in the 18 months prior to the survey and how many of these days were compulsory. Table 3.1 gives this information.

As TALIS was interested in professional development activities beyond the more structured types listed above, teachers were also asked whether or not they had participated in the following less formal professional development activities:

- **reading professional literature** (e.g. journals, evidence-based papers, thesis papers); and
- **engaging in informal dialogue with peers** on how to improve teaching.

Analysis of participation in these activities and their impact is included in Tables 3.2 and 3.8.

TALIS asked teachers about their professional development activities, their impact, the support they received for undertaking them, the extent to which they wanted more than they had engaged in and the barriers they felt had prevented them from doing so, and the areas of their work they found most in need of further development. Therefore, almost all of the results in this chapter are based on teachers' reports. The exception is the discussion of induction and mentoring policies in schools, which reports school principals' responses regarding the existence of such policies in their schools.

In interpreting the results, it is important to bear in mind the self-reporting nature of the survey responses. For example, teachers' reports about the impact of their development activities represent their perceptions; they are not part of an independent evaluation of the effectiveness of these activities. Nevertheless, teachers' perceptions are important and can be expected to influence their behaviour. Also teachers' views about their development needs are to be distinguished from an external assessment of these needs. Chapter 5 will examine the relation between teachers' reports of their development needs and the policies and practices that are in place to assess and appraise teachers' work.

Chapter outline

This chapter seeks to answer the following three questions:

- How much does the amount and profile of teachers' professional development vary within and among countries?
- How well are teachers' professional development needs being met?
- How can unsatisfied demand for professional development be best addressed?

The chapter first examines teachers' participation in professional development and compares the intensity of that participation in terms of number of days. The focus in this section is on more structured activities, such as attendance at courses and workshops, conferences and seminars, etc. More informal activities, such as engagement in informal discussions to improve teaching and reading professional literature, which are not readily measurable in terms of numbers of days, are excluded from these measures (See Box 3.1). The section then looks at the extent to which intensity of participation in professional development differs with the characteristics of the teacher or the schools in which they work and so provides some insight into the distribution of development opportunities. It does not seek to be exhaustive; it focuses on the characteristics that are most often of interest to policy makers. This section thus sheds light on how the policy choices countries make in terms of providing professional development opportunities are reflected in a comparison of participation rates and intensity rates.

The volume (or intensity) of professional development can be influenced by the types of development activities that teachers engage in. The chapter therefore goes on to profile all types of activities listed in Box 3.1, contrasting formal and less formal development activities, and shows how teachers combine different forms of professional development.

In the light of these participation patterns, the chapter then investigates how well teachers' professional development needs are being met. It compares the extent of unsatisfied demand within and between countries and identifies the areas of teachers' work which teachers regard as those in which they have the greatest development need. It concludes by considering how levels of unsatisfied demand relate to the professional development which teachers have received.

Teachers' views of what has helped or hindered their participation in professional development is then examined, in the light of their reports of unsatisfied demand and areas of greatest need. It reveals cross-country variations in the level and types of support received by teachers to participate in professional development and examines the relation between the support received and the level of participation reported in the survey. School-level policies and practices for induction and mentoring of new teachers are revealing of the extent to which they differ among countries; this section looks at how these practices co-exist with other professional development activities in schools.

Finally the chapter considers how unsatisfied demand and development needs might best be addressed. This first involves an analysis of teachers' reports of the factors that prevented them from engaging in more professional development than they did and then proceeds to examine the types of professional development teachers find most effective in meeting their needs. The final section discusses the policy implications arising from the analyses.

Note that further analysis of the professional development data from TALIS is the subject of a separate thematic report being published jointly with the European Commission.

LEVEL AND INTENSITY OF PARTICIPATION IN PROFESSIONAL DEVELOPMENT

This section analyses the level and intensity of participation in professional development across the lower secondary teacher population. Overall levels of participation are measured in terms of teacher participation rates and intensity of participation in terms of the average number of teachers' days of development during the 18-month period prior to the survey.

As noted above, levels of participation and intensity of participation reported in this section do not include the less structured development activities (informal dialogue to improve teaching and reading professional literature), as these are not readily measurable in terms of number of days of activity.

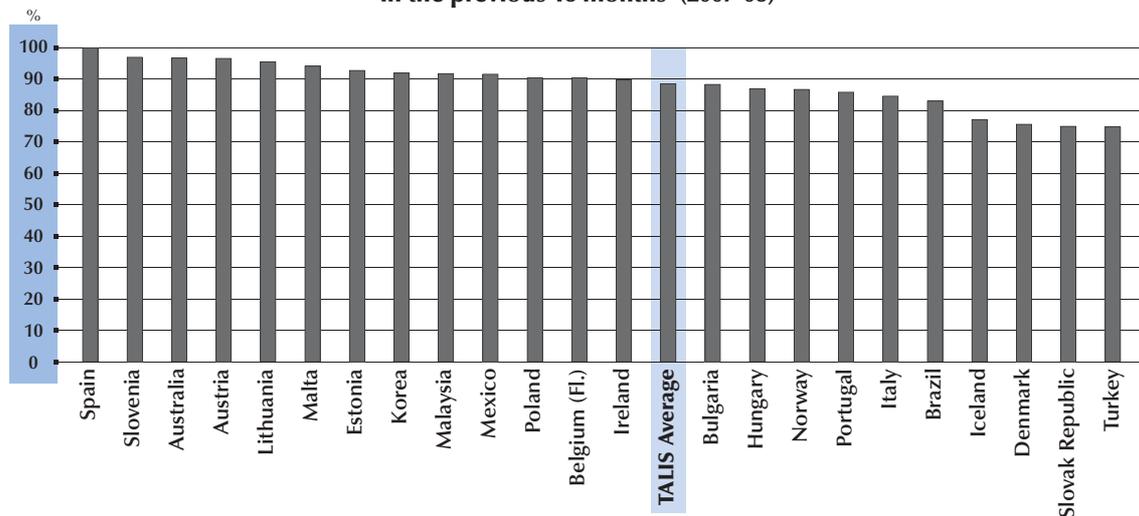
Participation rates

The first column of Table 3.1 shows country-level participation rates in professional development. On average across the 23 participating countries, almost 89% of teachers reported engaging in some professional development (defined as having taken part in at least one day of development in the previous 18 months) over the survey period. This suggests that engagement in professional development is a feature of the lives of the vast majority of teachers in the participating countries. Nevertheless, it is not trivial that some 11% of lower secondary teachers did not take part in any structured development activities.

When participation rates are compared across countries, there are some notable differences. In Australia, Austria, Lithuania and Slovenia, participation is virtually universal, with less than 5% of lower secondary teachers having participated in no development activities. In Spain all teachers reported some participation. This contrasts with the situation in Denmark, Iceland, the Slovak Republic and Turkey, where around one-quarter reported no participation during the period. For these four countries, such relatively high rates of non-participation must be a source of concern (Figure 3.1).

Figure 3.1

Percentage of teachers who undertook some professional development in the previous 18 months (2007-08)



Countries are ranked in descending order of percentage of teachers having had some professional development in the 18 months prior to the survey.

Source: OECD, Table 3.1.

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Intensity of participation

While participation rates are generally high, intensity of participation may differ among teachers and across countries. TALIS measures the intensity of participation in terms of the number of days of professional development teachers reported having taken during the survey period.

On average among all lower secondary teachers in the participating countries, teachers had 15.3 days of professional development in the 18 months prior to the survey – in other words, an average of just less than one day per month. But countries differ significantly. The highest average numbers were reported by Mexico (34.0 days), followed by Korea (30.0) and Bulgaria (27.2), and the lowest by Ireland (5.6 days), the Slovak Republic (7.2), Malta (7.3), Belgium (Fl.) (8.0) and Slovenia (8.3). Internationally, therefore, there is a six-fold difference between the highest and lowest intensity of participation (Table 3.1).

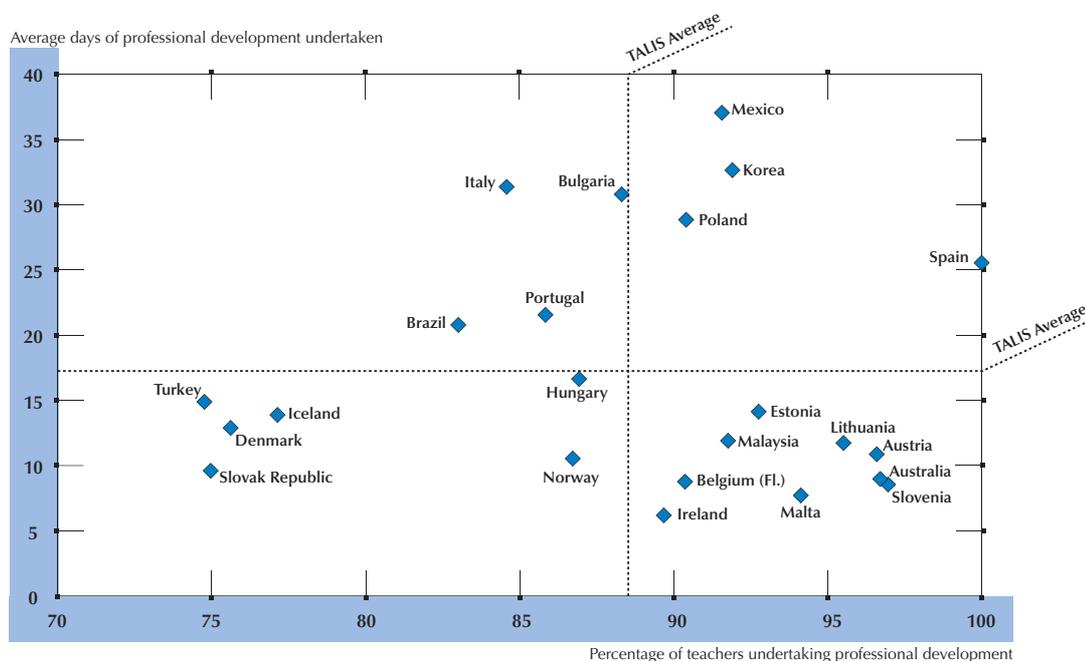
Are there trade-offs between participation and intensity?

A comparison of the level and intensity of participation can serve to indicate different policy choices that school systems may make, e.g. to spread opportunities across all teachers or to concentrate them on a smaller proportion of the teacher population.

As well as showing the average number of days of professional development for all lower secondary teachers, Table 3.1 (third set of columns) shows the average number of days for teachers who had some professional development during the survey period. Figure 3.2 compares the second measure with the proportion of teachers who received some professional development in the previous 18 months, thus providing a contrast between the level and the intensity of participation. From this, some interesting contrasts become apparent.

Figure 3.2

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



Source: OECD, Table 3.1.

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Nine out of 23 countries are in the lower right-hand quadrant, which represents a combination of high levels of participation and low intensity (*i.e.* above average participation and below average number of days of professional development). This may indicate a choice to spread development opportunities across a very large proportion of teachers. The clearest examples are Australia, Austria and Slovenia, where virtually all lower secondary teachers received some professional development but an average of only around 10 days.

In contrast, teachers in Italy reported participation rates somewhat below average at 85%, yet among those who participated, the number of days was a relatively high average of 31. This may indicate a situation in which universal participation is forgone in favour of generous provision for those who have the opportunity to participate.

There are exceptions, however. The four countries with the highest percentages of teachers who received no professional development – Denmark, Iceland, the Slovak Republic and Turkey – are also those with below average number of days of professional development. In these countries participation in professional development is far from universal but also is of low intensity for those who participate.

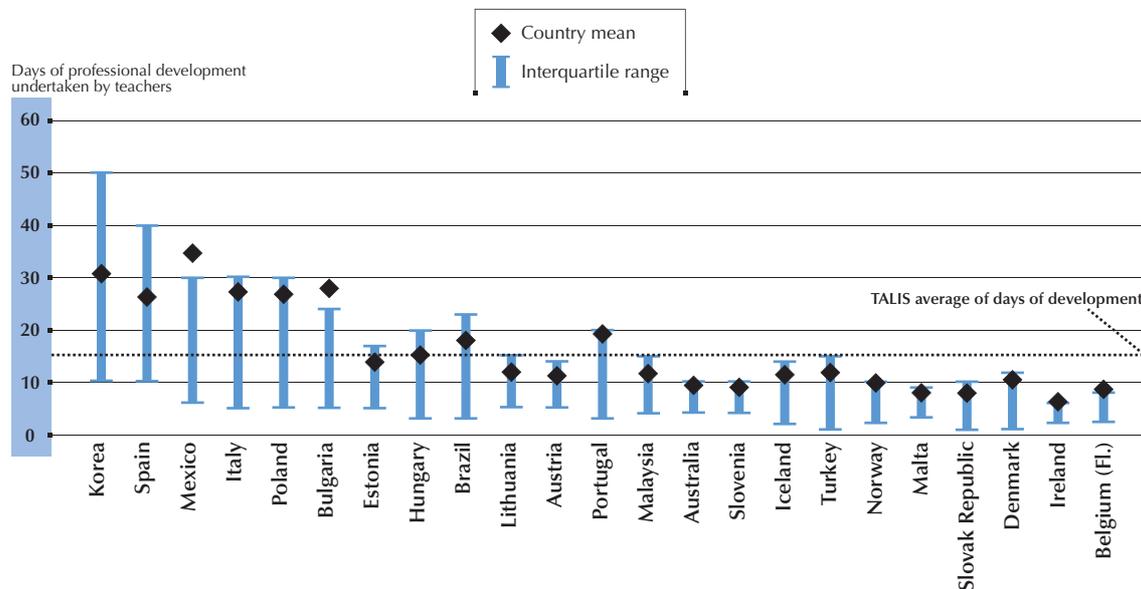
At the opposite end of the spectrum, Mexico, Korea, Poland and Spain not only have high participation but also high intensity of participation in professional development.

How much variation is there in the intensity of participation?

Examining the variation in the number of days of teachers' professional development can provide an indication of how professional development is distributed across teachers in each country.

Figure 3.3

Days of professional development taken – Interquartile range (2007-08)



Countries are ranked in descending order of the median number of days of professional development taken. The interquartile range is the range of days within which the middle 50% of teachers fall.

Source: OECD, Table 3.1d.

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To assess the overall degree of variation within a country, the percentile distribution of the number of days of teachers' development is analysed. Figure 3.3 illustrates the interquartile range – the range within which the middle 50% of professional development days taken by teachers lies, again measured across all teachers (including those who did not take professional development in the previous 18 months). The longer the bar for a country in Figure 3.3, the more variation there is in the number of days of development taken by teachers, around the mid-point of the distribution. A shorter bar indicates the opposite. The chart ranks countries in descending order of the median value for the number of days of professional development followed; the country mean is included for comparison.

Korea is the country with by far the widest range, followed by Spain, and then Italy, Mexico and Poland. In contrast, the range is much narrower (six days or less) in Australia, Belgium (Fl.), Ireland, Malta and Slovenia. The extent of variation measured in this way is associated with the average number of days of development taken by teachers in each country. Nevertheless, it is evident that, particularly in countries where teachers reported relatively large amounts of professional development on average, participation among teachers is very unequal.

How does participation vary by teacher and school characteristics?

The analysis of the disparity in the take-up of professional development within countries can be more closely focused by examining participation with respect to the characteristics of teachers and the schools in which they work. The comparisons shown in Table 3.1a and 3.1b and discussed here are based on the average days of professional development among teachers with some professional development in the survey period and so are net of teachers who had no professional development during this period.

The teacher and school characteristics chosen for the comparisons are those which are generally of the most policy interest to participating countries.

Gender differences

On average across participating countries, there is no statistically significant difference between male and female teachers – 17.5 days of professional development on average for female teachers compared with 16.9 days for male teachers. The largest differences in favour of female teachers were in Mexico (around six days more on average), followed by Poland and Korea (around four days more), though none of these differences is statistically significant. However, male teachers led in a number of countries, the largest differences being reported in Portugal and Italy (more than four days) and Turkey (less than three days). Again these differences are not statistically significant (Table 3.1a).

Age differences

On average, the amount of professional development that teachers received decreased with the age of the teacher. Averaged across all countries, teachers under 30 years of age received around 21 days of professional development; the number declined steadily to an average of around 14 days for teachers aged 50 years or more; these differences between age groups are all statistically significant. This indicates that on average less experienced teachers receive more days of professional development than more experienced teachers (Table 3.1a).

At the country level such significant differences are most pronounced in Italy, Poland and Portugal, where teachers less than 30 years of age participated in twice as many days of development as teachers aged 50 years and over. Again, country patterns vary. In some countries, lower secondary teachers remain active in professional development throughout their career. In Bulgaria, for example, teachers in each age group took part in well over 20 days of professional development during the previous 18 months. In fact, among those aged 50 years and over, the number was 27 days, the same number as for the youngest age group.

Qualification level differences

On average across participating countries, teachers with a Master's degree or higher qualification received more days of professional development (some 20 days) than those with a Bachelor's degree or less (17-18 days). This pattern is apparent in almost all participating countries, the exceptions being Austria, Belgium (Fl.), Hungary and the Slovak Republic, where teachers with a Master's degree or higher received on average the least number of days (though in the Slovak Republic virtually all teachers are qualified to Master's degree level) (Table 3.1a).

In a number of countries, the least qualified (*i.e.* those with qualifications below the level of a Bachelor's degree) received the least professional development. This would appear to be a worrying finding, as those who arguably might benefit most from further professional development are getting the least. This may raise questions of equity, particularly if such teachers are disproportionately employed in more challenging schools, as previous research has shown (OECD, 2005).

This pattern is most pronounced in Mexico, where those with at least a Master's degree received almost twice the number of days of development as those with less than a Bachelor's degree. Even so, the amount of professional development received by the latter group, at 27 days, is still higher than the amount teachers received on average in most other countries surveyed.

These findings present a notable parallel to results concerning the participation of adults in non-formal, continuing education and training, which indicate that more highly educated adults in the general population are more likely to participate in such training (OECD, 2005). This can be a consequence of issues concerning demand for training as well as its supply on an equitable basis.

Differences between public and private schools

As defined here, private schools comprise both independent private and government-dependent private schools, the latter being privately run but receiving most of their funding from public sources. On average in participating countries, teachers in public schools had one day more professional development than their private school counterparts, a difference that is not statistically significant. Except in Bulgaria, where the proportion of teachers in the private sector is very small (Table 2.4), the largest difference in favour of public school teachers was in Korea (nine days more). Though there were also sizeable differences in favour of private school teachers, none of these is statistically significant (Table 3.1b).

Interestingly, in Italy, this pattern is affected by the fact that teachers in private schools may undertake professional development in order to increase the possibility of obtaining a permanent position in public schools. This is because such activities improve the score and ranking of teachers in the list of qualified staff on which the appointment to public schools is based.

School location differences

On average, the amount of lower secondary teachers' professional development is much the same, regardless of whether the schools in which they teach are located in a village, town or city. Although countries vary in this respect, there is no prevailing trend, and differences are generally not statistically significant. In no country, for instance, does the amount of professional development consistently increase or decrease with the size of the population in the school's locality (Table 3.1b).

For example, in Brazil, teachers in village schools (fewer than 3 000 population) took part in slightly more professional development activities than their counterparts in other types of communities (23 days compared with 21 for all teachers who took professional development in Brazil), while the reverse was true in Bulgaria,

Mexico and Poland. On the basis of this mixed evidence, the geographic locality of the school does not appear to affect participation in professional development.

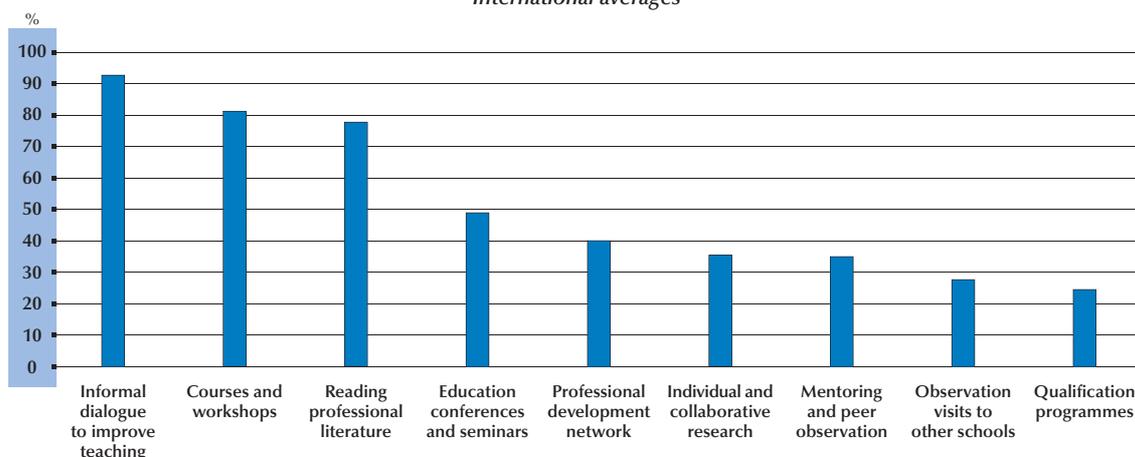
TYPES OF PROFESSIONAL DEVELOPMENT

Analysis of the types of development activities engaged in can be informative and may go some way towards explaining differences in teachers' average numbers of days of professional development participation. TALIS asked teachers about various activities ranging from more organised and structured to more informal and self-directed learning, all of which are listed in Table 3.2. Therefore, informal dialogue to improve teaching and reading professional literature, which were excluded from the analysis in the previous section are included here.

The type of professional development most often mentioned was "Informal dialogue to improve teaching", with 93% of teachers on average reporting this activity during the survey period. Indeed, in all countries but Hungary and Mexico, it was the development activity most frequently reported, with a participation rate of more than 90% in most countries. For Hungary, "Reading professional literature" (88%) came first, and for Mexico, attendance at "Courses and workshops" (94%) (Table 3.2 and Figure 3.4).

Figure 3.4

Participation rates by type of professional development activity (2007-08)
International averages



Activities are ranked in descending order of participation rates.

Source: OECD, Table 3.2.

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After "Informal dialogue to improve teaching", the most frequently reported activities were attending "Courses and workshops" (81%) and "Reading professional literature" (78%). The least common types of professional development were "Qualification programmes" (25%) and "Observation visits to other schools" (28%) (Table 3.2). However, patterns vary widely, particularly for the more structured types of activities. For instance:

- **Courses and workshops:** Participation among teachers was most common in Austria (92%), Estonia (93%), Lithuania (96%) and Mexico (94%) and much less common in Italy (66%), Turkey (62%) and particularly the Slovak Republic (50%).

- **Education conferences and seminars:** Over two-thirds of teachers participated in this activity in Lithuania (68%), Slovenia (75%) and Turkey (68%), but participation was less than half these rates in Belgium (Fl.) (33%), Malaysia (32%) and Mexico (33%).
- **Qualification programmes:** Participation in these programmes was most common in Brazil (41%), Bulgaria (50%) and Lithuania (44%) and least common in Australia (12%), Ireland (11%), Italy (11%) and Slovenia (10%).
- **Observation visits to other schools:** Around two-thirds of teachers in Estonia (63%), Iceland (60%) and Korea (67%) took part in such visits, whereas very few did so in Austria (10%), Denmark (10%), Ireland (8%) and Slovenia (8%).
- **Professional development network:** Participation in development networks was most common in Australia (60%) and Poland (61%) and particularly in Iceland (83%) and Slovenia (72%). In contrast, this was much less a feature of teachers' professional development in Bulgaria (20%), Italy (20%) and especially Portugal (15%).
- **Individual and collaborative research:** While more than half of teachers engaged in this activity in Brazil (55%), Denmark (52%), Italy (57%) and Mexico (63%), it was much less common in Norway (12%) and the Slovak Republic (12%).
- **Mentoring and peer observation:** Around two-thirds of teachers took part in such activities in Korea (69%), Poland (67%) and the Slovak Republic (65%), but it was much less common in Austria (18%), Denmark (18%), Ireland (18%), Malta (17%) and Portugal (15%).

In terms of the overall levels of participation in these activities, it is evident that in some countries participation rates are consistently fairly high across most types of activities. For instance, in Lithuania and Poland participation rates are higher than average for eight out of the nine development activities. These high rates result partly from the fact that individual teachers in these countries took part in a broader combination of development activities than in other countries; analysis of the database shows that in both countries, teachers undertook on average between five and six different types of activities, more than in any other countries. This relatively high level of participation across a broad range of activities may be the sign of a well-developed and active professional development culture. The fact that the percentage of teachers wanting more development than they received is below average in both of these countries (see next section) lends some support to this hypothesis.

On the other hand, participation was below average in Norway on eight out of the nine types of activities, the exception being participation in "Informal dialogue to improve teaching", for which the rate was above the TALIS average. Again, this was partly influenced by the number of types of development activities typically followed by Norwegian teachers. On average, teachers in Norway had only three or four different types of activities during the survey period, the lowest number among countries in the survey, followed by Italy and Ireland.

Clearly the range and type of teachers' professional development activities will influence the number of days reported. Analysis of the TALIS database indicates that enrolment in "Qualification programmes" is likely to be the most time-intensive activity, though "Individual and collaborative research" is also likely to require more time than other activities. It is no surprise therefore that Bulgaria, the country with the highest proportion of teachers engaged in qualification programmes (50%), is also one of the countries with the highest average number of days of professional development reported (31 days). Conversely, in Australia, despite above-average participation in most types of activities, the low rate of participation in qualification programmes is likely to be part of the explanation for the low average number of days reported.

Mexico offers a clear illustration of the association between the types of development activities undertaken by teachers and the resulting number of days of development. It has the highest average number of days of professional development reported by teachers (37 days), and above-average participation in qualification

programmes (34%) is combined with the highest participation of all countries in “Individual and collaborative research” (63%). Both are relatively time-intensive activities.

In Italy, high levels and intensity of participation in “Individual and collaborative research” appear to drive the high average number of days of development reported by teachers.

In other countries the picture is less clear. In Lithuania, for example, teachers report a below-average number of days of professional development overall and yet, as noted above, they also reported not only higher than average participation in almost all types of activities, but they also more frequently combined a larger number of activities. In this case, a high percentage of teachers engage in a wide range of activities, but the intensity of participation is not high.

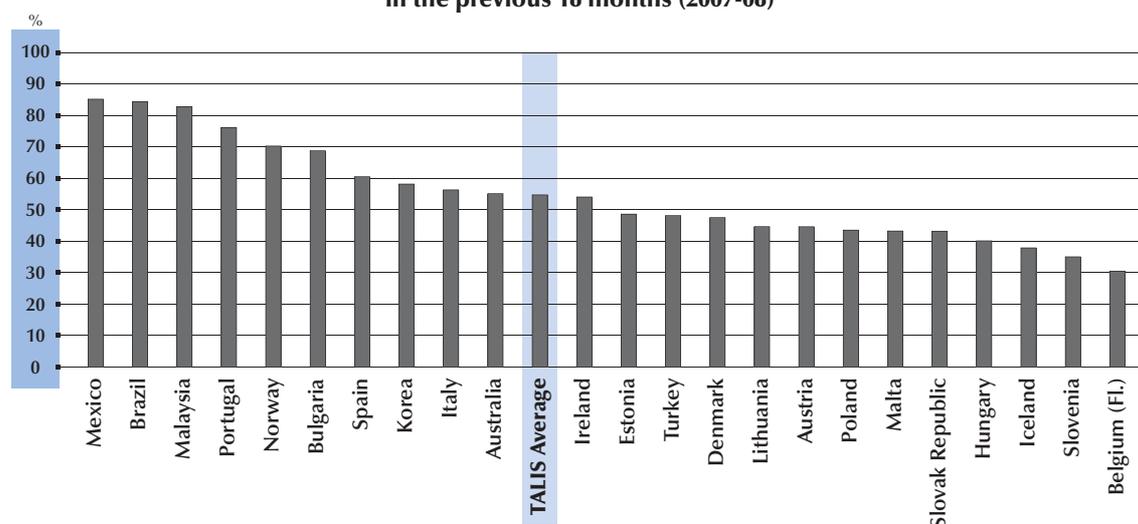
UNSATISFIED DEMAND AND DEVELOPMENT NEEDS

The question of how well teachers’ development needs are being met is considered by means of two indicators: the percentage of all teachers who reported that they wanted more professional development than they had received during the survey period and the extent to which they reported development needs in specified areas of their work.

Teachers were asked whether, during the survey period, they had wanted to participate in more professional development than they did. Table 3.3 summarises responses to this question. On average across countries, more than half of the teachers surveyed reported having wanted more professional development than they had received. The extent of unsatisfied demand is sizeable in every country, ranging from 31% in Belgium (Fl.) to over 80% in Brazil, Malaysia and Mexico (Figure 3.5).

Figure 3.5

Percentage of teachers who wanted more development than they received in the previous 18 months (2007-08)



Countries are ranked in descending order of percentage of teachers wanting more development than they received.

Source: OECD, Table 3.3.

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Table 3.3 also shows the extent of unsatisfied demand according to a range of teacher and school characteristics. In almost all countries female teachers were more likely than male teachers to report wanting more development than they received, though in most cases the differences are not large. There is a similarly consistent pattern for teachers less than 40 years of age; in most countries they were more likely than older teachers to report a desire for more participation.

There is no consistent cross-country pattern in terms of teachers' qualifications. Although in several countries (and particularly in Australia, Austria, Denmark, Malaysia, Spain and Turkey, where significant differences are evident), more highly qualified teachers are more likely to have reported unsatisfied demand, most countries show no definite pattern.

Similarly, a comparison of teachers in public and private schools does not reveal a consistent pattern. Considering significant differences only, teachers in public schools in Korea, Lithuania and Portugal and Turkey are more likely than their counterparts in private schools to report unsatisfied demand, whereas the reverse is true in Austria and Malta.

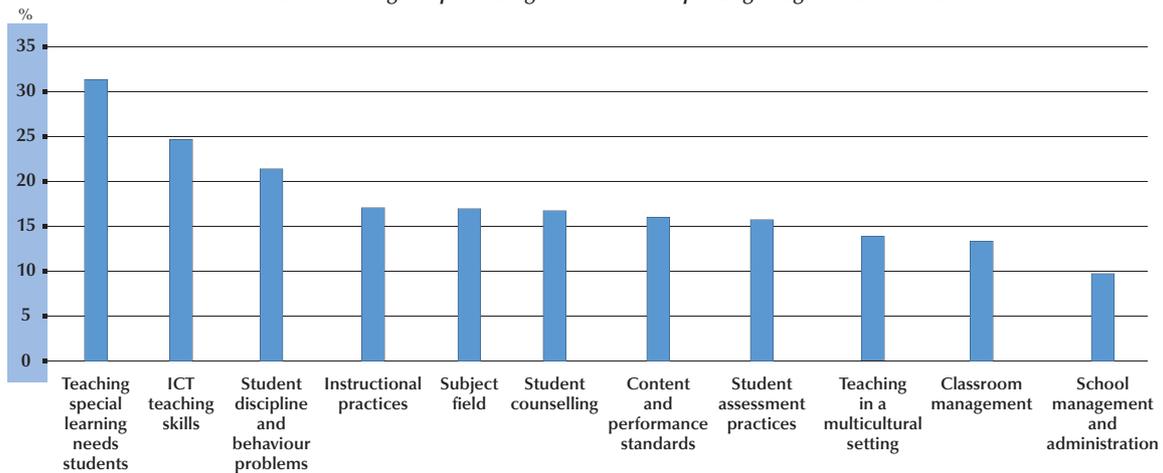
What are the areas of greatest development need?

Teachers were asked to rate on a four-point scale, ranging from "Low level of need" to "High level of need", their development needs for various aspects of their work. Table 3.4 presents the percentage of teachers reporting a high level of need in various aspects of their work.

Across the 23 participating countries, the aspect of teachers' work most frequently rated by teachers as an area of high development need was "Teaching special learning needs students". Almost one-third of teachers rated their development need in this area as high (Figure 3.6).

Figure 3.6

Areas of greatest development need (2007-08)
International average of percentage of teachers reporting a high level of need



Areas are ranked in descending order of the international average where teachers report a high level of need for development.

Source: OECD, Table 3.4.

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Given that the TALIS target population *excludes* teachers who only teach special learning needs students, this is a noteworthy result. It indicates that classroom teachers in general recognise the importance of developing their competence in this area, and this may be a reflection of two trends: first, the growing calls in some school systems for greater integration of special learning needs students in mainstream schools and classrooms (OECD, 2008) and second, the growing emphasis in education policy on equity as well as quality to ensure that the learning needs of all students are provided for equally. An important message from the TALIS data is that teachers do not feel fully prepared to cope with these challenges.

Sizeable proportions of teachers also reported having a high level of need for “Information and communication technology (ICT) teaching skills” (25%) and “Student discipline and behaviour” (21%). The 2001 OECD survey of upper secondary schools (rather than the lower secondary focus of TALIS) highlighted the lack of use of ICT in classroom instruction but noted the substantial amount of professional development that had taken place in this area (OECD, 2004). That school teachers identify such a high level of need in the use of ICT for instruction almost 10 years later may be a reflection of the speed of technological change which teachers must keep pace with. This may signal a continuing challenge for schools and teachers to keep up to speed in a fast-moving area and to fully exploit technology for the benefit of teaching and learning. But it may also confirm studies which indicate a lack of capacity building in terms of how best to use ICT in the classroom. The IEA SITES study (IEA, 2008), for instance, showed that attendance at ICT-related professional development was significantly and positively correlated with the use of ICT.

In contrast, the aspect of teachers’ work which was, on average, the least frequently reported as a high development need was “School management and administration” (10% of teachers) (Table 3.4). The interpretation of this finding is not straightforward. It may indicate that teachers are already well prepared for their role in school management and administration, or it may indicate the relatively low importance of this area for teachers’ work.

However, patterns differ sharply across countries. It is striking, for instance, that in Malaysia the extent to which teachers report high levels of development needs (Table 3.4) is, in a number of areas, much higher than the average across countries. This is most evident in the case of “Content and performance standards” (34 percentage points higher than the international average), “Subject field” (40 percentage points higher) and “Instructional practices” (38 percentage points higher).

In Malaysia, not only did the vast majority of teachers want more professional development than they received (83%, much higher than almost all other countries; see Table 3.3), but the strength of that need across almost all areas of their work is much greater than in the other countries surveyed. Interestingly, the only area for which teachers in Malaysia report a high level of need that is lower than the international average is “Teaching special learning needs students”, the area which is rated most frequently by teachers overall as a high level need across countries.

A similar though much less marked finding is evident for Lithuania and Italy. In Lithuania a higher than average level of high need is reported by teachers for most aspects of their work, the exceptions being “Teaching special learning needs students” and “Teaching in a multicultural setting”. However, the percentage of teachers who wanted more professional development than they received (45%) was slightly below the average across all countries. In Italy the extent of high need is greater than average in all areas of teachers’ work except “School management and administration”. Among European countries, teachers in Italy report the highest level of need for “Teaching in a multicultural setting”.

In Australia, the extent of high development need is below the international average in all eleven areas, most notably in “Teaching special learning needs students” (16 percentage points below the international average), “Student discipline and behaviour” (15 percentage points below) and “Instructional practices”

(13 percentage points below). No other country is below the international average on all eleven areas, though four countries are below on all but one: Denmark (the exception being “Content and performance standards”), Iceland (“Teaching in a multicultural setting”), the Slovak Republic (“Subject Field”) and Turkey (“Teaching in a multicultural setting”).

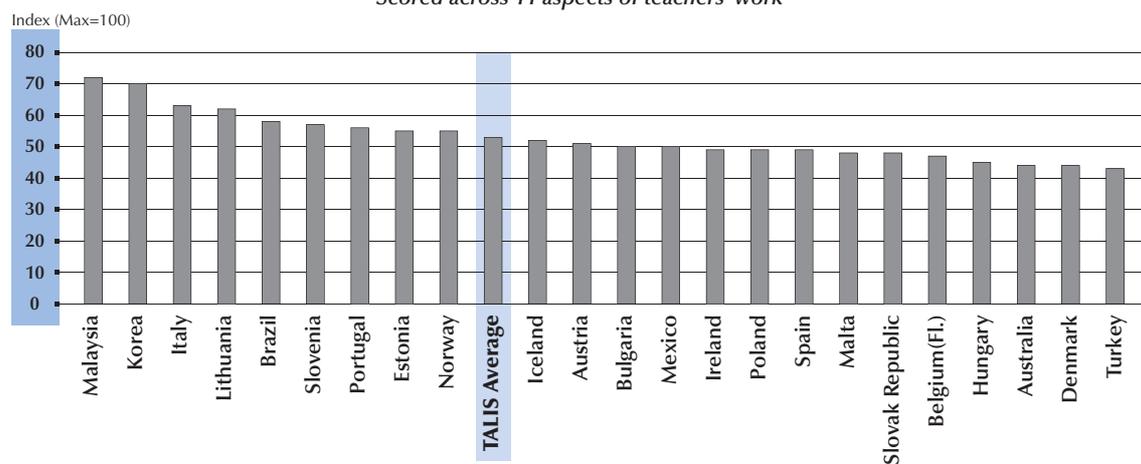
Overall index of professional development need

An index of overall need was compiled by assigning a score to each teacher according to the level of need reported for each of the aspects of his/her work: three points for a high level of need; two points for a moderate level of need, one point for a low level of need and no points for cases where teachers noted no development need at all. These were then aggregated and divided by the maximum possible score of 33 (3 times 11) and multiplied by 100 to give an overall percentage of the maximum “need” for each teacher. The index shown in the first column of Table 3.4 is the average of this score across all of a given country’s teachers. Thus, an index score of 100 would indicate that teachers reported a high level of need in each of the eleven areas of their work. The results shown in Figure 3.7 indicate that the greatest degree of need for development when aggregated across these areas was reported by teachers in Malaysia, followed by Korea, Italy and Lithuania. The lowest level of need measured by this index was reported by teachers in Hungary, Australia, Denmark and Turkey.

This index should, however, be interpreted with some caution given the consistently high and low reporting of the strength of development need in some countries (discussed in the previous section). These trends may genuinely reflect the level of unsatisfied demand in these countries, but it may also indicate some cultural bias. In other words, teachers in certain countries may systematically tend to report more or less positively than those in other countries. For this reason, a closer focus on differences *within countries* than between countries may be more appropriate, and patterns of high levels of need between topic areas within a country can be compared to identify the relative priorities for each country.

Figure 3.7

Index of professional development need (2007-08) Scored across 11 aspects of teachers’ work



Countries are ranked in descending order of index of professional development need.

Source: OECD, Table 3.4.

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

As noted, there is a high level of need for “Teaching special learning needs students” compared to other aspects of teachers’ work in all countries except Korea, Lithuania and Malaysia. It is particularly pronounced in Brazil and Portugal and is also relatively high in Hungary, Ireland, Malta, Mexico and Spain. The need to develop ICT teaching skills is relatively high in all countries except Korea and is particularly pronounced in Ireland, Norway and Spain.

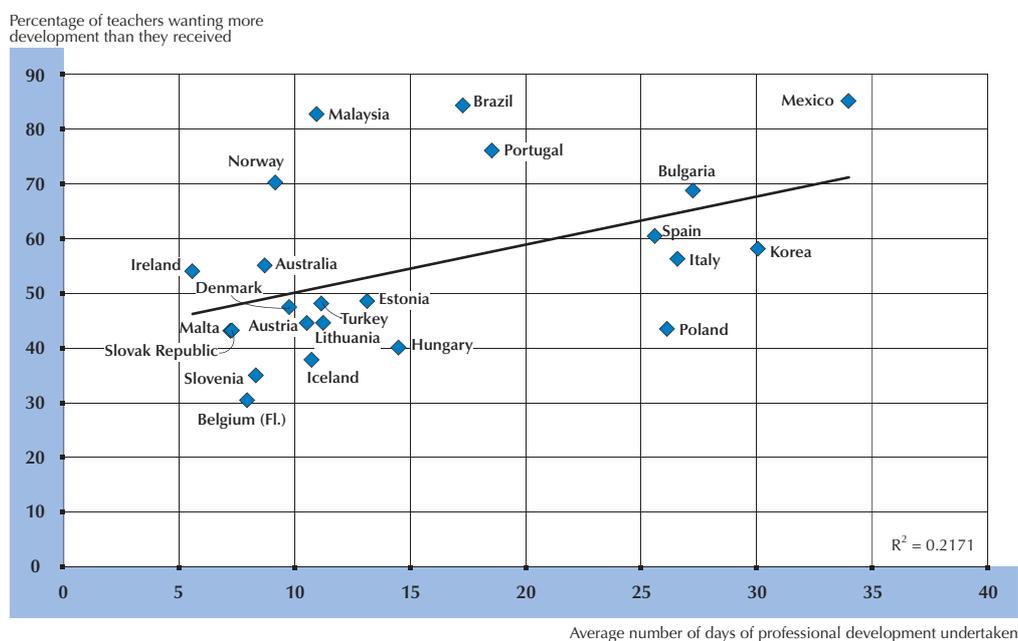
For other aspects of teachers’ work, the following development needs also are relatively high within the countries specified (Table 3.4):

- **Content and performance standards:** Bulgaria, Denmark, Malaysia and Lithuania.
- **Student assessment practices:** Belgium (Fl.), Lithuania and Norway.
- **Subject field:** Belgium (Fl.), Italy, Korea, Lithuania and Malaysia.
- **Instructional practices:** Italy, Korea, Lithuania and Malaysia.
- **Student discipline and behaviour problems:** Austria, Hungary, Iceland, the Slovak Republic and Slovenia;
- **Teaching in a multicultural setting:** Ireland, Italy, Spain and Turkey.
- **Student counselling:** Ireland, Korea, Mexico and Poland.

On average at the country level, there is a weak positive relation between the average number of professional development days engaged in and the percentage of teachers reporting that they wanted more than they had received (Figure 3.8).

Figure 3.8

Comparison of unsatisfied demand for professional development and amount undertaken (2007-08)



Source: OECD, Tables 3.1 and 3.3.

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

Although the relation is not very strong, it is interesting that such a pattern exists, though it is important to examine this relation at the country level, and here some divergent trends can be found.

Some countries follow this pattern fairly closely. For instance, in Mexico lower secondary teachers had the highest average number of days of professional development of all participating countries and also the highest percentage of teachers reporting that this did not satisfy their demand. Furthermore, some of the countries with the lowest average number of professional development days – most notably Belgium (Fl.) and Slovenia – also have percentages of teachers wanting more than they had received that is well below average (Table 3.3, column 1). This may indicate that the development received matched teachers' needs and satisfied their demand fairly well or they may be less motivated, for whatever reason, to engage in further professional development. Analysis in the remainder of the chapter will throw further light on this issue.

However, other countries do not show this pattern. In Australia and the Slovak Republic, for example, the teachers who were most likely to want more development were those who had received none during the survey period.

SUPPORT RECEIVED BY TEACHERS FOR PROFESSIONAL DEVELOPMENT

The level and intensity of participation in professional development activities are in part a function of the types of support that teachers receive to undertake them. Support can take many forms, and TALIS asked about possibilities ranging from compulsory development opportunities to formal induction and mentoring support for new teachers.

The following sections examine the different types of support and the relations between the support received and the level and intensity of participation reported.

Compulsory professional development

Teachers' professional development may be, or may not be, compulsory. Some professional development may be deemed compulsory because the skills and knowledge the development activities aim to enhance are considered important for teacher quality. In some cases participation in such activities may even be required for teacher certification. It can also be important for teachers to exercise their own professional judgement by identifying and taking part in development activities which they feel are most beneficial to them. A high degree of compulsory professional development may be indicative of a more highly managed professional development system with less discretion for teachers to choose the development they feel they need.

On average among the participating countries, some 51% of teachers' professional development was compulsory (Table 3.1). The proportion ranged from about one-third or less in Austria, Belgium (Fl.), Denmark and Portugal to 78% in Malta and as high as 88% in Malaysia. The countries with the highest *number* of compulsory days on average were Mexico, Bulgaria, Spain, Italy and Korea and those with the lowest were Austria, Belgium (Fl.) and Ireland.

The question arises as to whether the amount of teachers' professional development depends on the proportion that is compulsory. At the country level, there does not appear to be a clear relation between the average number of days of professional development and the percentage which was compulsory. For instance, Mexico had the highest average number of days of professional development, a figure undoubtedly influenced by the fact that two-thirds of these days were compulsory. In contrast, in Bulgaria, Italy, Korea and Poland, with the next highest average numbers of days of professional development, less than half were compulsory. And in Malaysia, the country with the highest percentage of compulsory days, the average number of days of professional development (among teachers who took personal development) was below average at around 12 days.

Financial support

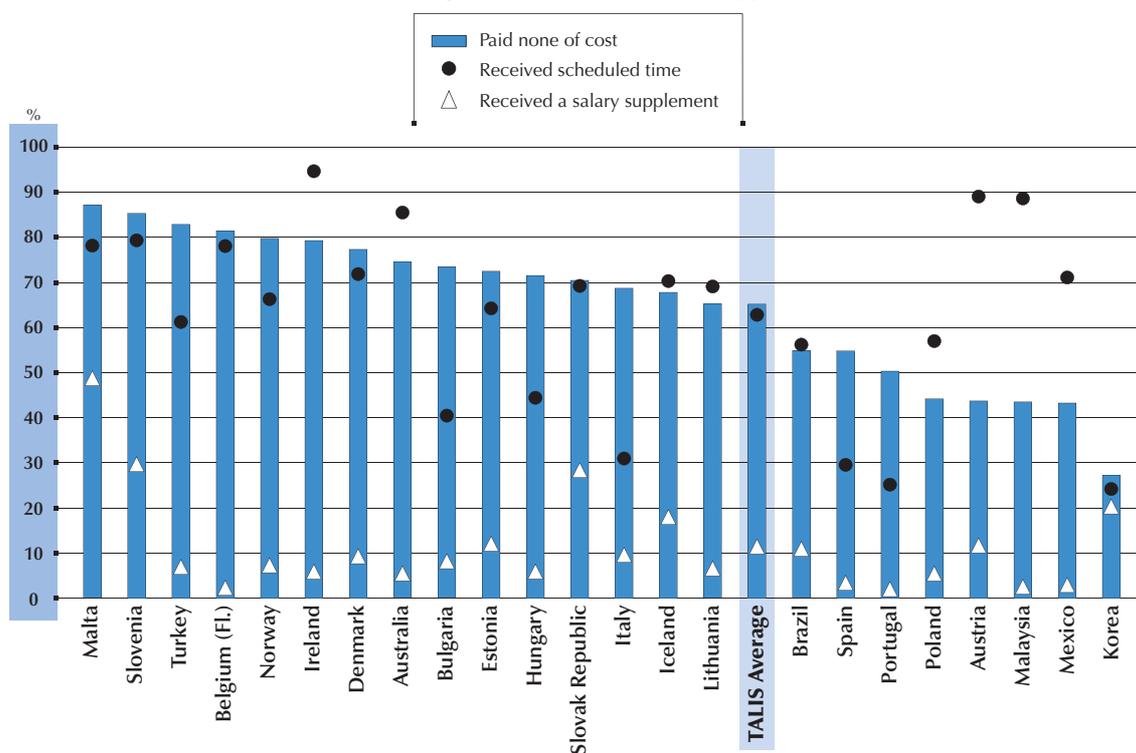
In addition to formal entitlement to professional development or provision of mandatory programmes, support for professional development can take a variety of forms. TALIS distinguished between financial support – direct payment of the costs of the development activities or salary supplements for undertaking development – and support in the form of time scheduled to allow for development activities.

On average in participating countries, around one-quarter of teachers who engaged in some professional development had to pay some of the cost themselves, and a further 8% had to pay all of the cost. There are certain differences among countries (Table 3.5).

The TALIS survey responses indicate that in no country is all professional development completely free for all teachers. The countries with the highest percentage of teachers who paid nothing for their participation are Belgium (Fl.), Malta, Slovenia and Turkey, where more than 80% of teachers reported having paid nothing towards the cost of their professional development activities. In contrast, less than half of the teachers in Austria, Malaysia, Mexico and Poland received free professional development, and only around one-quarter in Korea, the lowest proportion of all participating countries. The percentage paying the full cost was highest in Portugal (25%), followed by Mexico (19%), Brazil (18%) and Italy (18%).

Figure 3.9

Types of support received for professional development (2007-08)
Percentage of teachers who received support



Countries are ranked in descending order of percentage of teachers having paid none of the cost of professional development.

Source: OECD, Table 3.5.

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

Salary supplements

Salary supplements are a less common means of support for professional development, with only 11% of teachers on average receiving them for activities they had taken part in during the survey period. This was a relatively common means of support in Malta, where almost half of teachers received such supplements. It was also a significant means of support in Slovenia (30%) and the Slovak Republic (28%). It is notable that in addition to salary supplements, both Malta and Slovenia have the highest percentage of teachers who paid nothing towards the cost of their professional development, a sign of relatively generous financial support for professional development (Table 3.5).

Scheduled time

Almost two-thirds of teachers received scheduled time to take part in development activities, but the percentage varied substantially between less than 30% in Korea (24%), Portugal (25%) and Spain (30%) to well over 80% in Australia, Austria and Malaysia and over 90% in Ireland (Table 3.5).

Figure 3.9 combines the three forms of support. Relatively high levels of support for all three are reported in Malta, followed by Slovenia, an indication of these countries' extensive and varied support for professional development. In contrast, the levels of support in Poland, Portugal and Spain are below average on all three measures.

What is the relation between support received and levels of participation?

Financial support

The relation between financial support for participation in professional development and levels of participation is not a straightforward one. On the one hand, one might expect higher participation in countries with a high level of financial support for participation. On the other hand, the extent to which financial support is provided for undertaking professional development can be a function of the volume of professional development in the system. On the premise that budgets are limited, it will be easier to pay the full cost of professional development if uptake is low than if it is high. Another model of provision might require teachers to contribute to the cost of the activity but then reward the higher qualifications acquired in their remuneration.

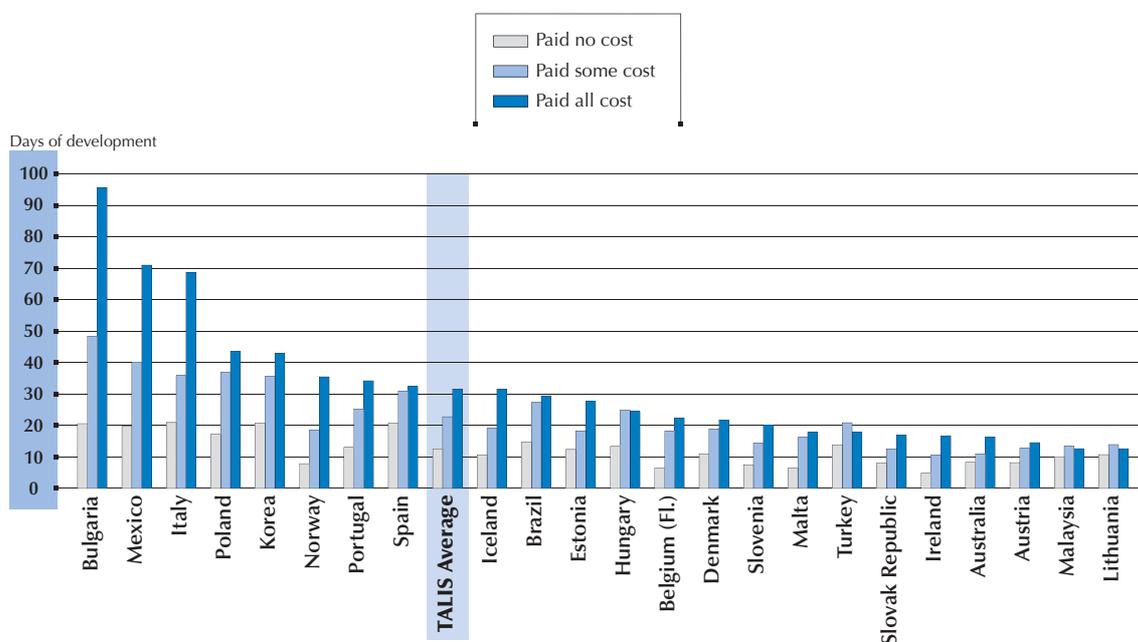
Analysis of the TALIS data reveals a negative relation between the amount of professional development and the extent to which teachers had to pay towards the cost. In other words, the countries in which teachers reported that they had to pay some or all of the costs of their professional development are also typically those in which teachers reported participating in the highest average number of days of development.

To understand the relation better, the average number of days of teachers' professional development can be broken down according to those who paid all, some or none of the costs of the development. On average, teachers who paid nothing towards the cost of their professional development had 13 days of professional development, while those who paid some of the cost had 23 days and those who paid all of the cost had 32 days. This general pattern fits almost every country (Figure 3.10).

Although at first glance counter-intuitive, this result fits the hypothesis that a limited budget will only fully cover the cost of professional development when the volume of professional development is relatively low. In other words, when the average number of days is small, it is more likely that the school or the education authorities will meet the full cost. The negative relation between the volume of professional development and the extent to which teachers have to pay also suggests that, in most countries, the provision of free professional development does not satisfy demand and teachers choose to supplement it by paying for additional development. Thus, the general trend is that higher intensity of participation in professional development goes hand in hand with a higher proportion of teachers having to pay something towards the cost.

Figure 3.10

Average days of development taken by teachers according to personal payment level (2007-08)



Countries are ranked in descending order of percentage of teachers having paid all of the cost of development they took.

Source: OECD, Table 3.5a, available on line.

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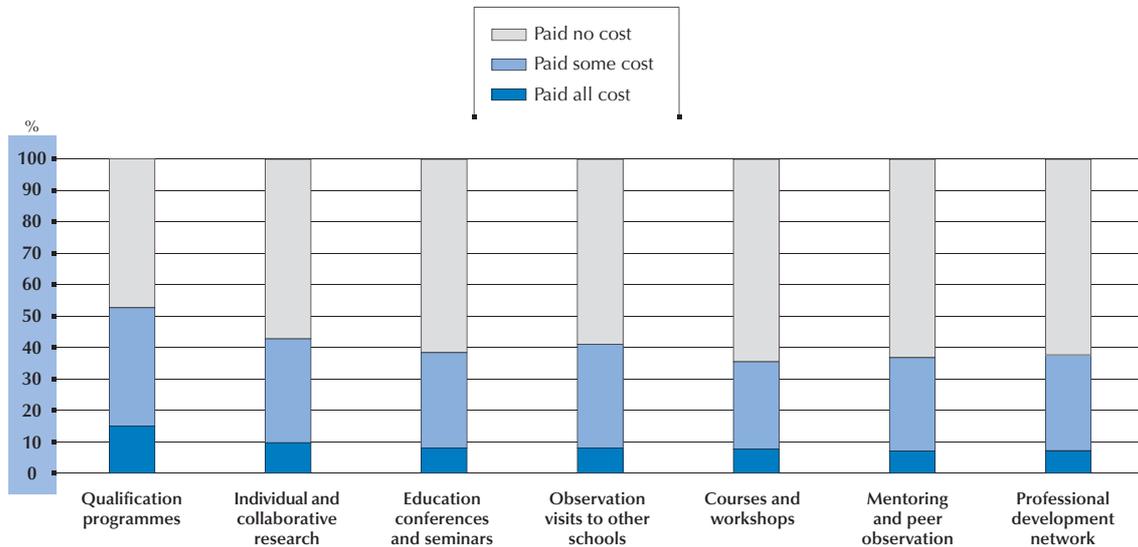
Some countries deviate from this picture. Bulgaria and Italy have relatively high percentages of teachers receiving free professional development (73% and 69%, respectively), with an average number of days in both countries that is well above average (31 days among teachers with some development). In these countries, teachers appear to have high levels of participation in professional development at relatively little cost to themselves. Conversely, in Austria and Malaysia, fewer than 50% of teachers received free professional development, and the average number of days was also low. This would suggest that, in these countries, factors other than budget influence the relatively low intensity of participation in professional development.

Part of the explanation for the relation between the extent of personal payment and the intensity of participation is the fact that development activities that are more time-intensive (qualification programmes and research activities) are also those for which, according to the TALIS survey responses, teachers are more likely to have to pay some or all of the costs (Figure 3.11). Among teachers enrolled in a qualification programme (as a single activity or in combination with other activities), more than half paid some or all of the costs, significantly more than for any of the other activities.

Thus, the strength of the relation between the average days of development received and the degree of personal payment is greatest in Bulgaria (Figure 3.10) where participation in qualification programmes is greatest (Table 3.2).

Figure 3.11

Level of personal payment by type of development activity¹ (2007-08)
International averages



1. Taken alone or in combination with other activities.

Activities are ranked in descending order of the percentage of teachers who paid all of the cost of the development they undertook.

Source: OECD, *TALIS Database*.

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The extent to which teachers who paid for their development did so entirely by choice is not clear from the TALIS data. It may be, for instance, that the cost and time commitment typically required for these activities will provide more of a barrier for some teachers than others, and this may raise some equity concerns. On the other hand, if participation in such programmes can lead to rewards for teachers, perhaps through career advancement or future pay enhancement, this may be less of a concern.

What is the relation between paying for professional development and the extent of unsatisfied demand for development? It might be supposed that if teachers pay for their development, this may help satisfy their demand for development. Analysis of the TALIS database indicates that teachers who paid some or all of the cost of the development they received are more likely to report unfulfilled demand: some 60% of those who paid the full cost said that they had wanted more. The equivalent figure for those who had paid nothing for the development they received was 53% (Table 3.5a available on line). At the country level, only in Norway are teachers who paid nothing towards the development they received more likely to have wanted more than those who had to pay something.

In summary then, those who paid the full cost of their professional development devoted more days to those activities than teachers who either paid some or none of the cost. This is partly indicative of the fact that, according to teachers, more time-intensive professional development activities were less likely to have been provided at no cost. But it also seems to indicate a significant desire among some teachers to take on development activities which are costly financially and in terms of time. In some cases, this can be seen as an investment

towards future career progression. Moreover, paying something towards the cost of the development they had received did not satisfy their demand, and these teachers – more than those who received free professional development – had a greater desire for more.

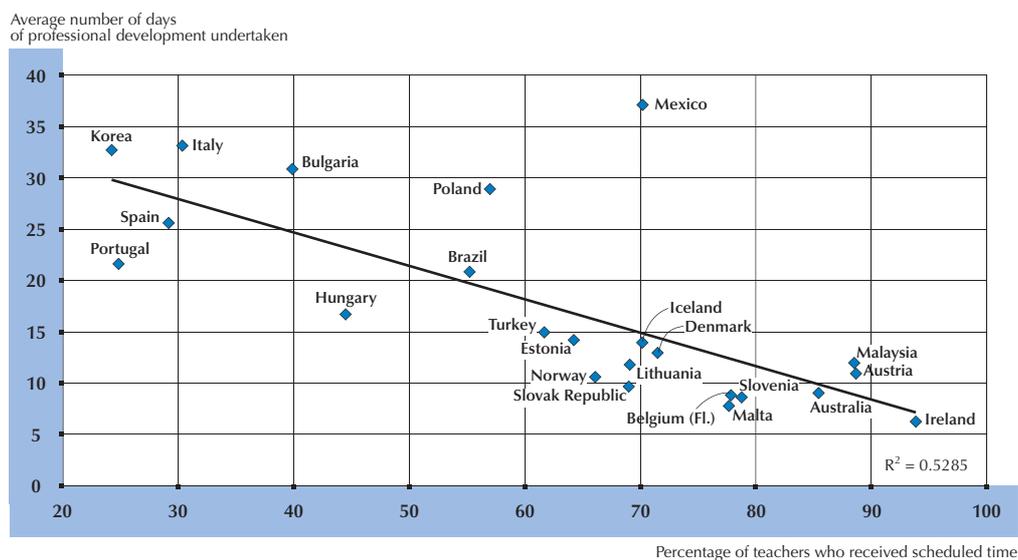
Scheduled time

In terms of the relation between the uptake of professional development and the provision of scheduled time for teachers to undertake development activities, a similar picture emerges. Again, there is no discernable relation at the country level between participation rates and the provision of scheduled time for development but, as Figure 3.12 shows, there is a negative correlation between the extent to which teachers received scheduled time for professional development and the amount of development they undertook during the survey period.

As in the case of personal payment for professional development, the negative relation between support and participation is, at first glance, counter-intuitive, but again the explanation may be resource-related, *i.e.* a high percentage of teachers receiving scheduled time for professional development is only manageable if the number of days is relatively small. Mexico is an exception, with an above-average percentage of teachers receiving time for development and a high level of professional development. The explanation probably lies in part in the fact that a relatively high percentage of this professional development was compulsory (66% of the days taken).

Figure 3.12

Percentage of teachers receiving scheduled time compared to average days of development undertaken (2007-08) Among those teachers who undertook some development



Source: OECD, Tables 3.1 and 3.5.

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And, as for the relation between personal payment and average days of development, part of the reason that teachers who did not receive scheduled time participated in more days of development on average is that the types of activity more likely to be taken in these situations are relatively time-intensive, namely enrolment in qualification programmes and engaging in research activities. The planned thematic report on teachers' professional development will explore these issues in more detail by attempting to model the determinants of participation in professional development.

Induction and mentoring

Another important type of support for teachers' development takes the form of schools' policies and practices to support teachers who are either new to the profession or new to the school. As noted in the OECD's review of teacher policy (OECD, 2005), the main challenges facing beginning teachers are remarkably similar across countries, such as motivating students to learn, classroom management, and assessing student work. Induction and mentoring programmes may help new teachers cope with these challenges and combat early dropout from the profession.

TALIS sought to learn the extent to which formal policies and practices for induction and for mentoring of new teachers exist in the lower secondary schools in which teachers work. This information was gathered from school principals rather than teachers and permits an examination of the broader development activities in schools where such policies do or do not exist.

On average across the participating countries, some 29% of teachers are in schools where school principals report no formal induction process for teachers new to the school (Table 3.6). A further 27% of lower secondary teachers are in schools where formal induction exists but only for teachers who are new to the profession. Thus, fewer than half of the teachers are in schools with a formal induction process for all teachers new to the school. However, there is enormous variation among countries.

For teachers in Australia and Belgium (Fl.), formal induction is virtually universal for all new teachers to the school. In the Slovak Republic very few teachers are in schools without an induction policy, although it may only be for teachers new to the profession. Also, in Ireland, Poland and Slovenia only a small minority of teachers (less than 10%) are in schools which lack any formal induction process, though in Slovenia and Poland it is predominantly for teachers new to the profession. Formal induction for new teachers is also relatively common in Bulgaria, Estonia, Hungary, Korea and Malaysia (Table 3.6 and Figure 3.13).

The situation in these countries contrasts sharply to that in Brazil, where almost three-quarters of teachers are in schools with no induction process, and in Lithuania, Malta, Mexico and Spain, where the figure exceeds 60%.

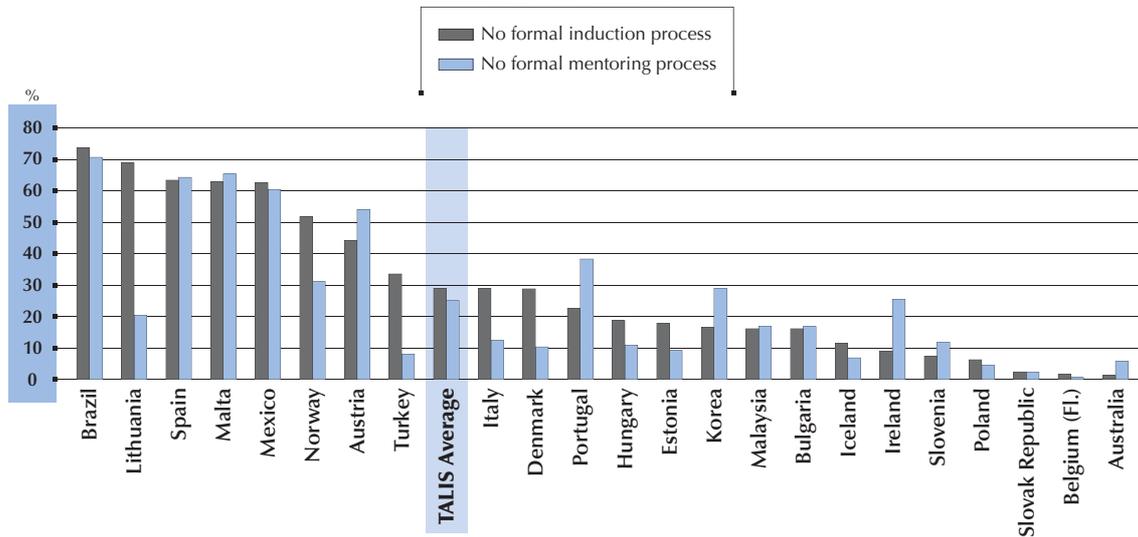
A similar picture emerges for mentoring practices. On average across countries, one-quarter of teachers are in schools whose principals report that there is no formal mentoring programme or policy. A further 38% are in schools where mentoring is provided only for teachers new to the profession and some 37% are in schools where all teachers new to the school – whether new to teaching or not – receive organised mentoring.

As for induction, policies for mentoring new teachers vary significantly across countries. The pattern is similar for the two policies. Thus, mentoring practices are extremely common in Australia, Belgium (Fl.), Poland and the Slovak Republic, although in Poland and the Slovak Republic mentoring is more for teachers new to the profession than for all teachers new to the school (Table 3.6). Moreover, as for induction, mentoring is relatively rare in Brazil, Malta, Mexico and Spain, where fewer than 40% of teachers are in schools with formal mentoring practices.

However, mentoring and induction practices do not always go hand in hand. For example, in Lithuania, formal induction of new teachers is relatively rare, but only 20% of teachers are in schools which do not provide mentoring.

Figure 3.13

Percentage of teachers in schools with no formal induction or mentoring programmes (2007-08)
Based on principals' reports



Countries are ranked in descending order of percentage of teachers in schools that do not have a formal induction programme.

Source: OECD, Table 3.6.

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

Across the participating countries, there is not a strong relation between induction and mentoring policies in schools and the amount of teachers' professional development. In around half of the countries, teachers were likely to have had more professional development if there was a formal induction process in place, and the same is true for mentoring. This positive relation is most prominent in Korea and Mexico, where teachers in schools which had a formal induction process received on average four more days of professional development during the survey period than teachers in schools without such formal programmes. The opposite was true in Bulgaria and Italy, where teachers in schools without formal induction programmes received two or three days more professional development than their counterparts in schools with such programmes (Table 3.6a available on line). It may be that when formal induction policies do not exist in schools, the corresponding support and development may be replaced by other means of development.

These analyses raise questions about how school leadership can support teacher development activities in schools. Chapter 5 will consider this issue in the context of practices to appraise the work of teachers, and Chapter 6 will examine the association between school leadership styles and the professional development activities of teachers.

The relation between unsatisfied demand for professional development and the presence or absence of formal induction or mentoring programmes in schools is similarly mixed (Table 3.6b available on line). On average across the participating countries, the percentage of teachers reporting unsatisfied demand is higher in schools that have formal induction programmes than in those that do not, but in countries such as Slovenia the opposite is true. For schools with and without mentoring programmes, there is on average across the countries surveyed very little difference in the extent of unsatisfied demand. Again there is no consistent pattern among countries.

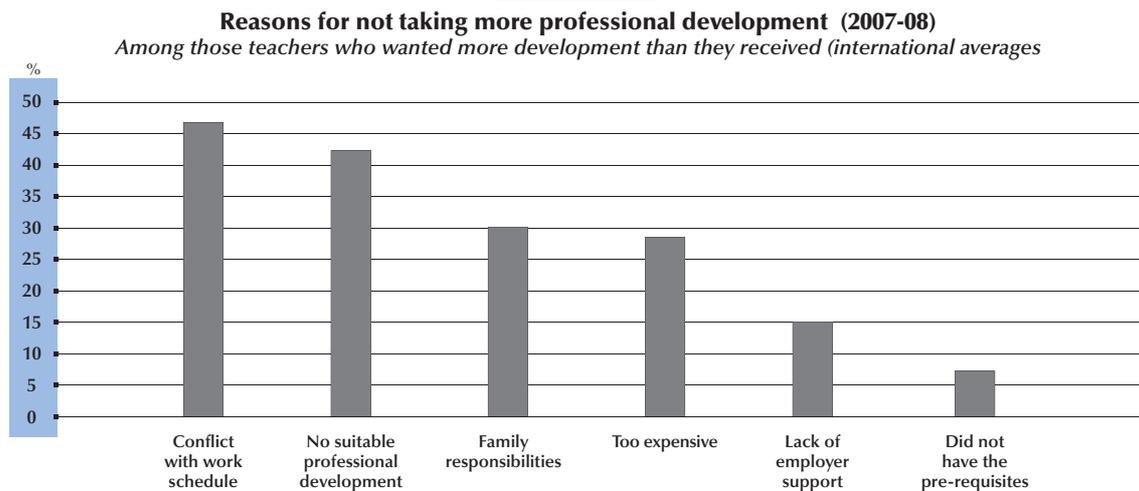
Part of the reason may be that TALIS only captures whether mentoring programmes exist or not and therefore cannot distinguish between different levels of intensity in the participation in mentoring programmes.

BARRIERS THAT PREVENT MEETING DEMAND

To understand better the take-up of professional development and provide insight into potential policy levers, TALIS asked teachers who had wanted to do more professional development to indicate the reasons that best explain what had prevented them from participating in more professional development. They were entitled to select as many of the options as were appropriate (Figure 3.14).

Across the participating countries, the most commonly cited reasons were “Conflict with work schedule” (47% of teachers) and “No suitable professional development” (42%). In fact, in all but four countries, one or the other of these two factors was the most frequently cited barrier to take-up of additional professional development. The exceptions were Hungary, Mexico and Poland, where the cost of professional development was the reason most often cited (47, 49 and 51%, respectively) and Malta, where “Family responsibilities” was the most cited reason (45%) (Table 3.7).

Figure 3.14



Reasons are ranked in descending order of frequency with which the barrier was reported by teachers.

Source: OECD, Table 3.7.

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

No suitable development

Not surprisingly, there is a significant negative correlation between the extent to which teachers reported a lack of suitable professional development and the amount of professional development they actually had. In every country, teachers who reported a lack of suitable development on offer as the reason for not engaging in more development actually participated on average in a smaller number of days of development during the survey period than teachers who did not report this as a barrier. This is good evidence of the association between the perceived lack of suitable development on offer and the amount of development teachers embark on.

The lack of suitable professional development seems to be most acute in Austria. Here almost two-thirds of teachers reported this as a reason for not participating in more professional development than they did, as did more than 50% of teachers in Estonia, Lithuania and the Slovak Republic. In these four countries, the amount of teachers' professional development is below the international average.

Conflict with work schedule

It is notable that the countries where "Conflict with work schedule" was most frequently reported as a barrier – Korea (73% of teachers) and Portugal (65%) – are also those in which teachers were least likely to have received scheduled time for professional development. However, across all countries there is no distinct relation between these two variables. For instance, some 62% of teachers in Australia reported "Conflict with work schedule" as a barrier to participating in more development, the third highest after Korea and Portugal, yet 86% reported that they received scheduled time for professional development (Tables 3.5 and 3.7). This would tend to indicate that the scheduled time was either insufficient or not well aligned with the types of professional development that teachers wanted or perhaps that it was provided for mandatory professional development only. The conflict with the teacher's work schedule was seen as less of a problem in Bulgaria and Denmark, although around one-quarter of teachers still reported this as a barrier.

In virtually all countries, teachers who reported "Conflict with work schedule" as a reason for not engaging in more professional development actually took more days on average than those who did not cite this as a barrier. As noted earlier, this is in part a consequence of the types of development activities undertaken by these teachers. Analysis of the TALIS database shows that those reporting schedule conflict as a barrier are more likely to have engaged in qualification programmes and research activities than those who did not.

Too expensive

Compared with the allocation of scheduled time, there is a slightly stronger relation between the extent to which teachers reported cost as a barrier to taking more professional development and the financial support that they received. In other words countries in which a relatively high percentage of teachers had to pay the full cost of their professional development were more likely to report cost as a barrier to taking more. This is most notable in Brazil and Mexico, as some 50% of teachers reported cost as a reason for not taking part in more development than they did; both countries also reported relatively high percentages (18% and 19% respectively) of teachers having to pay the full cost of these activities. Poland has one of the highest proportions of teachers who had to pay something towards the cost of development, and around 50% reported cost as a barrier to taking part in more (Tables 3.5 and 3.7).

In contrast, cost was less frequently reported as a barrier in Belgium (Fl.) (12%), Ireland (12%) and Turkey (12%), three countries in which relatively few teachers had to pay the cost of their professional development.

It is interesting that teachers who reported expense as a barrier actually had more days of professional development on average than those who did not report this as a barrier. The reason, as noted earlier, is probably that the activities that teachers were more likely to have paid for are also likely to be more time-intensive, particularly enrolment in qualification programmes.

So, in addition to the finding that teachers who had to pay for their development had more unsatisfied demand than those who did not, the preceding analysis shows that for these teachers more than others, cost is a barrier to satisfaction of that demand.

Other barriers

On average across participating countries, "Lack of employer support" was relatively rarely cited as a barrier. However, in Denmark more than one-third of teachers reported this as a factor preventing further professional development. In contrast, only a small minority of teachers in Bulgaria (3%), Italy (6%) and Spain (6%) see this as a barrier (Table 3.7).

The lack of prerequisites to undertake the desired development was reported as a significant problem only in Malaysia (over one-quarter of teachers), followed by more than 15% in Mexico and Turkey (Table 3.7).

IMPACT OF PROFESSIONAL DEVELOPMENT

Having assessed the level of unsatisfied demand for professional development among lower secondary teachers and the areas of their work for which they have greatest development need, the level and intensity of participation in professional development activities and the support on offer to teachers and the perceived barriers against taking more development, this chapter now turns to the question of the types of professional development activities that are most effective in providing the professional development teachers need.

TALIS asked teachers to report the impact of their development activities on their development as a teacher. Since TALIS reports teachers' perceptions, these reports of perceived impact should be treated with some caution as indicators of the effectiveness of these activities. Nevertheless, if teachers feel that a development activity has had limited impact, this is likely to colour their decisions, and perhaps those of their colleagues, regarding future participation in that activity.

Table 3.8 shows the percentage of teachers who reported a moderate or high impact for the types of development they had undertaken during the survey period. It is striking how positively teachers view the impact of these development activities and how consistent this is across all types of development activities. On average across participating countries, teachers reported that the most effective forms of development were "Individual and collaborative research", "Informal dialogue to improve teaching" and "Qualification programmes", all with close to 90% of teachers reporting a moderate or large impact on their development as a teacher. The development activities that were reported to be relatively less effective were attendance at "Education conferences and seminars" and taking part in "Observation visits to other schools", though even for these activities around 75% of teachers reported a moderate or high impact.

In general, there is little variation in this pattern across countries with the exception of teachers in Belgium (Fl.), who take a far less positive view of the impact of their development activities. On average, the percentage of teachers who reported a moderate or large impact was around 20-30 percentage points lower than the international average for most activities. This is in the context of teacher reports indicating relatively low participation in professional development activities, relatively low demand for more professional development, and relatively low financial or work-related barriers to further participation (Tables 3.1 and 3.3). A possible interpretation of the combination of low participation and low demand may be a perceived lack of impact of professional development activities. This need not necessarily raise a concern about the quality of the development on offer but could indicate a teacher workforce whose preparation for teaching is well served through initial teacher training.

Teachers in Australia, Austria and Brazil also view the impact of most types of development less positively than in other countries. In Australia this is most notably the case for "Reading professional literature" (where high or moderate impact was reported by 66% of teachers, 16 percentage points below the international average). For Austria, the reported impact of attendance at "Educational conferences and seminars" was relatively low (18 percentage points below the international average) and in Brazil the impact of "Mentoring and peer observation" activities was 12 percentage points below the international average (Table 3.8).

In contrast, teachers in Denmark, Hungary, Lithuania and Poland rank the impact of the development they had undertaken across all types of development above the international average. Malaysia is more positive than the international average on all aspects except "Individual and collaborative research", where the percentage of teachers reporting moderate or high impact was around the international average.

Education conferences and seminars, although seen as one of the less effective types of activities on average across countries, are considered particularly effective by teachers in Malaysia. Teachers in Lithuania found observational visits to other schools particularly effective, and teachers in Hungary reported a particularly strong impact of mentoring and peer observation (Table 3.8).

How does perceived impact relate to participation?

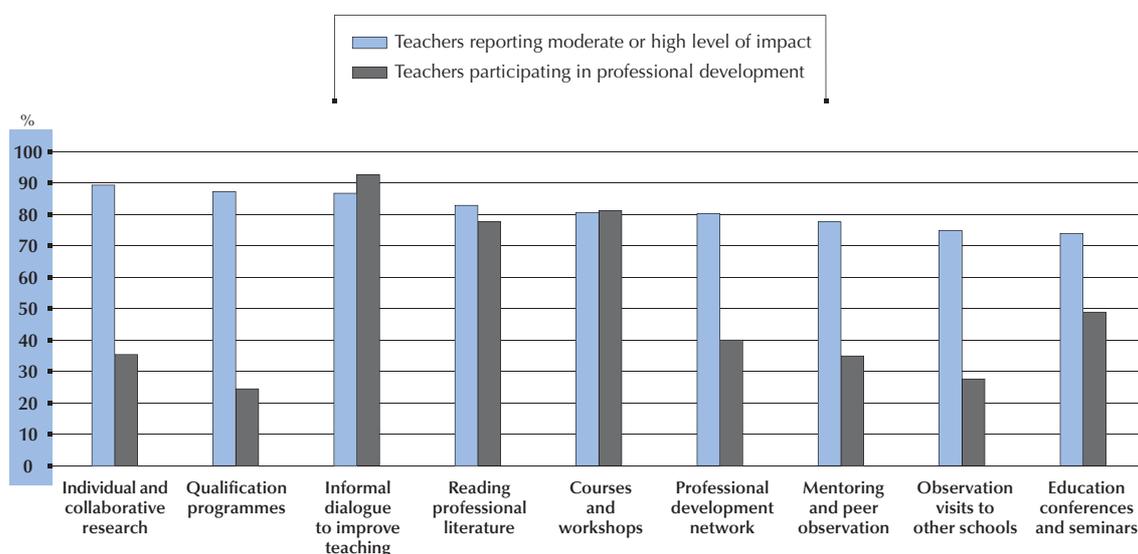
Given these varying patterns of impact, it is informative to compare impact and participation across the different types of activities. On average across the participating countries, the most obvious contrast between participation and impact is for “Qualification programmes”, which ranked second highest in the percentage (87%) of teachers who reported moderate or high impact resulting from their participation, yet the participation rate (25%) was the lowest of all development activities (Figure 3.15).

There is also a notable contrast between participation and impact for “Individual and collaborative research”, where impact ranked highest of the nine activities but only sixth in terms of participation.

It is not possible to learn from the TALIS data why these differences occur. However, it can be noted that both qualification programmes and research are relatively time-intensive and, as noted earlier, they are also activities which teachers were more likely to have had to pay for. It may not be possible for education systems to allow very high proportions of its teachers to spend a large part of their time on these activities and to finance them as well. The cost and time commitments are likely to present barriers for some teachers as well.

Figure 3.15

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, Tables 3.2 and 3.8.

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Yet it is striking that the two types of activities that teachers report as having the highest impact on their development are those that they are most likely to have to pay for and commit significant time to. In other words, it is through teachers' own investment that, on average, they engage in the activities they have found to be among the most effective for their development. Even allowing for the fact that teachers are likely to choose to participate in and pay for activities which they expect to be effective, this is an important finding.

In contrast, courses and workshops and, to a lesser degree, education conferences and seminars have relatively high rates of participation when compared with their reported impact on teachers' development. In these cases, while these activities may not generally require a large time commitment, the justification for high levels of participation might be questioned in view of the relatively lower impact that teachers report.

The pattern of participation in different development activities seems to be more closely aligned with the impact reported by teachers in some countries than in others. A broad indication of this alignment can be obtained by calculating the correlation between rankings of participation by activity and rankings of impact by activity. The correlation is strongest in Lithuania (0.57 Spearman Rank correlation coefficient), followed by Mexico and the Slovak Republic (both 0.43). Arguably in these cases, participation is fairly well aligned with the benefits to be obtained from various categories of professional development. In contrast, there is a fairly strong negative correlation between participation and impact in Estonia (-0.37) and weak negative correlations in Hungary, Iceland, Ireland and Korea (around -0.1). In Estonia, a major contributor to this result is that the activities for which teachers were most positive about the impact – "Qualification programmes" and "Individual and collaborative research" – were the two activities with the lowest participation for teachers.

CONCLUSIONS AND IMPLICATIONS FOR POLICY AND PRACTICE

This chapter has reviewed current patterns of participation in professional development activities by lower secondary education teachers. It has examined the extent to which teachers' demand for professional development is being met and how this varies according to the various types of support teachers have received and what they have perceived as hindrances to engaging in more than they did. Finally, it has analysed the types of activities that teachers reported as having had the greatest impact on their development as teachers.

The chapter set out to answer three questions about the amount of teachers' of professional development, the extent to which it meets their needs, and how it could be improved. This now provides the framework for a reiteration of key results and a discussion of what can be learned. Some of these issues will be examined in greater depth in the separate thematic report on teachers' professional development.

How much does the amount and profile of teachers' professional development vary within and among countries?

This chapter first examined the patterns of participation in professional development reported by teachers.

Key results

- The *level and intensity* of participation in professional development varies considerably among countries. Nearly nine in ten teachers take part in some sort of activity, but since the definition of professional development is broadly drawn, the fact that in some countries up to one in four teachers receive none is a source of concern. Moreover, intensity varies across countries more than participation, with Korea and Mexico seeing teachers participating on average for over 30 days in 18 months, twice the average rate (Table 3.1).
- *Within-country* variation in the intensity of professional development can be high and is greatest in Italy, Korea, Mexico, Poland and Spain. Older teachers tend to receive less than the average, though the pattern by gender is more mixed (Tables 3.1d and 3.1a).

- The *types of development* undertaken by teachers explain some of these variations. Countries in which a high percentage of teachers take part in “Qualification programmes” or “Individual and collaborative research” tend to have a higher average number of days of development. However, only a small minority of teachers participate in these activities. On the other hand, virtually all teachers engage in “Informal dialogue to improve teaching” (not counted in the main measure of professional development), and the great majority attend some form of “Course and workshops” (Tables 3.1 and 3.2).

Discussion

The high average participation in development activities among lower secondary teachers is unquestionably a positive message from the TALIS results. Nevertheless, the fact that, among participating countries, an average of some 11% of teachers did not take part in any of the more structured forms of professional development in the 18 months prior to the survey may be a concern (Table 3.1).

On the other hand, even if not all teachers engage in more organised types of activities, it is reassuring that virtually all engage in informal dialogue with others to improve their teaching and that the vast majority read professional literature. However, some of the more collaborative forms of development are more evident in some countries than in others.

How well are teachers’ professional development needs being met?

Analysis of the TALIS data reveals that despite high levels of participation in development activities, the professional development needs of a significant proportion of teachers are not being met.

Key results

- More than half of the teachers surveyed reported that they *wanted more* professional development than they received during the 18-month survey period. The extent of unsatisfied demand is sizeable in every country, ranging from 31% in Belgium (Fl.) to over 80% in Brazil, Malaysia and Mexico (Table 3.3).
- Across countries, teachers who were *more likely to report unsatisfied demand* were in public schools, females and under 40 years of age (Table 3.3).
- Across countries, the aspects of teachers’ work with *greatest development need* are: “Teaching special learning needs students”, followed by “ICT teaching skills” and “Student discipline and behaviour” (Table 3.4).

Discussion

A certain level of unsatisfied demand might be expected; it is natural that a certain proportion of teachers will at some time not feel fully equipped to carry out their work effectively. Nonetheless, the extent of unsatisfied demand appears large, and in some countries the great majority of teachers state that they need more professional development than they receive.

The extent to which this undermines the effectiveness of the teacher workforce in the participating countries cannot be measured by TALIS, but it is difficult to imagine that such deficits are not to some extent detrimental to effective teaching and learning.

The information from TALIS gives policy makers clear pointers to the main deficits in each country. In terms of the topics for which development needs are greatest, it is striking how consistently countries reported a high level of need for development in the area of teaching students with special learning needs. This indicates a clear recognition on the part of teachers that they do not feel properly equipped to deal with increasingly heterogeneous groups and to address the learning needs of the weaker as well as the stronger students.

An individual teacher's amount of development is predictably correlated with the type of activity they have taken part in: teachers engaged in qualification programmes and research activities have to devote more time to these activities than those who attend conferences or workshops. An important discovery from TALIS is that unsatisfied demand exists no matter what activities teachers have engaged in.

How best should unsatisfied demand for professional development be addressed?

The chapter examined the support mechanisms that are in place for teachers and also the barriers which teachers reported as preventing them from engaging in more professional development than they did. The analysis also reveals how these relate to teachers' participation and their desire for more professional development.

Key results

- The more teachers *paid* for development, the more they took part in. That is, teachers who paid nothing received 13 days on average, those who paid some of the cost received 23 days, and those who paid all of the cost received 32 days. This seems partly associated with the nature of programmes: those leading to a qualification were both more time-consuming and more likely to be paid for by teachers (Table 3.5a, available on line).
- *Payment and satisfaction* did not go hand in hand: on the contrary, those who paid for professional development were more likely to want more (Table 3.5a, available on line).
- The principal *cause of unfulfilled demand*, according to teachers, is the conflict with their work schedule, but they also often cite lack of suitable development opportunities. Those who participated in the least development were most likely to cite the latter cause (Table 3.7).
- The *most effective types of development*, according to teachers, are those in which they participate least – especially programmes leading to qualifications, and to a lesser degree, research activities. The most effective types of development are also those for which teachers are more likely to have had to pay the full or partial cost and devote most time to (Table 3.8).

Discussion

In seeking to meet teachers' professional development requirements, policy makers and practitioners need to consider both how to support and encourage participation and how to ensure that opportunities match teachers' perceived needs. This must be balanced with the cost in terms both of finance and teachers' time. Teachers' perceived needs should also match the wider goals of school development and how well teachers' professional development is coordinated with appraisal and feedback practices in schools and school evaluations more generally (see Chapter 5).

Even if there is no country in which the professional development of teachers is completely free, TALIS data indicate that teachers feel that the level of support they receive in most countries is significant in terms of finance and separately scheduled time in which to undertake development activities. In the participating countries, an average of around two-thirds of teachers pay nothing, and a similar proportion receive allocated time; schools and public authorities clearly make a significant investment in teachers' professional development.

Yet, the degree of unsatisfied demand reported by teachers remains troubling and may suggest a misalignment between the support provided and teachers' development needs in terms of content and modes of delivery.

For modes of delivery, the evidence from TALIS is very revealing. It is striking that the activities that teachers report as the most effective for their development are also those for which they are more likely to have had to pay full or partial cost and to devote the most time to. This need not mean that the cost of all teachers' participation in qualification programmes and research should be fully paid for, but a better balance should perhaps be sought between who pays and who benefits.

The 42% of teachers who report a lack of suitable professional development activities to satisfy their needs is an equally worrying finding (Table 3.7). It indicates that carefully comparing provision and support with development needs should be a priority in many participating countries.

Further analysis of teachers' professional development

Further to the discussion of teachers' professional development in this chapter, Chapters 4-6 show how teachers' professional development inter-relates with the other key policy themes of TALIS. Chapter 4 shows how teachers' teaching beliefs, their teaching practices and their professional co-operation are related to their participation in different forms of professional development. Chapter 5 examines how teachers' professional development activities are connected to school and teacher evaluation practices and allows an assessment of the extent to which these practices are related to providing the development that teachers need. Chapter 6 examines how different school leadership styles are associated with teachers' professional development activities and sheds light on the degree to which school leaders can shape schools as professional learning communities. Finally, Chapter 7 examines the significance of professional development among the determinants of classroom disciplinary climate and teachers' self-efficacy.

In addition, these findings prompt further policy questions and thus the need for further analysis of the TALIS data. The thematic report on teachers' professional development, which is being produced jointly with the European Commission, will seek to do this. In particular, it will seek to examine more thoroughly the factors that determine participation in professional development as well as the factors that determine the differing impacts that teachers report for alternative types of development activities.

ADDITIONAL MATERIAL

The following additional material relevant to this chapter is available on line at:

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

- Table 3.1c Percentage distribution of days of professional development undertaken by teachers in the previous 18 months (2007-08)
- Table 3.1d Percentile distribution of days of professional development undertaken by teachers in the previous 18 months (2007-08)
- Table 3.5a Average days of development taken by teachers and desire for more development according to the level of costs teachers paid (2007-08)
- Table 3.6a Average days of development taken by teachers according to whether a formal induction or mentoring programme was in place (2007-08)
- Table 3.6b Teachers who wanted to participate in more development than they did in the previous 18 months according to whether a formal induction or mentoring programme was in place (2007-08)

Table 3.1

Participation of teachers in professional development in the previous 18 months (2007-08)
Participation rates, average number of days and average of compulsory days of professional development undertaken by teachers of lower secondary education in the 18 months prior to the survey

	Percentage of teachers who undertook some professional development in the previous 18 months		Average days of professional development across all teachers		Average days of professional development among those who participated		Average percentage of professional development days taken that were compulsory	
	%	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	%	(S.E.)
Australia	96.7	(0.43)	8.7	(0.19)	9.0	(0.20)	47.3	(1.17)
Austria	96.6	(0.37)	10.5	(0.17)	10.9	(0.16)	31.4	(0.66)
Belgium (Fl.)	90.3	(0.73)	8.0	(0.38)	8.8	(0.42)	33.6	(0.95)
Brazil	83.0	(1.21)	17.3	(0.70)	20.8	(0.79)	40.2	(1.17)
Bulgaria	88.3	(1.17)	27.2	(1.65)	30.8	(2.04)	46.9	(2.11)
Denmark	75.6	(1.26)	9.8	(0.34)	12.9	(0.40)	34.6	(1.43)
Estonia	92.7	(0.50)	13.1	(0.29)	14.2	(0.31)	49.2	(1.20)
Hungary	86.9	(1.77)	14.5	(0.50)	16.7	(0.41)	46.1	(1.58)
Iceland	77.1	(1.10)	10.7	(0.44)	13.9	(0.56)	49.9	(1.30)
Ireland	89.7	(0.78)	5.6	(0.21)	6.2	(0.21)	41.4	(0.99)
Italy	84.6	(0.76)	26.6	(0.98)	31.4	(1.17)	40.0	(1.08)
Korea	91.9	(0.59)	30.0	(0.57)	32.7	(0.55)	46.9	(0.85)
Lithuania	95.5	(0.40)	11.2	(0.21)	11.8	(0.21)	56.6	(0.98)
Malaysia	91.7	(0.67)	11.0	(0.32)	11.9	(0.33)	88.1	(0.64)
Malta	94.1	(0.75)	7.3	(0.25)	7.8	(0.26)	78.4	(1.07)
Mexico	91.5	(0.60)	34.0	(1.60)	37.1	(1.78)	66.4	(1.22)
Norway	86.7	(0.87)	9.2	(0.30)	10.6	(0.34)	55.5	(1.25)
Poland	90.4	(0.67)	26.1	(1.10)	28.9	(1.20)	41.0	(1.14)
Portugal	85.8	(0.87)	18.5	(0.89)	21.6	(1.01)	35.1	(0.99)
Slovak Republic	75.0	(1.13)	7.2	(0.30)	9.6	(0.38)	44.1	(1.19)
Slovenia	96.9	(0.35)	8.3	(0.20)	8.6	(0.20)	60.5	(0.93)
Spain	100.0	(0.03)	25.6	(0.51)	25.6	(0.51)	66.8	(0.99)
Turkey	74.8	(2.09)	11.2	(0.52)	14.9	(0.65)	72.8	(1.65)
TALIS average	88.5	(0.20)	15.3	(0.14)	17.3	(0.16)	51.0	(0.25)

Source: OECD, TALIS Database.

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

Table 3.1a

Amount of professional development undertaken by teachers in the previous 18 months (2007-08) – teacher characteristics

Average number of days of professional development undertaken by teachers of different characteristics [among those teachers of lower secondary education who took some professional development]

	Female teachers		Male teachers		Teachers aged under 30 years		Teachers aged 30-39 years		Teachers aged 40-49 years		Teachers aged 50+ years	
	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)
Australia	9.0	(0.24)	9.0	(0.28)	9.0	(0.52)	8.9	(0.41)	9.1	(0.34)	9.1	(0.31)
Austria	11.2	(0.20)	10.3	(0.23)	12.4	(0.72)	10.5	(0.47)	11.3	(0.25)	10.5	(0.25)
Belgium (Fl.)	8.5	(0.55)	9.5	(0.48)	8.7	(0.62)	8.8	(0.79)	8.6	(0.61)	9.2	(0.88)
Brazil	20.7	(0.88)	21.2	(1.02)	22.2	(1.51)	22.3	(1.15)	19.7	(0.85)	17.0	(1.40)
Bulgaria	30.7	(2.00)	31.5	(3.79)	27.3	(5.36)	34.2	(4.29)	33.6	(4.21)	26.8	(1.67)
Denmark	13.4	(0.53)	12.3	(0.68)	17.3	(3.02)	13.4	(0.70)	15.8	(1.07)	10.3	(0.50)
Estonia	14.6	(0.36)	11.6	(0.51)	15.3	(1.19)	16.8	(0.80)	15.2	(0.55)	11.8	(0.36)
Hungary	16.6	(0.52)	16.9	(1.28)	15.4	(1.05)	16.3	(0.95)	18.3	(0.80)	15.4	(1.29)
Iceland	14.4	(0.68)	12.7	(0.83)	11.5	(1.41)	12.9	(0.84)	15.2	(0.96)	14.2	(0.99)
Ireland	6.0	(0.23)	6.7	(0.45)	5.8	(0.49)	6.6	(0.49)	6.8	(0.45)	5.7	(0.30)
Italy	30.5	(1.12)	34.8	(2.52)	64.1	(12.08)	50.1	(3.36)	30.4	(1.54)	24.1	(1.04)
Korea	34.2	(0.69)	30.0	(0.91)	43.3	(1.61)	36.7	(1.01)	30.3	(0.82)	24.3	(1.51)
Lithuania	12.1	(0.24)	10.1	(0.46)	11.2	(0.75)	11.5	(0.41)	12.5	(0.34)	11.4	(0.31)
Malaysia	11.8	(0.39)	12.3	(0.44)	12.0	(0.56)	11.7	(0.43)	12.2	(0.37)	11.9	(0.65)
Malta	7.9	(0.39)	7.6	(0.32)	7.7	(0.51)	7.5	(0.42)	8.6	(0.86)	7.9	(0.50)
Mexico	39.9	(2.17)	33.9	(2.72)	48.5	(5.64)	41.8	(3.88)	34.5	(2.27)	28.1	(2.26)
Norway	10.9	(0.49)	10.1	(0.47)	10.2	(0.95)	10.4	(0.58)	12.6	(0.86)	9.7	(0.55)
Poland	29.9	(1.40)	25.6	(1.60)	35.2	(3.22)	33.2	(2.08)	25.5	(1.45)	17.9	(1.64)
Portugal	20.3	(1.06)	24.8	(1.95)	38.5	(5.51)	21.3	(1.29)	20.2	(1.12)	17.7	(2.21)
Slovak Republic	9.9	(0.43)	8.3	(0.61)	9.8	(1.05)	9.7	(0.52)	10.9	(0.53)	8.5	(0.45)
Slovenia	8.7	(0.23)	8.3	(0.34)	9.4	(0.54)	9.7	(0.49)	8.4	(0.25)	7.2	(0.26)
Spain	26.7	(0.64)	24.2	(0.60)	29.4	(1.51)	25.7	(0.91)	26.8	(0.73)	23.0	(0.69)
Turkey	13.6	(0.82)	16.2	(1.29)	16.9	(1.13)	13.6	(0.74)	14.4	(1.91)	10.6	(1.18)
TALIS average	17.5	(0.18)	16.9	(0.29)	20.9	(0.72)	18.9	(0.34)	17.4	(0.28)	14.4	(0.23)

	Teachers with qualification at ISCED level 5B or below		Teachers with an ISCED level 5A Bachelor degree		Teachers with an ISCED level 5A Master degree or a higher level of qualification	
	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)
Australia	9.8	(1.24)	8.7	(0.20)	10.6	(0.51)
Austria	11.3	(0.22)	14.1	(2.72)	10.2	(0.25)
Belgium (Fl.)	8.6	(0.44)	15.5	(4.03)	8.0	(0.72)
Brazil	18.9	(2.00)	20.8	(0.87)	24.8	(2.87)
Bulgaria	28.0	(4.37)	28.4	(3.40)	32.3	(2.93)
Denmark	12.8	(4.47)	12.4	(0.39)	18.7	(1.83)
Estonia	14.7	(1.02)	13.3	(0.43)	14.9	(0.43)
Hungary	23.2	(6.28)	17.1	(0.53)	15.7	(0.59)
Iceland	10.4	(0.79)	15.1	(0.74)	17.8	(2.41)
Ireland	5.9	(0.66)	5.9	(0.25)	7.9	(0.65)
Italy	28.4	(1.53)	26.3	(3.81)	32.0	(1.25)
Korea	55.5	(11.32)	31.5	(0.65)	34.4	(0.82)
Lithuania	11.1	(0.54)	11.5	(0.32)	12.5	(0.34)
Malaysia	10.5	(0.65)	12.0	(0.34)	13.6	(0.76)
Malta	7.6	(0.57)	7.8	(0.30)	8.0	(0.67)
Mexico	27.4	(2.62)	36.4	(2.26)	53.1	(5.31)
Norway	16.0	(3.02)	9.9	(0.39)	12.7	(0.81)
Poland	28.7	(8.87)	27.5	(4.46)	29.0	(1.21)
Portugal	21.1	(3.54)	19.8	(1.07)	35.3	(3.34)
Slovak Republic	12.4	(2.90)	9.9	(2.81)	9.6	(0.37)
Slovenia	7.7	(0.22)	9.3	(0.31)	14.0	(2.98)
Spain	23.8	(2.20)	22.1	(1.22)	26.2	(0.49)
Turkey	10.6	(1.07)	15.0	(0.76)	19.3	(2.95)
TALIS average	17.6	(0.80)	17.0	(0.41)	20.0	(0.41)

■ Denotes categories that include less than 5% of teachers.

Source: OECD, TALIS Database.

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

Table 3.1b

Amount of professional development undertaken by teachers in the previous 18 months (2007-08) – school characteristics

Average number of days of professional development undertaken by teachers in schools of different characteristics [among those teachers of lower secondary education who took some professional development]

	Teachers in public schools		Teachers in private schools		Teachers in schools in a village		Teachers in schools in a small town		Teachers in schools in a town		Teachers in schools in a city		Teachers in schools in a large city	
	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)	Mean	(S.E.)
Australia	8.9	(0.24)	9.2	(0.32)	10.1	(0.57)	9.4	(0.74)	9.0	(0.35)	8.8	(0.40)	9.0	(0.32)
Austria	11.0	(0.19)	10.2	(0.55)	11.3	(0.44)	10.2	(0.24)	12.1	(0.58)	11.2	(0.45)	11.3	(0.40)
Belgium (Fl.)	12.2	(1.31)	7.6	(0.34)	15.6	(4.07)	7.7	(0.46)	9.1	(0.86)	10.3	(0.88)	a	a
Brazil	21.1	(0.91)	19.0	(1.36)	22.8	(3.01)	19.5	(1.18)	20.2	(1.42)	21.3	(1.23)	20.2	(1.19)
Bulgaria	30.9	(2.08)	20.5	(9.36)	27.5	(3.54)	32.9	(6.88)	32.1	(2.56)	30.6	(3.18)	30.2	(2.55)
Denmark	13.4	(0.49)	12.4	(0.99)	11.7	(0.98)	14.0	(1.45)	12.1	(0.77)	15.0	(1.37)	15.4	(1.74)
Estonia	14.2	(0.31)	14.9	(3.11)	13.9	(0.45)	14.1	(0.76)	14.8	(0.85)	14.3	(0.64)	a	a
Hungary	16.6	(0.50)	17.0	(0.81)	16.7	(1.17)	17.6	(1.06)	16.2	(1.04)	17.0	(0.91)	16.0	(0.81)
Iceland	14.3	(0.65)	6.9	(2.27)	13.3	(0.71)	14.9	(1.21)	15.4	(1.37)	13.3	(1.09)	a	a
Ireland	6.4	(0.33)	5.7	(0.35)	5.9	(0.45)	5.9	(0.40)	6.2	(0.57)	6.7	(0.97)	5.9	(0.51)
Italy	30.8	(1.20)	44.5	(7.40)	30.4	(2.91)	33.0	(2.38)	29.5	(1.48)	29.2	(2.43)	35.3	(3.84)
Korea	34.3	(0.76)	25.1	(1.29)	32.9	(2.74)	33.0	(2.12)	32.2	(1.58)	32.2	(1.43)	33.1	(0.94)
Lithuania	11.8	(0.22)	11.4	(1.58)	10.9	(0.32)	11.7	(0.54)	12.3	(0.53)	12.2	(0.38)	a	a
Malaysia	12.0	(0.33)	10.0	(1.45)	12.1	(0.60)	11.6	(0.47)	12.3	(0.96)	11.9	(1.04)	13.4	(0.41)
Malta	7.5	(0.34)	8.2	(0.36)	8.6	(0.78)	7.9	(0.33)	7.6	(0.54)	a	a	a	a
Mexico	35.3	(1.57)	44.0	(6.21)	30.6	(7.64)	38.6	(4.31)	35.6	(3.13)	32.2	(2.47)	38.4	(2.43)
Norway	10.7	(0.36)	7.1	(1.14)	11.8	(0.78)	10.4	(0.64)	10.6	(0.59)	8.7	(0.57)	a	a
Poland	29.0	(1.26)	27.9	(3.86)	26.5	(1.32)	31.7	(3.33)	28.1	(1.92)	29.7	(3.70)	45.1	(7.16)
Portugal	21.9	(1.22)	17.9	(1.49)	23.8	(2.18)	20.2	(2.00)	22.9	(1.74)	19.9	(3.23)	18.0	(3.57)
Slovak Republic	9.7	(0.39)	10.0	(1.19)	10.6	(1.07)	9.4	(0.66)	8.9	(0.46)	10.3	(1.19)	a	a
Slovenia	8.6	(0.21)	a	a	8.9	(0.42)	8.4	(0.29)	9.0	(0.63)	8.6	(0.73)	a	a
Spain	27.1	(0.62)	21.1	(0.79)	25.4	(1.50)	27.0	(0.88)	25.3	(0.86)	25.5	(1.28)	24.6	(1.18)
Turkey	15.0	(0.72)	14.9	(1.13)	15.1	(2.42)	17.4	(3.05)	14.9	(1.48)	14.4	(0.83)	15.8	(1.32)
TALIS average	17.5	(0.18)	16.6	(0.66)	17.2	(0.50)	17.7	(0.46)	17.2	(0.28)	17.4	(0.34)	22.1	(0.44)

■ Denotes categories that include less than 5% of teachers.

Source: OECD, TALIS Database.

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

Table 3.2

Types of professional development undertaken by teachers (2007-08)

Percentage of teachers of lower secondary education undertaking specified professional development activities in the previous 18 months

	Courses and workshops		Education conferences and seminars		Qualification programmes		Observation visits to other schools		Professional development network		Individual and collaborative research		Mentoring and peer observation		Reading professional literature		Informal dialogue to improve teaching	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	90.6	(0.81)	64.0	(1.34)	11.7	(0.80)	22.2	(1.42)	60.1	(1.38)	36.6	(1.21)	48.6	(1.30)	82.4	(1.09)	93.7	(0.70)
Austria	91.9	(0.56)	49.2	(0.97)	19.9	(0.68)	10.3	(0.55)	37.6	(0.98)	25.9	(0.82)	18.4	(0.84)	89.4	(0.57)	91.9	(0.60)
Belgium (Fl.)	85.2	(0.89)	32.6	(1.33)	17.8	(0.83)	15.1	(1.06)	25.7	(1.05)	31.8	(0.87)	22.1	(0.92)	79.6	(0.98)	91.3	(0.71)
Brazil	80.3	(1.31)	61.0	(1.52)	40.8	(1.27)	32.5	(1.03)	21.9	(0.95)	54.7	(1.17)	47.5	(1.37)	82.5	(0.78)	94.2	(0.58)
Bulgaria	73.7	(2.07)	42.2	(3.44)	50.2	(2.56)	22.5	(2.03)	19.8	(2.22)	24.5	(1.73)	35.4	(3.01)	93.5	(0.96)	94.7	(0.70)
Denmark	81.2	(1.33)	41.6	(1.56)	15.4	(1.47)	10.4	(0.92)	43.5	(1.65)	52.3	(1.51)	17.5	(1.66)	77.3	(1.50)	90.4	(0.89)
Estonia	92.5	(0.66)	50.6	(1.29)	27.7	(0.96)	62.8	(1.37)	42.8	(1.16)	26.6	(1.00)	31.5	(1.35)	87.7	(0.85)	93.8	(0.58)
Hungary	68.7	(1.66)	39.9	(1.64)	26.1	(1.13)	34.6	(2.15)	43.7	(1.83)	17.0	(0.84)	46.7	(1.93)	88.4	(1.11)	79.1	(1.39)
Iceland	72.1	(1.30)	52.1	(1.25)	18.8	(1.02)	60.0	(1.27)	82.6	(1.11)	18.2	(1.08)	33.4	(1.16)	82.8	(1.05)	94.9	(0.65)
Ireland	85.7	(0.88)	42.0	(1.41)	11.4	(0.67)	7.6	(0.75)	51.1	(1.20)	26.3	(1.17)	18.2	(1.12)	60.3	(0.96)	87.4	(0.81)
Italy	66.3	(1.10)	43.5	(1.03)	10.8	(0.50)	16.0	(0.89)	20.0	(0.75)	56.5	(0.92)	27.4	(0.93)	66.2	(0.81)	93.1	(0.46)
Korea	85.0	(0.86)	46.9	(1.24)	27.5	(0.88)	66.8	(1.26)	39.6	(1.00)	50.1	(1.03)	69.4	(1.15)	52.5	(1.06)	90.0	(0.63)
Lithuania	95.7	(0.43)	67.6	(1.10)	43.9	(1.16)	57.1	(1.21)	37.6	(1.05)	48.1	(1.00)	39.7	(1.16)	93.5	(0.50)	96.7	(0.38)
Malaysia	88.6	(0.71)	32.4	(0.93)	22.0	(1.01)	30.0	(1.40)	47.8	(1.25)	21.7	(1.08)	41.8	(1.26)	61.5	(1.63)	95.7	(0.36)
Malta	90.2	(0.96)	51.8	(1.88)	18.1	(1.36)	14.8	(1.23)	39.0	(1.70)	37.4	(1.85)	16.5	(1.19)	61.1	(1.90)	92.3	(1.05)
Mexico	94.3	(0.57)	33.1	(1.23)	33.5	(1.21)	30.5	(1.30)	27.5	(1.13)	62.9	(1.05)	38.1	(1.37)	67.4	(1.05)	88.9	(0.86)
Norway	72.5	(1.40)	40.4	(1.61)	17.6	(0.71)	19.1	(1.49)	35.3	(1.55)	12.3	(0.72)	22.0	(1.50)	64.1	(1.12)	94.0	(0.57)
Poland	90.8	(0.77)	64.3	(1.18)	35.0	(0.95)	19.7	(0.84)	60.7	(1.43)	40.0	(1.08)	66.7	(1.40)	95.2	(0.46)	95.8	(0.36)
Portugal	77.0	(0.91)	51.6	(1.31)	29.5	(0.87)	26.4	(1.03)	15.0	(0.82)	47.1	(1.15)	14.6	(0.84)	73.3	(0.97)	94.2	(0.49)
Slovak Republic	50.1	(1.45)	38.2	(1.38)	38.1	(1.28)	33.1	(1.41)	34.6	(1.46)	11.8	(0.83)	64.8	(1.27)	93.2	(0.64)	95.9	(0.48)
Slovenia	88.1	(0.70)	74.7	(1.05)	10.2	(0.65)	7.7	(0.58)	71.9	(1.38)	22.5	(0.97)	29.1	(0.87)	86.4	(0.73)	97.0	(0.35)
Spain	83.9	(0.86)	36.2	(1.10)	17.2	(0.62)	14.7	(0.75)	22.6	(0.84)	49.2	(0.96)	21.4	(1.00)	68.1	(0.93)	92.6	(0.49)
Turkey	62.3	(1.51)	67.8	(1.99)	19.2	(1.09)	21.1	(1.66)	39.4	(1.67)	40.1	(1.35)	32.2	(2.15)	80.6	(2.14)	92.8	(0.82)
TALIS average	81.2	(0.23)	48.9	(0.32)	24.5	(0.23)	27.6	(0.26)	40.0	(0.28)	35.4	(0.24)	34.9	(0.30)	77.7	(0.23)	92.6	(0.14)

Source: OECD, TALIS Database.

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

Table 3.3

Teachers who wanted to participate in more development than they did in the previous 18 months (2007-08)
Percentage of teachers of lower secondary education who wanted to take more professional development than they did in the previous 18 months, by certain teacher and school characteristics

	All teachers		Female teachers		Male teachers		Teachers aged under 40 years		Teachers aged 40+ years		Teachers with qualification below ISCED level 5A		Teachers with qualification at ISCED level 5A Bachelor degree		Teachers with qualification at ISCED level 5A Masters degree or higher		Teachers in public schools		Teachers in private schools	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	55.2	(1.37)	57.9	(1.67)	51.3	(1.89)	59.0	(1.70)	52.5	(1.70)	24.6	(11.05)	55.0	(1.37)	58.9	(2.83)	55.5	(1.49)	54.8	(2.49)
Austria	44.7	(0.93)	46.0	(1.17)	41.9	(1.36)	48.8	(1.83)	43.5	(1.00)	40.3	(1.18)	41.8	(8.01)	51.9	(1.43)	43.9	(1.01)	53.4	(2.05)
Belgium (Fl.)	30.5	(0.98)	32.3	(1.40)	26.5	(2.50)	34.9	(1.22)	25.6	(1.34)	30.4	(1.02)	23.0	(3.04)	36.0	(3.42)	32.7	(1.17)	29.7	(1.36)
Brazil	84.4	(0.77)	85.9	(0.88)	80.5	(1.30)	85.8	(1.05)	82.6	(1.21)	86.4	(2.41)	83.9	(0.85)	83.3	(3.56)	84.8	(0.89)	83.6	(1.52)
Bulgaria	68.9	(1.77)	69.5	(1.62)	65.8	(4.77)	70.9	(2.83)	68.0	(1.87)	67.6	(4.25)	71.6	(3.98)	68.5	(2.33)	68.9	(1.78)	64.5	(12.29)
Denmark	47.6	(1.39)	49.6	(1.93)	44.8	(2.50)	47.3	(2.41)	47.8	(1.90)	18.0	(6.30)	47.8	(1.37)	52.9	(5.58)	48.0	(1.80)	45.8	(3.01)
Estonia	48.7	(1.07)	48.6	(1.16)	49.2	(2.38)	48.3	(1.90)	48.8	(1.26)	48.7	(2.89)	49.8	(1.74)	47.8	(1.49)	48.6	(1.10)	50.4	(9.40)
Hungary	40.2	(2.00)	39.9	(2.45)	41.0	(2.10)	41.1	(3.19)	39.6	(1.81)	39.3	(18.39)	38.6	(2.07)	44.6	(2.22)	40.1	(1.63)	40.3	(5.22)
Iceland	37.9	(1.47)	40.6	(1.93)	32.0	(2.36)	36.3	(2.23)	39.0	(1.84)	36.5	(2.33)	39.4	(1.80)	32.9	(5.74)	37.5	(1.61)	35.0	(12.03)
Ireland	54.1	(1.37)	55.7	(1.54)	50.7	(2.56)	54.8	(1.87)	53.5	(1.61)	46.5	(5.83)	54.6	(1.45)	53.6	(2.85)	53.6	(2.28)	53.8	(1.81)
Italy	56.4	(0.98)	58.4	(1.08)	49.2	(1.78)	57.0	(1.85)	56.2	(1.07)	54.0	(2.38)	62.9	(3.09)	56.1	(1.07)	56.5	(1.03)	48.5	(5.20)
Korea	58.2	(1.16)	60.5	(1.28)	54.1	(1.92)	67.6	(1.57)	52.5	(1.53)	68.1	(13.27)	58.5	(1.42)	57.6	(1.72)	59.6	(1.41)	50.8	(3.98)
Lithuania	44.7	(1.10)	45.4	(1.12)	40.9	(2.80)	47.9	(1.79)	43.3	(1.28)	44.0	(2.18)	45.2	(1.40)	44.2	(1.84)	45.0	(1.10)	31.6	(6.43)
Malaysia	82.9	(0.95)	83.8	(1.10)	81.1	(1.30)	86.5	(1.12)	77.3	(1.28)	75.0	(2.21)	83.9	(1.05)	85.8	(2.12)	83.0	(0.97)	66.9	(11.42)
Malta	43.3	(1.79)	44.4	(2.33)	41.4	(3.10)	42.5	(2.22)	44.6	(3.04)	40.5	(4.26)	43.3	(1.99)	48.0	(5.52)	41.1	(2.44)	47.7	(2.04)
Mexico	85.3	(0.85)	86.3	(1.04)	84.1	(1.15)	88.0	(1.04)	83.3	(1.15)	80.8	(3.10)	86.1	(0.88)	86.6	(2.15)	85.7	(0.80)	84.8	(3.28)
Norway	70.3	(1.13)	72.5	(1.43)	67.1	(1.76)	70.3	(1.72)	70.4	(1.45)	52.6	(12.23)	71.1	(1.36)	68.6	(2.11)	70.6	(1.16)	72.9	(8.17)
Poland	43.6	(1.04)	45.1	(1.28)	38.9	(2.07)	49.5	(1.54)	37.3	(1.26)	40.7	(8.80)	47.5	(4.38)	43.3	(1.07)	43.5	(1.01)	45.2	(7.26)
Portugal	76.2	(0.91)	77.5	(1.04)	73.1	(1.56)	77.3	(1.22)	75.1	(1.43)	70.7	(4.35)	76.0	(0.99)	79.8	(2.52)	77.0	(0.98)	66.0	(3.51)
Slovak Republic	43.2	(1.34)	44.3	(1.37)	38.6	(2.98)	48.4	(1.90)	39.6	(1.78)	38.4	(7.68)	47.3	(15.00)	43.6	(1.40)	42.6	(1.35)	46.3	(3.89)
Slovenia	35.1	(1.18)	34.9	(1.23)	36.0	(2.38)	39.5	(1.82)	32.2	(1.36)	28.8	(1.48)	40.7	(1.50)	36.0	(7.85)	34.9	(1.14)	a	a
Spain	60.6	(1.02)	63.8	(1.28)	56.4	(1.43)	68.6	(1.59)	56.0	(1.29)	47.6	(3.83)	56.5	(2.53)	62.0	(1.16)	60.6	(1.23)	59.5	(2.31)
Turkey	48.2	(2.21)	51.3	(2.13)	44.8	(3.22)	51.2	(2.40)	37.2	(3.56)	26.2	(5.62)	48.8	(2.23)	58.8	(6.69)	48.4	(2.51)	41.6	(3.71)
TALIS average	54.8	(0.27)	56.3	(0.32)	51.7	(0.49)	57.5	(0.40)	52.4	(0.36)	48.1	(1.47)	55.4	(0.85)	56.6	(0.74)	54.9	(0.31)	53.3	(1.26)

■ Denotes categories that include less than 5% of teachers.

Source: OECD, TALIS Database.

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

Table 3.4

Teachers' high professional development needs (2007-08)

Percentage of teachers of lower secondary education indicating they have a "High level of need" for professional development in the following areas and overall index of need

	Overall index of development need (Maximum=100) ¹		Content and performance standards		Student assessment practices		Classroom management		Subject field		Instructional practices	
	Index	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	44	(0.35)	8.3	(0.64)	7.5	(0.60)	5.2	(0.52)	5.0	(0.53)	3.6	(0.40)
Austria	51	(0.31)	13.9	(0.69)	12.2	(0.53)	13.6	(0.64)	14.8	(0.59)	18.6	(0.75)
Belgium (Fl.)	47	(0.39)	12.0	(0.65)	15.6	(0.74)	12.1	(0.59)	17.5	(0.74)	14.1	(0.77)
Brazil	58	(0.55)	23.1	(1.31)	21.1	(1.15)	13.7	(0.98)	14.9	(1.06)	14.8	(1.06)
Bulgaria	50	(0.59)	25.7	(2.33)	16.1	(1.45)	12.7	(1.46)	21.2	(1.53)	18.3	(1.67)
Denmark	44	(0.59)	17.1	(1.25)	13.6	(0.97)	2.3	(0.55)	4.6	(0.54)	4.7	(0.57)
Estonia	55	(0.49)	17.7	(0.95)	10.4	(0.65)	13.4	(0.76)	22.6	(1.01)	18.2	(0.78)
Hungary	45	(0.51)	9.2	(0.55)	5.9	(0.51)	3.3	(0.36)	7.4	(0.64)	14.7	(0.81)
Iceland	52	(0.48)	7.3	(0.74)	14.3	(1.00)	11.6	(0.90)	10.3	(0.91)	8.2	(0.76)
Ireland	49	(0.48)	6.7	(0.52)	8.2	(0.77)	6.4	(0.59)	4.1	(0.49)	5.4	(0.60)
Italy	63	(0.30)	17.6	(0.69)	24.0	(0.83)	18.9	(0.84)	34.0	(0.75)	34.9	(0.89)
Korea	70	(0.30)	26.8	(0.92)	21.5	(0.79)	30.3	(0.91)	38.3	(0.96)	39.9	(0.91)
Lithuania	62	(0.41)	39.2	(1.01)	37.3	(1.03)	27.9	(0.96)	43.4	(0.89)	44.5	(0.90)
Malaysia	72	(0.64)	49.8	(1.59)	43.8	(1.43)	41.6	(1.41)	56.8	(1.53)	55.2	(1.47)
Malta	48	(0.57)	8.1	(1.00)	7.2	(0.82)	5.3	(0.78)	6.7	(0.86)	3.9	(0.60)
Mexico	50	(0.59)	13.7	(0.77)	15.0	(0.83)	8.8	(0.66)	11.0	(0.88)	12.3	(0.92)
Norway	55	(0.51)	12.9	(0.85)	21.9	(1.29)	7.7	(0.66)	8.6	(0.70)	8.2	(0.61)
Poland	49	(0.50)	11.9	(0.74)	12.8	(0.77)	17.6	(0.95)	17.0	(0.87)	17.5	(0.75)
Portugal	56	(0.31)	9.8	(0.62)	6.9	(0.51)	5.8	(0.47)	4.8	(0.43)	7.7	(0.54)
Slovak Republic	48	(0.56)	8.2	(0.66)	9.0	(0.57)	9.8	(0.81)	17.2	(0.96)	13.4	(0.89)
Slovenia	57	(0.35)	13.4	(0.67)	22.3	(0.89)	24.0	(0.79)	15.9	(0.78)	19.9	(0.80)
Spain	49	(0.44)	6.0	(0.38)	5.8	(0.42)	8.1	(0.57)	5.0	(0.47)	5.5	(0.39)
Turkey	43	(0.72)	9.8	(0.81)	9.2	(0.90)	6.7	(1.29)	8.9	(0.93)	9.0	(0.92)
TALIS average	53	(0.10)	16.0	(0.20)	15.7	(0.19)	13.3	(0.18)	17.0	(0.18)	17.1	(0.18)

	ICT teaching skills		Teaching special learning needs students		Student discipline and behaviour problems		School management and administration		Teaching in a multicultural setting		Student counselling	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	17.8	(0.94)	15.1	(0.98)	6.6	(0.71)	5.9	(0.53)	4.0	(0.43)	7.3	(0.61)
Austria	23.8	(0.64)	30.3	(0.94)	32.6	(1.03)	3.9	(0.37)	10.0	(0.68)	13.1	(0.65)
Belgium (Fl.)	14.8	(0.72)	12.8	(0.76)	11.8	(0.71)	2.4	(0.31)	3.7	(0.46)	11.0	(0.68)
Brazil	35.6	(1.33)	63.2	(1.21)	26.5	(1.12)	20.0	(0.78)	33.2	(1.22)	20.7	(1.14)
Bulgaria	26.9	(1.58)	24.4	(1.47)	14.9	(1.82)	8.5	(0.95)	15.5	(2.35)	10.4	(1.30)
Denmark	20.1	(1.67)	24.6	(1.44)	9.8	(1.21)	3.9	(0.49)	7.1	(0.98)	5.5	(0.66)
Estonia	27.9	(0.91)	28.1	(0.95)	23.6	(1.02)	4.6	(0.37)	9.7	(0.77)	21.5	(0.95)
Hungary	23.0	(1.15)	42.0	(1.57)	31.2	(1.50)	3.4	(0.96)	10.7	(0.68)	8.4	(0.83)
Iceland	17.3	(1.08)	23.2	(1.16)	20.0	(0.97)	7.9	(0.84)	14.0	(0.92)	12.9	(0.86)
Ireland	34.2	(1.30)	38.3	(1.32)	13.9	(0.98)	11.8	(0.94)	24.3	(1.31)	24.9	(1.33)
Italy	25.8	(0.81)	35.3	(1.05)	28.3	(1.04)	8.6	(0.49)	25.3	(0.85)	19.7	(0.87)
Korea	17.7	(0.67)	25.6	(0.88)	34.6	(0.92)	10.8	(0.62)	10.4	(0.61)	41.5	(1.04)
Lithuania	36.1	(0.93)	25.4	(0.95)	24.3	(0.89)	9.8	(0.68)	9.8	(0.79)	18.6	(1.09)
Malaysia	43.8	(1.18)	25.9	(1.08)	41.6	(1.41)	29.9	(1.14)	30.3	(1.35)	35.1	(1.21)
Malta	22.8	(1.51)	34.4	(1.56)	10.5	(1.18)	12.9	(1.31)	14.0	(1.36)	15.8	(1.29)
Mexico	24.9	(1.09)	38.8	(1.27)	21.4	(1.04)	11.9	(0.71)	18.2	(0.93)	25.9	(1.12)
Norway	28.1	(1.19)	29.2	(1.04)	16.5	(0.93)	5.8	(0.57)	8.3	(0.75)	7.8	(0.63)
Poland	22.2	(0.90)	29.4	(1.28)	23.5	(0.94)	7.8	(0.57)	6.6	(0.58)	25.4	(1.01)
Portugal	24.2	(0.89)	50.0	(1.06)	17.4	(0.88)	18.2	(0.90)	17.0	(0.73)	8.5	(0.61)
Slovak Republic	14.8	(0.97)	20.1	(0.97)	19.2	(1.26)	4.8	(0.46)	4.6	(0.52)	7.9	(0.58)
Slovenia	25.1	(0.81)	40.4	(1.09)	32.0	(1.04)	7.0	(0.59)	9.9	(0.68)	21.1	(0.83)
Spain	26.2	(1.08)	35.8	(1.04)	18.3	(0.76)	14.2	(0.64)	17.5	(0.73)	12.0	(0.62)
Turkey	14.2	(0.85)	27.8	(1.70)	13.4	(1.44)	9.3	(0.78)	14.5	(1.10)	9.5	(1.16)
TALIS average	24.7	(0.23)	31.3	(0.25)	21.4	(0.23)	9.7	(0.15)	13.9	(0.21)	16.7	(0.20)

1. Index derived from aggregating the development need for each teacher over all of the aspects of their work: 3 points for a high level of need; 2 points for a moderate level of need, 1 point for a low level of need and no points for cases where teachers noted no development need at all. These were then aggregated and divided by the maximum possible score of 33 and multiplied by 100.

Source: OECD, TALIS Database.

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

Table 3.5

Support for professional development undertaken by teachers (2007-08)
 Percentage of those teachers of lower secondary education who undertook professional development
 and received the following types of support

	Teacher contribution to the cost of professional development undertaken						Teacher received scheduled time		Teacher received salary supplement	
	Paid none of the costs		Paid some of the costs		Paid all of the costs					
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	74.5	(1.24)	24.3	(1.24)	1.2	(0.26)	85.5	(0.86)	5.5	(0.57)
Austria	43.7	(1.00)	49.7	(1.01)	6.6	(0.45)	89.0	(0.72)	11.7	(0.68)
Belgium (Fl.)	81.4	(1.32)	15.3	(1.10)	3.2	(0.46)	78.1	(1.63)	2.2	(0.49)
Brazil	54.8	(1.59)	26.9	(1.36)	18.3	(1.22)	56.2	(1.67)	10.9	(0.88)
Bulgaria	73.4	(2.06)	20.5	(2.16)	6.1	(0.68)	40.4	(1.88)	8.1	(0.91)
Denmark	77.3	(1.45)	16.3	(1.13)	6.4	(0.93)	71.8	(2.34)	9.2	(1.64)
Estonia	72.5	(0.98)	25.6	(0.93)	2.0	(0.28)	64.2	(1.37)	12.0	(0.88)
Hungary	71.5	(1.99)	20.5	(1.76)	8.0	(0.76)	44.4	(2.95)	5.9	(0.85)
Iceland	67.8	(1.34)	27.8	(1.42)	4.5	(0.61)	70.3	(1.39)	17.9	(1.24)
Ireland	79.3	(1.03)	17.5	(0.99)	3.2	(0.46)	94.7	(0.53)	5.8	(0.67)
Italy	68.7	(1.04)	13.7	(0.65)	17.6	(0.78)	30.9	(1.38)	9.6	(0.74)
Korea	27.1	(1.07)	58.5	(1.06)	14.4	(0.79)	24.3	(0.94)	19.8	(1.02)
Lithuania	65.2	(1.75)	30.0	(1.48)	4.8	(0.57)	69.1	(1.26)	6.5	(0.58)
Malaysia	43.5	(1.52)	52.7	(1.54)	3.9	(0.38)	88.6	(0.80)	2.5	(0.31)
Malta	87.1	(1.29)	10.6	(1.18)	2.2	(0.51)	78.2	(1.62)	48.7	(1.94)
Mexico	43.2	(1.31)	38.0	(1.12)	18.8	(1.14)	71.1	(1.52)	2.9	(0.45)
Norway	79.8	(1.14)	17.0	(1.05)	3.3	(0.44)	66.3	(1.56)	7.2	(0.74)
Poland	44.2	(1.30)	45.1	(1.12)	10.7	(0.85)	57.0	(1.68)	5.4	(0.61)
Portugal	50.3	(1.43)	25.2	(1.14)	24.5	(1.24)	25.1	(1.68)	2.0	(0.33)
Slovak Republic	70.4	(1.37)	24.1	(1.21)	5.5	(0.57)	69.2	(1.47)	28.3	(1.72)
Slovenia	85.3	(0.91)	13.7	(0.87)	1.0	(0.22)	79.3	(1.28)	29.7	(1.18)
Spain	54.8	(1.33)	29.6	(1.00)	15.6	(0.87)	29.5	(1.48)	3.3	(0.41)
Turkey	82.9	(1.87)	12.1	(1.90)	5.0	(0.95)	61.2	(2.96)	6.9	(1.19)
TALIS average	65.2	(0.29)	26.7	(0.27)	8.1	(0.15)	62.8	(0.34)	11.4	(0.20)

Source: OECD, TALIS Database.

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

Table 3.6

Frequency of mentoring and induction programmes (2007-08)
 Percentage of teachers of lower secondary education whose school principal reported the existence of induction processes
 and mentoring programmes for teachers new to the school

	Existence of formal induction process in school						Existence of a mentoring programme or policy in school					
	Yes, for all teachers new to the school		Yes but only for those in their first teaching job		No formal induction process		Yes, for all teachers new to the school		Yes but only for those in their first teaching job		No formal mentoring process	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	93.1	(2.41)	5.6	(2.21)	1.3	(0.96)	70.4	(4.59)	23.8	(4.27)	5.8	(1.84)
Austria	32.1	(3.15)	23.6	(2.61)	44.3	(2.99)	23.0	(2.73)	23.0	(2.64)	54.1	(3.24)
Belgium (Fl.)	94.4	(1.69)	3.9	(1.21)	1.7	(1.08)	90.5	(2.08)	8.8	(2.02)	0.7	(0.49)
Brazil	19.8	(2.38)	6.5	(1.42)	73.7	(2.46)	17.7	(2.11)	11.7	(2.03)	70.7	(2.91)
Bulgaria	53.2	(4.94)	30.7	(6.13)	16.2	(3.85)	29.6	(3.95)	53.5	(4.87)	16.9	(3.51)
Denmark	47.7	(5.22)	23.5	(4.51)	28.8	(3.81)	62.6	(4.52)	27.0	(3.77)	10.4	(2.65)
Estonia	23.1	(3.68)	59.1	(4.19)	17.8	(3.14)	25.8	(3.49)	64.9	(3.81)	9.2	(1.98)
Hungary	34.8	(5.06)	46.4	(5.26)	18.8	(3.46)	44.8	(4.50)	44.2	(4.68)	11.0	(2.40)
Iceland	72.8	(0.17)	15.7	(0.13)	11.5	(0.12)	44.7	(0.17)	48.4	(0.16)	6.9	(0.04)
Ireland	83.7	(3.67)	7.2	(2.68)	9.0	(2.64)	63.8	(4.21)	10.7	(2.44)	25.5	(4.10)
Italy	36.6	(2.87)	34.4	(2.91)	29.0	(2.81)	26.3	(2.70)	61.3	(2.99)	12.4	(2.16)
Korea	33.6	(3.33)	49.8	(3.75)	16.6	(3.03)	26.8	(3.76)	44.3	(4.37)	29.0	(4.18)
Lithuania	17.1	(2.61)	14.0	(2.49)	68.9	(3.26)	29.0	(3.59)	50.6	(4.08)	20.4	(3.13)
Malaysia	43.0	(3.62)	40.9	(4.00)	16.2	(2.87)	45.0	(3.71)	38.1	(3.82)	16.9	(2.61)
Malta	25.3	(0.17)	11.8	(0.11)	62.9	(0.18)	22.4	(0.18)	12.3	(0.12)	65.3	(0.20)
Mexico	22.7	(3.35)	14.7	(2.91)	62.6	(3.94)	19.2	(3.47)	20.4	(3.52)	60.5	(4.14)
Norway	29.9	(3.83)	18.3	(3.25)	51.8	(4.27)	43.3	(3.85)	25.4	(3.67)	31.3	(3.67)
Poland	14.3	(3.13)	79.4	(3.63)	6.3	(2.15)	23.5	(3.97)	71.9	(4.32)	4.6	(1.87)
Portugal	73.1	(3.52)	4.2	(1.69)	22.7	(3.20)	41.3	(4.48)	20.4	(3.53)	38.3	(4.32)
Slovak Republic	62.1	(3.85)	35.5	(3.67)	2.4	(1.53)	26.4	(4.06)	71.3	(4.22)	2.4	(1.32)
Slovenia	41.1	(3.83)	51.5	(4.06)	7.4	(2.01)	23.5	(3.55)	64.6	(4.02)	11.9	(2.65)
Spain	20.9	(3.22)	15.7	(2.71)	63.4	(3.70)	17.6	(2.77)	18.1	(2.74)	64.3	(3.60)
Turkey	50.2	(5.27)	16.2	(4.04)	33.6	(5.10)	22.3	(4.85)	69.6	(5.51)	8.1	(3.22)
TALIS average	44.5	(0.73)	26.5	(0.70)	29.0	(0.62)	36.5	(0.75)	38.4	(0.76)	25.1	(0.60)

Source: OECD, TALIS Database.

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

Table 3.7

Reasons for not participating in more professional development (2007-08)
 Percentage of teachers of lower secondary education who wanted more professional development and gave the following reasons for not undertaking more

	Reason for not undertaking more professional development											
	Did not have the pre-requisites		Too expensive		Lack of employer support		Conflict with work schedule		Family responsibilities		No suitable professional development	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	3.2	(0.59)	32.6	(1.61)	26.5	(1.52)	61.7	(1.93)	27.6	(1.73)	40.5	(1.80)
Austria	2.6	(0.46)	18.0	(0.93)	9.3	(0.79)	41.5	(1.34)	29.0	(1.21)	64.2	(1.15)
Belgium (Fl.)	3.6	(0.86)	11.8	(1.33)	10.9	(1.40)	43.2	(1.69)	40.6	(1.70)	38.8	(1.73)
Brazil	5.1	(0.46)	51.0	(1.46)	24.6	(1.35)	57.8	(1.46)	18.4	(0.92)	27.0	(1.22)
Bulgaria	7.0	(1.61)	34.6	(2.41)	2.9	(0.47)	24.4	(1.46)	16.6	(1.22)	48.3	(2.35)
Denmark	1.8	(0.44)	29.6	(1.94)	38.3	(1.76)	23.7	(1.90)	15.4	(1.21)	42.1	(1.99)
Estonia	4.2	(0.62)	35.1	(1.59)	15.3	(1.30)	60.5	(1.65)	25.2	(1.35)	52.3	(1.61)
Hungary	5.6	(0.85)	46.9	(2.40)	23.0	(1.90)	40.3	(1.88)	24.5	(1.77)	25.9	(1.89)
Iceland	1.8	(0.70)	18.6	(1.61)	6.7	(1.18)	43.0	(2.41)	35.4	(1.99)	47.0	(2.36)
Ireland	5.5	(0.75)	12.2	(0.96)	13.9	(1.47)	42.6	(1.53)	29.4	(1.57)	45.2	(1.83)
Italy	5.1	(0.44)	23.5	(1.23)	5.8	(0.50)	43.1	(1.47)	40.8	(1.38)	47.2	(1.37)
Korea	11.9	(0.95)	19.9	(0.98)	8.7	(0.93)	73.3	(1.26)	32.7	(1.30)	42.2	(1.28)
Lithuania	7.7	(0.90)	25.7	(1.45)	15.9	(1.19)	46.7	(1.63)	26.4	(1.20)	53.2	(1.60)
Malaysia	28.4	(1.38)	22.2	(1.41)	13.7	(1.14)	58.9	(1.30)	31.3	(1.32)	45.9	(1.25)
Malta	4.7	(1.06)	18.4	(2.06)	10.2	(1.73)	38.8	(2.37)	45.4	(2.85)	40.5	(2.84)
Mexico	17.2	(1.07)	49.0	(1.44)	21.1	(1.01)	48.7	(1.31)	37.4	(1.29)	20.3	(0.97)
Norway	2.5	(0.38)	31.6	(1.36)	26.4	(1.79)	50.4	(1.44)	26.5	(1.37)	30.0	(1.36)
Poland	3.4	(0.51)	51.2	(1.72)	12.3	(1.20)	40.7	(1.90)	32.6	(1.63)	38.7	(1.84)
Portugal	6.5	(0.63)	36.3	(1.14)	10.4	(0.66)	65.5	(1.26)	35.6	(1.28)	48.2	(1.23)
Slovak Republic	9.5	(0.96)	18.8	(1.48)	12.8	(1.32)	38.2	(1.95)	20.6	(1.35)	58.0	(1.81)
Slovenia	3.7	(0.74)	35.9	(1.57)	18.2	(1.48)	47.8	(1.75)	22.3	(1.25)	32.6	(1.52)
Spain	6.7	(0.67)	19.2	(0.99)	6.3	(0.66)	50.3	(1.23)	48.4	(1.43)	38.4	(1.25)
Turkey	16.9	(2.03)	12.4	(1.48)	11.9	(1.51)	34.7	(3.47)	31.2	(2.68)	46.6	(2.22)
TALIS average	7.2	(0.19)	28.5	(0.32)	15.0	(0.27)	46.8	(0.37)	30.1	(0.33)	42.3	(0.36)

Source: OECD, TALIS Database.

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

Table 3.8

Impact of different types of professional development undertaken by teachers (2007-08)
 Percentage of teachers of lower secondary education reporting that the professional development undertaken in the previous 18 months had a moderate or high impact upon their development as teachers

	Courses and workshops		Education conferences and seminars		Qualification programmes		Observation visits to other schools		Professional development network		Individual and collaborative research		Mentoring and peer observation		Reading professional literature		Informal dialogue to improve teaching	
	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)	%	(S.E.)
Australia	78.5	(1.04)	67.6	(1.32)	78.6	(2.67)	72.2	(2.26)	73.5	(1.27)	85.8	(1.53)	72.5	(1.40)	66.4	(1.28)	86.0	(0.85)
Austria	75.7	(0.89)	55.5	(1.24)	89.0	(1.21)	61.0	(2.99)	68.6	(1.33)	88.4	(0.96)	72.7	(1.63)	82.4	(0.69)	84.9	(0.71)
Belgium (Fl.)	52.9	(1.26)	42.6	(1.82)	67.0	(2.01)	47.0	(2.84)	53.9	(1.92)	67.6	(1.52)	48.1	(2.64)	57.8	(1.20)	71.7	(1.05)
Brazil	76.1	(1.07)	72.9	(1.32)	89.9	(0.93)	67.5	(1.49)	73.4	(1.91)	80.9	(1.26)	65.8	(1.66)	82.6	(1.09)	76.5	(0.99)
Bulgaria	84.2	(1.58)	80.6	(1.67)	88.0	(2.06)	79.3	(3.00)	86.2	(1.83)	87.1	(1.70)	86.0	(1.68)	92.3	(1.21)	86.3	(1.20)
Denmark	86.0	(0.96)	82.9	(1.70)	96.8	(1.18)	83.6	(3.34)	88.1	(1.32)	94.6	(0.86)	78.7	(3.45)	84.9	(1.14)	92.8	(0.89)
Estonia	86.4	(0.74)	70.4	(1.52)	90.4	(0.99)	69.9	(1.27)	84.3	(1.06)	90.5	(1.04)	76.8	(1.58)	87.3	(0.70)	81.8	(0.94)
Hungary	86.0	(1.04)	78.2	(1.46)	93.1	(0.93)	81.4	(1.74)	84.8	(1.11)	93.8	(1.30)	91.1	(1.00)	92.6	(0.78)	92.9	(0.89)
Iceland	83.0	(1.13)	73.7	(1.75)	92.4	(1.76)	80.5	(1.37)	90.6	(0.85)	94.2	(1.70)	77.8	(2.09)	88.7	(0.97)	91.8	(0.85)
Ireland	81.9	(0.96)	74.5	(1.55)	92.5	(1.53)	81.0	(4.35)	78.7	(1.36)	86.8	(1.41)	71.3	(2.81)	71.0	(1.55)	83.0	(1.00)
Italy	81.9	(1.17)	78.5	(1.16)	86.8	(1.58)	82.6	(2.06)	86.6	(1.06)	95.1	(0.45)	89.6	(1.03)	90.9	(0.60)	90.6	(0.47)
Korea	79.2	(0.87)	75.1	(1.36)	84.2	(1.37)	65.2	(1.15)	85.4	(1.01)	89.9	(0.82)	69.5	(1.17)	77.4	(1.22)	85.8	(0.67)
Lithuania	91.4	(0.62)	83.2	(1.03)	88.2	(1.26)	90.7	(0.81)	90.0	(0.94)	91.4	(0.78)	85.2	(1.24)	96.2	(0.41)	92.0	(0.64)
Malaysia	94.4	(0.48)	89.1	(1.05)	95.0	(0.88)	87.6	(1.30)	90.3	(0.97)	88.8	(1.17)	89.9	(0.89)	86.4	(0.78)	92.2	(0.49)
Malta	73.9	(1.65)	70.0	(2.47)	94.4	(1.56)	69.8	(3.87)	75.2	(2.45)	89.8	(1.57)	67.8	(3.78)	78.1	(1.83)	84.3	(1.29)
Mexico	85.4	(0.77)	82.2	(1.54)	91.3	(1.03)	77.7	(1.65)	81.3	(1.69)	91.0	(0.69)	78.3	(1.59)	84.0	(0.98)	81.6	(0.92)
Norway	79.3	(0.96)	73.7	(1.46)	93.7	(1.24)	71.9	(2.39)	81.1	(1.83)	95.3	(1.39)	77.9	(2.62)	78.1	(0.93)	95.7	(0.44)
Poland	86.3	(0.73)	75.8	(1.31)	92.1	(0.97)	78.2	(2.29)	88.3	(0.91)	92.8	(0.90)	77.9	(1.11)	93.4	(0.49)	90.0	(0.70)
Portugal	82.8	(0.88)	73.0	(1.38)	87.0	(1.12)	67.4	(1.82)	80.7	(2.04)	94.0	(0.76)	87.6	(1.84)	78.9	(1.04)	88.1	(0.68)
Slovak Republic	75.5	(1.57)	75.9	(1.44)	83.0	(1.43)	66.0	(2.02)	78.0	(1.93)	83.8	(3.72)	78.6	(1.10)	88.8	(1.03)	85.9	(0.85)
Slovenia	83.3	(0.73)	78.6	(0.91)	80.2	(2.43)	77.3	(2.74)	64.1	(1.30)	89.9	(1.44)	76.1	(1.53)	81.5	(0.85)	87.0	(0.74)
Spain	76.5	(0.94)	71.8	(1.75)	73.1	(1.97)	76.2	(2.31)	81.5	(1.49)	89.9	(0.89)	81.1	(1.49)	74.4	(1.01)	80.2	(0.74)
Turkey	72.9	(1.78)	74.1	(1.65)	79.3	(3.77)	87.8	(1.99)	80.5	(1.43)	92.3	(2.11)	84.8	(1.77)	91.3	(1.17)	92.8	(1.01)
TALIS average	80.6	(0.23)	73.9	(0.31)	87.2	(0.35)	74.9	(0.50)	80.2	(0.31)	89.3	(0.30)	77.6	(0.41)	82.8	(0.22)	86.7	(0.18)

Source: OECD, TALIS Database.

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